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Original Article

Exercise is recreation not medicine

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Abstract

Purpose: This paper responds to the question, is exercise medicine? It does so using a qualitative case study that proposes that *exercise is recreation*. The study (1) describes and reflects upon an *exercise is recreation* metaphor, (2) establishes the principles and processes used to develop a sport park within which *exercise is recreation*, and (3) presents a comparative analysis of the *exercise is recreation* approach with a UK quality framework for “exercise referrals”.

Methods: Four years of documentation were collated and placed into 14 categories: (1) university strategies, (2) plans of the site, (3) policy documents, (4) minutes of a steering group, (5) contemporary documents, (6) organisational charts, (7) responses to local government policies on sport, (8) consultation documents, (9) operational procedures, (10) facility specifications, (11) partnership agreements, (12) material relating to the university's work on events, (13) notes on the universities sport department, and (14) timetables. These data were analysed through a 4-stage process which used recreation as the analytical theme for a comparative analysis.

Results: The characteristics of the *exercise is recreation* metaphor in this case are (1) a focus on the experience of the user, (2) the promotion of wellbeing, (3) the importance of community, (4) embracing inclusivity, (5) sport, (6) aesthetics, and (7) leisure time. The principles and processes used to develop the sport park were (1) custodianship, (2) partnerships, (3) values, (4) inter-professional working, (5) local heritage, (6) change; (7) the natural park environment, and (8) “riding the bike as you build it”. The comparative analysis with a UK quality framework for “exercise referrals” clearly shows a difference from an *exercise is recreation* approach.

Conclusion: Exercise is recreation and may enable individuals and communities to reach a state of well-being.

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Keywords: Case study; Exercise; Medicine; Recreation

1. Introduction

Is exercise medicine? One way to respond to this question is to present the arguments against the proposition that exercise is a form of medicine. Such a retort has 2 weaknesses. Firstly it frames the debate around a medical model and excludes alternative metaphors such as *exercise is recreation*. Secondly, it is a negative response, which may explain what exercise is not, but which leaves open the question “what is exercise”? This paper argues that *exercise is recreation*. By proposing that *exercise is recreation* this paper is part of the literature that argues exercise is not medicine. This study joins the work of Nesti on sport;¹ Chen's metaphor that “exercise is vaccine”² and Sjøgaard's contention that “exercise is more than medicine”³ in constructively critiquing the medical metaphor of exercise.

This paper is a case study, which is defined as an “analyses of persons, events, decisions, periods, projects, policies, institutions, or other systems which are studied holistically by one or other methods. The case that is the subject of the inquiry will illuminate and explicate some analytical theme, or object”.⁴ The case investigated here is the development of a student and community sport park by York St John University (YSJU). The author is one of the leaders of this development on which he has worked since the inception of the project 4 years ago. Thomas et al.⁵ stated that one of the strengths of case studies is that they “can be fruitful in formulating new ideas and hypotheses”.⁵ In this paper the case study helps to develop the idea that *exercise is recreation*. The analytical theme is recreation. As Thomas⁴ notes, case studies can have the “same starting points” but follow “different paths”. Thomas goes on to state that the quality of a case study “is determined by the line of inquiry that you choose to take”. From the outset this case study set out to focus on recreation.

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In the UK, arguably the most authoritative academic voice in Recreation Management has been George Torkildsen. The analytical theme used here draws heavily on his work and specifically on the fourth⁶ and sixth editions⁷ of his seminal book *Leisure and Recreational Management*. Torkildsen recognises that there are many different definitions of “recreation”. Here it is suffice to quote him as saying “recreation is perceived by most people as organised leisure activity for personal and social benefit”.⁶

The aims of this case study are to:

1. describe and reflect upon an *exercise is recreation* metaphor;
2. establish the principles and processes used to develop the sport park within which *exercise is recreation*;
3. present a comparative analysis of the *exercise is recreation* approach with a UK quality framework for “exercise referrals”.

Through these aims, this case study addresses the question is exercise medicine? It does so by illustrating an alternative way of thinking about exercise which focuses on recreation.

2. Methods

The methodology is a qualitative one in the form of a case study. It is based on (a) the experience of the author as one of the leaders of the development prompted by reflection on the reports he wrote as a leader of the sport park; (b) scrutiny of documents and plans related to the development; (c) discussion of the preliminary findings with other leaders of the sport park and (d) reference to the UK literature on recreation and a UK Department of Health set of guidelines on exercise referral schemes. Ethical approval for the study was granted by YSJU.

A 4-stage analysis was conducted. The first stage was to collect, file, and collate key documents and other evidence related to the sport park. During this stage 4 years’ worth of documents dating from the start of the multi-million £ project in 2012 were scrutinised. The author had access to all the material related to this development and a deep understanding of the material.

The second stage was to read and think about this evidence from a “recreation” perspective. Recreation was defined as:

“[...] leisure time activities which are [...] organised and institutional [...]. In its purest sense, recreation is re-creation—an inner consuming experience that leads to revival of the senses and the spirit. In this sense recreation renews, restores and recharges the batteries” (p.13–14).⁷

This definition was used for the analysis of the data. It was not the definition used to develop the sport park from the beginning.

The third stage was to categorise the evidence in terms of the contribution it could make to either the *exercise is recreation* metaphor research aim (see section 2.1 below) or to the principles and process research aim (see section 2.2 below). The final stage was to conduct a comparative analysis of the *exercise is recreation* metaphor with a UK quality framework for “exercise referrals”.

2.1. The method used to describe and reflect upon an *exercise is recreation* metaphor

The third stage of the analysis allocated the documentary evidence to the following 5 categories: a) strategies; b) plans of the site starting with concept drawings, sketch proposals through to tender issue plans and planning applications; c) policy documents; d) the agenda and minutes of a sports strategy steering group; and e) contemporary documents from 2016, e.g., current usage figures.

As the sport park was developed in phases, it was possible to create a timeline (Fig. 1) based on the dates major facilities were opened to students and the community. Site plans and visits were used to enable a physical description of the recreational environment to be presented along with a description of the facilities. Schedules of usage and data on bookings were used to catalogue the types of recreational experience taking place in the park.

As the Director of Estates has oversight of the physical development of the sport park, he was given the opportunity to comment on the data. This was done to enable him to add his professional opinion to that of the researchers.

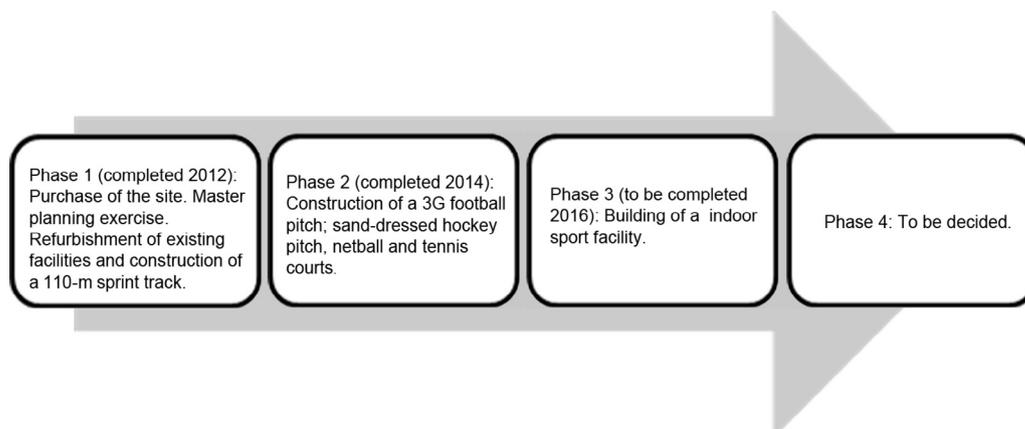


Fig. 1. Timeline of the development of the recreational project.

2.2. The method used to establish the principles and processes used to develop the sport park within which exercise is recreation

The third stage of the analysis allocated the documentary evidence to the following 10 categories: (a) organisational charts; (b) plans of the site ranging from concept drawings and sketch proposals through to tender issue plans and planning applications; (c) responses to local government consultation policies on sport, e.g., the York “playing pitch strategy” 2013; (d) consultation documents and minutes of meetings; (e) operational procedures; (f) facility specifications; (g) partnership agreements and events; (h) material relating to the university’s work around the Tour de France “Grand Depart—York” in July 2014; (i) notes on YSJ-A (the YSJU Department of Sport); (j) timetable, bookings and schedules of usage. There was some overlap with the evidence described in section 2.1. The inclusion of site plans being the most substantial.

As the Chief Operating Officer (COO) of the university has responsibility for the delivery of the sport park on time and in budget, he was given the opportunity to comment on the data. This was done to enable him to add his professional opinion to that of the researcher. This draft version was also shown to the Deputy Director of Estates because of the use of site plans in this section.

2.3. The method to present a comparative analysis of the “exercise is recreation” metaphor with a UK quality framework for “exercise referrals”

The fourth stage of the analysis was to use the results from the methods described in 2.1 and 2.2 to conduct a comparative analysis of the *exercise is recreation* metaphor with a UK Department of Health National Quality Assurance Framework for Exercise Referral Systems (NQA) (page vi).⁸ The author is in a unique position to write this case study as he (i) has a senior leadership role in the development of the sport park and (ii) was a co-author of the NQA. The framework establishes 8 things which are required of exercise referral programmes. These are compared and contrasted with the recreation metaphor.

3. Results

3.1. Description and reflection upon an exercise is recreation metaphor

The YSJU, Sports Centre, Nestle Rowntree Park, is a sport park in York (UK). The plans show that this is a 57-acre site encompassing over a 1000-trees bordered on one side by the River Foss. GPS Coordinates for the site are Eastings (460861.055) Northings (454139.986). The UK postcode is YO31 8TA. Images of the site, its development and more information can be found at Projects On Site Now | York St John.⁹ The site is within walking distance of the main campus, the City Centre and a number of residential areas. The site is well served by public transport and has good parking facilities for bikes and cars. If recreational facilities are to serve the needs of their local communities they need to be accessible by active commuting, e.g., walking or cycling. Smith and Bird¹⁰ have argued that

Table 1
Recreational facilities and experiences.

Current facilities	Current experiences
1 × 3G football/rugby pitch	Football
1 × sand dressed hockey/5 a-side football	5 a-side football
3 × tennis courts (which can also be multi use cricket practice)	Rugby League Rugby Union
2 × netball courts (which can also be two tennis courts)	Touch Rugby Hockey
1 × 120 m sprint track	Ultimate Frisbee
1 × grass football pitch	Athletics
1 × grass rugby pitch	Tennis
1 × cricket pitch	Netball
1 × training/ultimate frisbee pitch	Cricket
1 × Crown Green Bowling Green	Rounders
Gym	Crown Green Bowls
Allotments	Dog walking
Paths	Gardening
Cycle and car parking	Walking
Changing rooms	Exercise

transport and not health policy may be the “key to promoting health-enhancing physical activity” and this view has shaped the development of the sport park. The site was purchased by YSJU partly because of its location, active transport links and aesthetic appeal.

Analysis of the initial concept plans reveals that from the start of the project every effort had been made to provide as many facilities, activities and experiences on site as possible without distracting from the natural environment. The park has been developed in phases, as shown in Fig. 1. The development is still a work in progress and subject to the influence of the debate over the nature of exercise.

Table 1 shows the facilities and the experiences they enable that have been developed to date. More facilities are currently being built and planned. Those developing recreational programmes should focus on experiences rather than facilities.

Table 2 shows 7 characteristics of the recreation metaphor that the author identified through his analysis of this case using recreation as the “analytical theme”. Whilst the *exercise is recreation* metaphor was not used to develop the sport park from the very beginning, as it had not been conceptualised in 2012, the use of recreation as an “analytical theme” demonstrates that it does fit the metaphor. Referring back to Torkildsen’s definition of recreation in the methodology, the park offers leisure time activities (on evenings and weekends) which have an institutional backing (i.e., from YSJU) and which aim to provide a positive experience. As the sport park is still being developed, the *exercise is recreation* metaphor will guide the provision of future experiences, programmes, and facilities. One of the earliest examples of the *exercise is recreation* concept is a recreational programme called “Prepare to Ride” which YSJU runs to help people get ready for a British Heart Foundation charity bike ride which is hosted at the sport park.

When the Director of Estates was asked to comment on a first draft of these results, he emphasised that the most important characteristic was maximising the experience of the user.

The medical metaphor stresses the importance of health and the absence of disease. This recreational metaphor adopts the

Table 2
The characteristics of the *exercise is recreation* metaphor particular to this case.

Characteristic	Example evidence
Focus on the experience of the user	<i>Strategy 2.1a</i> : The YSJU Strategy for Sport 2012–2016 begins with the aim to provide “an exceptional student experience”. The proposal that secured the support of the Vice Chancellors Group (28/8/12) focused on “the student experience”.
Promotion of well-being	<i>Organisation 2.2a</i> : Within its structure YSJU has a team dedicated to improving the well-being of staff and students.
Importance of community	<i>Contemporary 2.1e</i> : In 2016, York suffered flooding. The sport park helped 7 local sport clubs whose own facilities had flooded, allocating them 26.5 h access to outdoor all-weather facilities. The University is now working on a Recreational Flood Resilience Plan.
Embracing inclusivity	<i>Steering Group 2.1d</i> : At the groups meeting on 20/2/13 there was an agenda item on “how to ensure inclusivity”. To promote female participation the YSJU prioritised netball, investing in facilities and scholarships.
Sport	<i>Timetables 2.2j</i> : Bookings show that most of the physical recreation that takes place on site is sport related. A limitation of using data based on “bookings” is that they do not capture informal recreation, such as walking, that takes place in the park.
Aesthetic	<i>Plans 2.1b</i> : All the site plans show a concern to protect and enhance the natural environment. The COO talks about the “wow” factor created by a combination of the park setting and world class outdoor sport facilities.
In leisure time	<i>Timetables 2.2j</i> : Recreation takes place in leisure time, i.e., evenings and weekends. To provide recreational opportunities the YSJU has (i) invested in floodlighting and (ii) staff who work outside of the “normal” 9–5 work pattern.

Note: The tracking number and letters in bold-italic and underlined (e.g., 2.1a) refer to categories described in the methodology (e.g., 2.1a = the sub-heading 2.1 in the method section and the ‘a’ = strategies).

Abbreviations: YSJU = York St John University; COO = Chief Operating Officer.

broader concept of well-being. Well-being can be defined as “the state of being comfortable, healthy, or happy”.¹¹ This definition recognises that whilst health is necessary for a good quality of life it is not sufficient. Enjoyment, comfort, and happiness are important.

3.2. The principles and processes used to develop the sport park in which “exercise is recreation”

Organisational charts show that the sport park was developed by a process involving 4 groups. A project group had oversight of (i) an architect sub-group, (ii) a construction group, and (iii) a user’s group. Since the purchase of the Nestle Rowntree Park in 2012 the author identified 8 principles that have guided the project. These are presented in Table 3. Within a sports management context, Andrew et al.¹² stated that “the end result of most case studies is to help sports management practitioners in their quest to operate more effectively and efficiently”. It is hoped that these results will help develop evidence-based practice in recreation management.

In discussing theories of recreation, Torkildsen stated that “one of the key learning points is that programmes and activities should give potential participants a wide choice of oppor-

Table 3
The principles and processes used to develop the sport park.

Principles and process of development	Evidence
Custodianship	<i>Policy Statement 2.1c</i> : On 8/8/13 the YSJU obligation to be “responsible custodians of a site with a distinguished sporting heritage” was recorded. <i>Timetable 2.2j</i> : The sport park is used 4 days per week as a venue to teach students on sport related degrees and in 2015–2016 it will be the venue for the delivery of 14 sports coaching courses, 5 first aid courses and 12 “Sport Coach UK” courses. This work is developing the physical educators of the future.
Partnerships	<i>Agreements 2.2g</i> : The Sport Park hosts the annual British Heart Foundation “Heart of York Bike Ride”. It provides a recreation preparation programme for people with stable heart conditions who would like to participate in the ride.
Value driven	<i>Strategy 2.1a</i> : The strategy states “sport at the University should be accessible, free from discrimination and founded on inclusive practices [. . .]”. Important insights into the values of the university came from the institution’s history. ¹⁵
Interprofessional	<i>Consultation 2.2d</i> : Minutes from a consultation meeting held on 20th March, 2014 record the involvement of academics, estate professions, architects, and sport development officers.
Local heritage informs practice	<i>Timetables 2.2j</i> : Joseph Rowntree (1836–1925) provided recreational facilities for the workers in his chocolate factory on or near the current Sport Park. ¹⁶ A number of clubs still bearing the Rowntree name use the site.
Change	<i>YSJ-A 2.2j</i> : A lot has been learned from developing the Sport Park. As a result, the YSJU is reviewing the structure by which recreation is managed.
The Park Environment	<i>Plans 2.1b</i> : The site plans demonstrate a real concern for protecting and enhancing the natural environment.
Ride the bike as you build it	<i>Timetables 2.2j</i> : The records show that the facility was in use from purchase and through all the phases of construction.

Note: The tracking number and letters in bold-italic and underlined (e.g. 2.2j) refer to categories described in the methodology (e.g., 2.2j = sub-heading 2.2 & j = timetable, bookings and schedules of usage).

Abbreviations: YSJU = York St John University; YSJ-A = York St John University Department of Sport.

tunity to experience satisfaction and benefits [. . .]” (p.48).⁷ Evaluated in these terms, the sport park is a success as it offers facilities ranging from football to bowls to garden allotments.

When presented with a draft set of results, the Deputy Director of Estates emphasised the importance of the park setting.

3.3. Results from the comparing “the exercise is recreation” metaphor with a UK quality framework for “exercise referrals”

In 2001, the author of this paper was a co-author of the NQAF. The NQAF “focuses primarily on the most common model of exercise referral system, where the GP or practice nurse refers patients to facilities such as leisure centres or gyms for supervised exercise programmes”.⁸ In the UK, GPs are medical doctors in general practice. The 69-page framework made 8 things necessary for referral schemes and includes 70

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Table 4

A comparison between the *exercise is recreation* metaphor with a UK quality framework for “exercise referrals”.

Requirements from the NQAF	Comparison with <i>exercise is recreation</i>
“Establish a formally agreed process for the selection, screening and referral of specific patients”.	Recreation can be spontaneous and informal. It can be simply a walk in the park.
“Conduct appropriate assessment of patients prior to the exercise programme”.	Recreation is not about patients, it is about people and communities
“Provide a specific range of appropriate and agreed physical activities for a defined period of time, which maximise the likelihood of long-term participation in physical activity”.	Recreation is about presenting the individual and community with a wide range of facilities from which they can select options that meet their needs.
“Ensure any assessments and the exercise programmes are delivered by professionals with appropriate competencies and training which match the needs of the patient being referred”.	Recreation can be about amateurs who do things out of love of the activity.
“Incorporate a mechanism for the evaluation of such a referral processes”.	In preparing this manuscript and listening to the presentations at the symposium the author had the sense that the medical metaphor is built on quantitative research whilst the recreation and sport metaphors are built on qualitative work .
“Facilitate long-term support for patients to maintain increases in physical activity”.	Exercise and recreation is often about the experience of feeling good in the present not just in the future. ¹⁷
“Ensure the patient is consulted and involved throughout the referral process and is encouraged to take responsibility for their health and physical activity participation”.	Based on the authors’ 30 years of experience working in the exercise sector he believes that both the exercise referral schemes and programmes of recreation could do more to involve the participant.
“Ensure confidentiality of patient information through secure and appropriate storage of records.”	Record keeping on recreational programmes tends to be at the club, group, or community level and not about the individual.

Note: All the texts in the first column are quotes from the NQAF⁸ (see page vii) with the text in bold highlighted by the author for the purposes of this analysis. Abbreviation: NQAF = a UK Department of Health National Quality Assurance Framework for Exercise Referral Systems.

guidelines and performance indicators collated under 4 sections. The main sections of the framework are (i) a patient-centred model, (ii) professional competencies, (iii) scheme development and monitoring, and (iv) evaluation issues. Table 4 compares the 8 things required by the framework with the *exercise is recreation* metaphor.

Clearly the NQAF approach and the recreational one are different but possibly complimentary. If working with patients then the NQAF approach has a lot to offer; if working with the general population the *exercise is recreation* metaphor may help guide interventions and developments like the case presented here. As exercise is such a broad concept it may conform to a number of metaphors including medicine and recreation.

Indeed, throughout the NQAF the importance of physical activity including walking is stressed as well as structured exercise.

4. Discussion

Based on the results of this case study, and the debates at the symposium, 3 major themes are discussed.

4.1. Terroir

In his fictional writing, VanderMeer¹³ refers to the concept of Terroir (a sense of place). He defines it as “the sum of the effects of a localised environment, inasmuch as they impact the qualities of a particular product” (p.131). The “product” normally referred to is wine. Here the author refers to Terroir in an effort to capture the totality of the culture created by a recreation facility. When exercise is perceived as recreation it emphasises the interaction of people, place and heritage. To enable people to recreate through exercise and to achieve well-being, exercise scientists need to understand the complex interaction of individuals, community norms, and the environment.

4.2. Reductionism

To reduce exercise to medicine is akin to saying that fire is simply energy. Van Der Post¹⁴ once overheard Jung ask an eminent professor “what does fire mean to you”. When the Professor responded “Why, it means energy, of course” Van Der Post reflected:

“You wouldn’t think to hear him that fire [. . .] is light in darkness, safety against the beasts [. . .]; it is warmth against cold; [. . .]It is all these and many more things before it becomes an abstract of energy in the mind of a professor, however eminent.”¹⁴

The risk of “reducing” exercise to medicine is the unintended consequences of putting at risk a broader understanding of exercise. For example, *exercise is recreation*, exercise is leisure, exercise is play and exercise is part of physical education. Exercise is of value in and of itself as a life-affirming experience, and one that in this increasingly virtual world enables us to experience the joy of embodiment and to remain in the moment.

4.3. The implications the exercise is recreation metaphor for those developing recreational sites

When institutions invest in developments there is a risk that the focus is on facilities rather than the recreational experience. Whilst facilities are sometimes necessary for recreation to occur they are not sufficient. For example, for people to recreate through soccer they need more than a pitch. They need organisation, other players and a shared understanding of the game. Sport is such a powerful phenomenon that it can monopolise the development agenda. Care needs to be taken to ensure that activities such as walking are given equal attention.

5. Conclusion

This paper contributes to the literature on the nature of exercise by proposing that it is recreation, not medicine. The paper also (i) demonstrates the impact that qualitative work can make and (ii) introduces to the debate a fresh perspective from the UK on recreation management and GP referral schemes.

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Competing Interests

The author declares no competing financial interests.

References

- Nesti M. Physical activity for health: serious fun for the whole person! In: Cheng S, Ronkainen N, Tikkanen O, editors. *Proceedings of the physical activity throughout the lifespan: is exercise medicine or what? Scientific symposium*. Shanghai: Shanghai Jiao Tong University; 10–11 November 2015.p.3.
- Chen A. On childhood obesity prevention: “Exercise is medicine” vs. “exercise as vaccine”. *J Sport Health Sci* 2012;**1**:172–3.
- Sjøgaard G. Exercise is more than medicine: the working age population’s wellbeing and productivity. In: Cheng S, Ronkainen N, Tikkanen O, editors. *Proceedings of the physical activity throughout the lifespan: is exercise medicine or what? Scientific symposium*. Shanghai: Shanghai Jiao Tong University; 10–11 November 2015.p.12.
- Thomas G. *How to do your case study: a guide for students and researchers*. 2nd ed. London: Sage; 2016.p.23.
- Thomas J, Nelson J, Silverman S. *Research methods in physical activity*. 6th ed. Champaign, IL: Human Kinetics; 2011.p.297.
- Torkildsen G. *Leisure and recreation management*. 4th ed. Abingdon, Oxon: Spon Press; 1999.p.47.
- Taylor P, editor. *Torkildsen’s leisure and recreation management*. 6th ed. Abingdon, Oxon: Spon Press; 2011.
- UK National Health Service. *Exercise referral systems: a national quality assurance framework*. London: Crown Copyright; 2001.p.vi.
- Projects On Site Now*. Available at: <http://www.yorksj.ac.uk/estate-management/estate-management/our-projects/on-site-now.aspx>. [accessed 01.03.2016].
- Smith A, Bird S. From evidence to policy: reflections on emerging themes in health-enhancing physical activity. *J Sports Sci* 2004;**22**: 791–9.
- Oxford Dictionaries Language Matters. Available at: <http://www.oxforddictionaries.com/definition/english/well-being>; [accessed 01.03.2016].
- Andrew D, Pedersen P, McEvoy C. *Research methods and design in sport management*. Champaign, IL: Human Kinetics; 2011.p.130.
- VanderMeer J. *Authority*. New York, NY: Farrar, Straus and Giroux; 2014.p.131.
- Van Der Post L. *Jung and the story of our time*. London: Penguin; 1978.p.46.
- McGregor G. *Life more abundant: York St John University 1841–2008*. York: Sessions of York; 2009.
- Vernon A. *A quaker business man: the life of Joseph Rowntree*. York: Sessions of York; 1987.
- Crone D, Smith A, Gough B. “I feel totally at one, totally alive and totally happy”: a psycho-social explanation of the physical activity and mental health relationship. *Health Educ Res* 2005;**20**:600–11.