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Eras of Burnout Research:

What Does the Past Tell us About the Future of Burnout in Sport?

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Introduction

In the first volume of our special issue on *Burnout in Sport and Performance* in the *Journal of Clinical Sport Psychology*, we provided our (and other experts in the field's) thoughts on where burnout research and practice efforts in sport should go in the future. However, we cannot fully and most effectively talk about the future without a proper understanding of past efforts relative to burnout in sport and performance. As it has been approximately 40 years (e.g., Smith, 1986; Dale & Weinberg, 1990) since interest in burnout in sport began, now seems a prudent time for some historical reflection on the state of the field, especially given broader sports medicine calls for its relevance to holistic athlete health, and for youth and adolescent athletes in particular (LaPrade et al., 2016).

As of May 2023, there are over 100 articles on athlete burnout on PubMed and over 47,000 listings on Google Scholar, highlighting the clear growth in this knowledge base in less than half a century. Moreover, in the occupational burnout research and practice space, we have seen the World Health Organization recently recognize burnout as an "occupational phenomenon" in its Revision of the International Classification of Diseases (ICD-11; WHO, 2019). As a result, it is certainly time to re-consider how research efforts have arrived at this current state, what the contributions and limitations of each 'era' of athlete burnout research and practice are, and how we can use this information to inform the next generation of burnout scholars and practitioners in sport. We believe that considering these eras of athlete burnout history will be beneficial to this special issue and inform future research and practice efforts.

The Recognition in Sport Era

The first era of burnout research and practice in sport involved the description and consideration of the burnout experience in the sport environment that had previously only been considered in the working world (e.g., Freudenberger, 1974; Maslach, 1982). For example, early discussions of the concept highlighted the exhaustion, reduced accomplishment, and devaluation components (dimensions) as relevant to the athlete experience for professional and amateur athletes alike (Dale & Weinberg, 1990; Rotella, Hanson, & Coop, 1991; Smith, 1986). These early descriptions and discussions initiated the idea that the concept of burnout was potentially relevant to sport but did little to conceptually and/or operationally define the construct (Cresswell & Eklund, 2006a). Moreover, early descriptions linked the burnout construct to the stress and coping model (Smith, 1986) but did little to differentiate sport burnout from various outcomes of the stress and coping process potentially distinct from burnout such as dropout/sport discontinuation (Eklund & DeFreese, 2020).

Early work in this era was extremely important for bringing this concept to sport for consideration and mirrored some of the early work in worker populations (Maslach & Jackson, 1986; Maslach & Leiter, 1997; 1999). That said, as early research eras often do, efforts to promote the importance of the concept to a new population and research and practice audience in sport brought up more questions than answers including: how to define burnout in sport, how to measure it, and what conceptual models best explain its development? Ultimately, this era set the foundation for the scientific examination of burnout in the sport environment.

The Definition, Measurement and Theoretical Development Era

The second era of burnout research in sport focused on a consistent definition, measurement, and theoretical development. Raedeke (1997) adapted the burnout definition from

Maslach's work-based conceptualization resulting in the current athlete burnout definition as a multidimensional cognitive-affective syndrome characterized by symptoms/dimensions of emotional and physical exhaustion, reduced sense of accomplishment, and sport devaluation (Raedeke, 1997; Raedeke & Smith, 2009). Moreover, despite earlier calls for this, it was not until the early 2000s that burnout measurement in sport (for athletes) really began. The earliest efforts to measure burnout began with the *Eades Athletic Burnout Inventory*, (Eades, 1990). But this measure had several limitations including poor psychometric properties (Cresswell & Eklund, 2006b; Eklund & Cresswell, 2007). Consequently, Raedeke (1997) and Raedeke and Smith's (2001) *Athlete Burnout Questionnaire* has since become the most commonly utilized measure exhibiting reliability and validity in various athlete populations (Raedeke & Smith, 2004; 2009). Importantly, having a consistent definition and a valid and reliable measure of athlete burnout allowed for exponential growth and expansion of the burnout knowledge base in sport.

Guided by the ability to measure burnout in sport, conceptual model development and/or adaptation has facilitated growth in the burnout research and theory knowledge base by providing insight for testable hypotheses regarding how and why burnout may develop. The stress and coping model (Smith, 1986) has facilitated understanding of perceived stress and/or ineffective coping strategies being key antecedents of athlete burnout as well as how other factors related to the motivation processes (e.g., cognitive appraisal, motivation, trait variables such as perfectionism) contribute to the understanding of burnout in sport (Goodger, Gorely, Lavallee, & Harwood, 2007). Sport commitment models (Schmidt & Stein, 1991) have further highlighted that maladaptive sport commitment profiles (i.e., staying in sport because I have to not because I want to) are associated with the highest levels of burnout (Raedeke, 1997). Importantly, this suggests that, though possible, it is not entirely likely that those athletes

experiencing the highest levels of burnout are likely to leave sport. This puts these athletes at risk for a variety of other maladaptive psychosocial experiences (e.g., depression). Other models have highlighted the importance of high athletic identity combined with low perceived control over the sport experience to potential athlete burnout development (Coakley, 1992; 2009). Finally, a variety of psychosocial theories, including self-determination theory (Deci & Ryan, 1985), have highlighted that low and/or maladaptive (i.e., less self-determined) forms of motivation are associated with the potential for burnout development (e.g., Lonsdale & Hodge, 2011). Cumulatively, these models/theories are considered complementary rather than as existing in opposition and have been considered within an integrated models of burnout development as well (Gustafsson, Kenttä, & Hassmén, 2011). Ultimately, this era is best known for systematically jumpstarting research on athlete burnout and burnout in sport more broadly by using theory as a means to inform testable hypotheses regarding burnout, allowing for the strongest inferences to inform burnout research and practice in sport.

The Cross-Sectional Research Era

A third burnout research era was represented by a proliferation of cross-sectional research using validated measures of athlete burnout (largely the ABQ; Raedeke & Smith, 2009). Researchers in this era began to test some of the hypothesized antecedents of burnout proposed by the aforementioned theoretical models. Notably, this era established psychological stress and coping variables (Raedeke & Smith, 2001; 2004), various conceptualizations of sport motivation (Cresswell & Eklund, 2005b; 2005c), as well as sport commitment (Raedeke, 1997) and identity and control factors (Black & Smith, 2007) as key burnout antecedents/correlates. For example, Raedeke (2001) examined multiple empirically informed burnout antecedents in a sample of elite adolescent swimmers with an emphasis on how sport commitment variables were associated with

athlete burnout perceptions using a cluster analytic approach. This seminal article set a standard for high-level cross-sectional research in the athlete burnout space. The work was followed up by notable works by Cresswell and Eklund (2005b; 2005c) highlighting the importance of psychological stress and motivation to athlete burnout perceptions in samples of New Zealand Rugby Union athletes. Overall, this era was important for establishing a key set of burnout antecedents (i.e., perceived stress, coping, sport commitment, identity, perceived control) which established the foundational variables to consider in future longitudinal research designs as salient burnout predictors.

The Early Longitudinal Research Era

The 2007 Special Issue on Athlete Burnout published in the *International Journal of Sport Psychology* was a landmark empirical collection of research and evidence-based recommendations for research and practice in the athlete burnout space (Smith, Lemyre, & Raedeke, 2007). Notable works included an examination of Coakley's model in collegiate swimmers (Black & Smith, 2007) and an examination of the combination of psychological needs satisfaction in predicting athlete burnout (Perreault et al., 2007). However, a particular memory our authorship group has of this work is its "call to action" regarding the needs for more longitudinal (i.e., multi-time point) studies. Their special issue, among recommendations by others (e.g., Eklund & Cresswell, 2007), sparked the beginning of this early era of longitudinal athlete burnout work.

Research in this era focused primarily on testing theoretically driven hypotheses from prominent burnout theories including psychological stress and coping and motivational (i.e., achievement goal theory, self-determination theory) theories as well as associated (to relevant conceptual frameworks) psychosocial correlates germane to athlete burnout development. A

collection of representative studies provided a strong foundation from which to best understand this important era of athlete burnout research and to inform larger scale longitudinal burnout research efforts going forward. For example, in a collection of studies with New Zealand Rugby Union athletes, Cresswell and Eklund (2007) highlighted the importance of stress and coping antecedents to burnout development using a longitudinal qualitative design which built from their earlier qualitative work in the population (Cresswell & Eklund, 2006c). Moreover, building off this series of studies that also examined self-determined motivation and burnout in rugby athletes (Cresswell and Eklund, 2005a), Lemyre and colleagues (2007) showcased the influence of self-determined motivation to burnout development across a season for elite swimmers while additional work by this research group highlighted variability in both self-determined motivation and affect across a season to collegiate swimmer athlete burnout development (Lemyre, Treasure, & Roberts, 2006). Moreover, the work of Quested and Duda (2011) highlighted the importance of the psychological needs of autonomy, competence, and relatedness to the development of athlete burnout over time. Overall, this era was important as it provided initial, longitudinal evidence to support extant burnout theory that served as foundational knowledge from which to base more sophisticated longitudinal burnout study designs going forward.

The Contemporary Longitudinal Research/Meta-Analysis Era

The most recent era of athlete burnout research has focused on the proliferation of longitudinal and meta-analytic work. Early work in this era highlighted the potential for empirically specified relationships between perceived stress, self-determined motivation, social interactions (e.g., DeFreese & Smith, 2014) and aspects of perfectionism (e.g., Madigan, Stoeber, & Passfield, 2015) as predictors of athlete burnout development over time. The time course of these studies varied from across competitive seasons to across multiple seasons of sport

academy participation. This era also included some sophisticated longitudinal designs linking burnout development to important antecedents and examining how burnout dimensions of emotional and physical exhaustion, reduced accomplishment, and sport devaluation develop over time, with some evidence suggesting burnout dimensions may not develop concomitantly over time (Lundkvist et al., 2018). For example, Madigan and colleagues (2016), using a three-time point design in a study of junior sport academy athletes, found autonomous motivation to mediate the negative relationship between perfectionistic strivings and burnout at both the between- and within-person levels. However, controlled motivation, was found to only mediate the positive relationship between perfectionistic concerns and burnout at the between-person level. Accordingly, this study examined burnout antecedents longitudinally, in tandem, and at the within-athlete and between-athlete levels – representing a complex and illustrative study design, data analysis, and interpretation strategy. Relatedly, Isoard-Gautheur and colleagues (2015) examined the development of burnout in a sample of adolescent French handball athletes at elite training centers using a five-wave longitudinal design. Results unearthed a complex series of outcomes with individual burnout dimensions developing differentially over time with gender impacting the slope of these developmental patterns. The most recent longitudinal research efforts have showcased that a complex series of mediators (i.e., perceived support and stress) of athlete burnout exist over time (Glandorf, Coffee, & Madigan, 2022), that person-centered longitudinal efforts have utility in detailing how highlighted how the individual dimensions of athlete burnout develop across a competitive sport season (DeFreese & Smith, 2021), and that burnout symptoms appear to be increasing over time in athlete populations (Madigan et al., 2022). Other important contemporary efforts are further highlighted within both volumes of this special issue.

Moreover, this era is also notable for its for its focus on meta-analytic work. Meta-analytic studies have built on earlier systematic review efforts (Goodger et al., 2007) and systematically summarized key antecedents of burnout – through a collection of meta-analyses highlighting key burnout antecedents including motivation (Li et al., 2013), stress (Lin et al., 2022), perfectionism (Hill & Curran, 2016), and social factors (Pacewicz et al., 2019). And, most recently, sought to summarize possible consequences of burnout for athletes' health (Glandorf et al., in press). Ultimately, this meta-analytic work, driven by the fact that enough studies have now been conducted to utilize this data analytic technique, represents a key summary of what we know about burnout in sport as well as a foundational knowledge base to inform research and practice going forward.

Cumulatively, this era of burnout research has established a solid summary of the current knowledge base including longitudinal antecedents to inform development of psycho-educational interventions necessary to prevent and/or mitigate burnout. A necessary and key response to this era is for these interventions to become more commonplace in sport as, to date, only small pilot trials have been considered (Dubuc-Charbonneau & Durant-Bush, 2015; Li et al., 2019). Overall, this most contemporary burnout era has made great strides in broad knowledge, temporal understanding, and the elements necessary to design and test burnout interventions with potential to mirror the success of interventions in non-sport, work environments (Ahola et al., 2017).

Conclusions

As an authorship group, we have thought carefully about what can be said regarding the future of burnout research in sport that has not been said before with the goal of informing burnout research and practice eras yet to come. Contemporary calls for improved methodologies, study designs, and interventions have been stated long ago with interventional work still needing

continued and innovative focus. However, we would like to strike another note by highlighting the potential for future sport policy and sampling considerations with regard to burnout in sport. Notably, the extant knowledge base in sport combined with the growing public health interest in non-sport burnout has set a stage to more broadly consider what policies could be enacted to prevent burnout in athletes and other sport-based actors (e.g.., coaches). For example, could training protocols, sport psychology resources, and other environmental resources (e.g., onboarding, transition planning) be provided to athletes from the onset of their participation prior to burnout occurring? Additionally, can sport scientists well-versed in the study of burnout work with public policy leaders to establish these guidelines and policies using an evidence-based practice model? One way to spark such efforts could be with an updated white paper/consensus describing the importance of burnout to sport, with an athlete focus, as well as outlining such procedures in a public manner. Similar white papers/policy statements on athlete mental health (Chang et al., 2020) and previous athlete burnout position statements (DiFiori et al., 2013) could be excellent guides for such work and jumpstart burnout guidelines and policy efforts in sport.

Moreover, though not uncommon to many areas of sport science research, much of the research on burnout in sport has focused on samples that lack some aspects of diversity in sampling (e.g., race/ethnicity, gender identity, sexual orientation, country of origin) which limit generalizations of the extant work to these important populations. Though notable work in athlete burnout, showcased in the pages of these special issues, has crossed countries, sports, gender identities, and age/developmental levels, there is still much important work that can be done to make sure burnout research is relevant to all who participate. This includes those who may discontinue sport due to the experience of burnout (or other factors) resulting in a complex sampling problem noted in worker populations (e.g., “healthy-worker effect”, Schaufeli &

Enzmann, 1998), as those that leave sport due to burnout are rarely (if ever) studied. Specifically, more burnout research with athletes and others in sport experiencing high levels of burnout is needed would aid in further understanding burnout development, burnout outcomes, and whether current tools like the ABQ are validity and/or reliable for clinical decision-making (i.e., burnout diagnosis, Gerber et al., 2018). Accordingly, we hope this review sparks continued interest in a diverse collection of researchers examining burnout in sport in innovative ways and in the most diverse sport-based populations possible.

Papers within this Burnout Special Issue (Volume 2) represent additional studies which can inform these public policy and sampling re-consideration efforts. We would like to again thank the contributing authors for their knowledge and effort in producing such excellent manuscripts with conceptual and practical implications. We would also like to thank the *Editor-in-Chief* of the Journal of Clinical Sport Psychology, Human Kinetics, and all contributors to both special issues including guest editors and guest reviewers.

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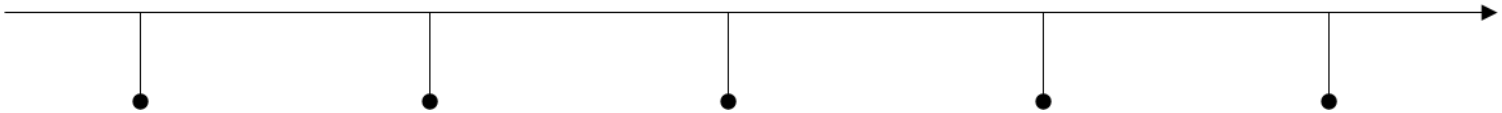
Table 1. The eras of burnout in sport research.



Era	The Recognition in Sport Era	The Definition, Measurement and Theoretical Development Era	The Cross-Sectional Research Era	The Early Longitudinal Research Era	The Contemporary Longitudinal Research/Meta-Analysis Era
Contributions	Established the importance of burnout to sport, including in athlete populations. Established the need for appropriate and theoretically informed measurement of burnout in sport.	Established a consistent, theory driven definition of athlete burnout. Established a valid and reliable measure of athlete burnout, and consistent use of work-based measures for coaches and other sport actors. Contributed a detailed conceptual development and integration of burnout-specific models/theories to aid the understanding of burnout in sport.	Established initial support for conceptual models in understanding athlete burnout experiences via cross-sectional designs. Substantiated key antecedents from conceptual models and their posited, initial directions and magnitudes of association with burnout in sport.	Early longitudinal and/or prospective evidence to support the hypothesized directions of empirically specific antecedents of burnout development.	Foundational understanding of key contributors to the experience of burnout in sport, with a primary focus on athlete burnout. More detailed longitudinal evidence to support directional associations among burnout and conceptually driven antecedents from which to inform intervention development in sport.

Limitations	Lack of an established, sport-specific burnout definition. A limited understanding of the scope of the problem in sport and/or factors contributing to its occurrence.	Limited research assessing the utility of established conceptual models in understanding/predicting burnout experiences in sport via specific antecedents.	Lack of longitudinal and/or prospective data to establish stronger, directional and/or causal links of burnout with empirically specified antecedents.	Lack of replicated, longitudinal evidence to inform burnout intervention development efforts for sport.	Lack of quasi- and/or randomized control study evidence to directly support practitioner intervention efforts to support manage, prevent, or treat burnout experiences in sport, especially for athlete populations where the most burnout data is currently available.