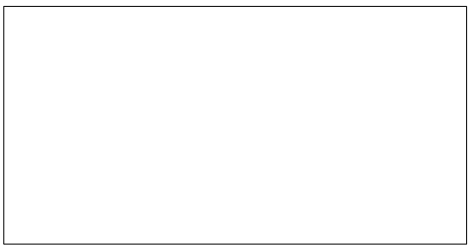

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Reducing Burnout in Athletes

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Summary

Burnout is a growing concern for those working in sport. This is because burnout is relatively common among athletes, and it negatively influences their performance, motivation, and wellbeing. However, currently, few guidelines exist for how to deal with burnout in practice. Consequently, the present chapter seeks to provide initial recommendations for how to reduce burnout in athletes. To do so, we first provide an introduction to athlete burnout. This includes a definition and description of burnout, details of how to measure burnout, models outlining the development of burnout, and an overview of the consequences of burnout for athletes. We then provide a review of research that has examined the efficacy of interventions in reducing burnout. Because of a lack of studies in sport, this review focuses on studies in other professions such as physicians, nurses, and teachers, where much more evidence exists. We review 13 meta-analyses of randomised controlled trials of burnout interventions in these professions. Based on the findings of this review, we provide suggestions for how practitioners might reduce burnout in athletes. It is hoped that these suggestions are useful in alleviating the symptoms of burnout, and safeguarding athletes from its negative consequences.

Keywords:

Stress; exhaustion; Athlete Burnout Questionnaire (ABQ); cognitive-affective model of burnout; commitment model of burnout; self-determination theory (SDT); meta-analysis; review; interventions; randomised controlled trial (RCT)

Introduction

Burnout has never been more relevant. This is especially the case for athletes, who train and compete under extreme and, it would appear, increasing levels of stress (e.g., Lopes Dos Santos et al., 2020). For example, the significant challenges and disruption caused by the COVID-19 pandemic, such as training in quarantine, restricted access to facilities, and the uncertainty of rescheduled competitive seasons, may have drastically accelerated the risk that athletes will develop burnout (e.g., Spagnoli et al., 2021). Unsurprisingly, these issues pose a significant challenge for those working with athletes (e.g., Schinke et al., 2020). As noted previously (e.g., Madigan et al., 2021), however, there is a limited evidence base in sport from which to make applied recommendations. Consequently, in the present chapter, given the much larger body of evidence, we provide a review of research that has examined the efficacy of interventions in reducing burnout outside of sport. Based on the findings of this review, we provide suggestions for how practitioners might reduce burnout in athletes. But first we introduce athlete burnout. This includes providing a definition and description of burnout, details of how to measure burnout, models outlining the development of burnout, and an overview of the consequences of burnout for athletes, before moving on to our review.

What is Burnout?

Burnout has its scientific roots in occupational psychology. In this regard, at around the same time, in the 1970s, two psychologists – Christina Maslach and Herbert Freudenberger – observed a phenomenon of gradual exhaustion and loss of commitment in those working in caring and care-giving professions (e.g., Freudenberger, 1974; Maslach & Pines, 1977). This phenomenon became known as burnout. Shortly after this initial recognition, Maslach provided the first formal conceptualization of burnout in which she defined burnout as a

multidimensional syndrome that theoretically arose as a consequence of chronic work stress. This definition posits that there are three main symptoms (or dimensions) of burnout: (1) emotional exhaustion (feelings of being emotionally overextended and exhausted at one's work), (2) cynicism (an unfeeling and impersonal response toward recipients of one's service, care, treatment, or instruction), and (3) reduced professional efficacy (feelings of reduced competence and achievement in one's work with people; Maslach et al., 1986). Since its conceptualization, a vast body of work has explored the antecedents, correlates, and consequences of burnout and has done so in many occupations (e.g., teaching, healthcare, sport).

It was not until the early 2000s that a systematic examination of burnout in athletes occurred. This shift was spurred by the recontextualization of burnout to the sport domain. Specifically, Raedeke and Smith (2001) recontextualized the occupational symptoms to better suit the experience of athletes. By doing so, athlete burnout was, and still is, viewed as an extreme form of sport disillusionment that is comprised of three symptoms that mirror those in the work domain: (1) physical and emotional exhaustion, (2) devaluation or cynicism directed at sport, and (3) a reduced sense of athletic accomplishment (Raedeke & Smith, 2001). Physical and emotional exhaustion is characterized by the perceived depletion of emotional and physical resources resulting from training and/or competition. Sport devaluation is the development of a cynical attitude towards sport participation. Finally, reduced sense of athletic accomplishment is characterised by a negative evaluation of one’s sporting abilities and achievements.

In providing their recontextualization, Raedeke and Smith (2001) also developed a tool to quantify burnout in athletes – the Athlete Burnout Questionnaire (ABQ). The ABQ

consists of 15 items, with five items reflecting physical and emotional exhaustion, five items reflecting sport devaluation, and five items reflecting a reduced sense of accomplishment. This self-report instrument asks athletes to reflect on the frequency with which they are experiencing these symptoms (*almost never* to *almost always*). Recent work has suggested that quantifying the intensity (*very mild* to *very strong*) and duration (*no time* to *a very long time*) of symptoms may also be beneficial (Madigan, 2021). This instrument is the most commonly used tool to determine whether athletes are experiencing burnout and has been used with athletes of many ages, competitive levels, and across a large range of individual and team sports (Eklund & DeFreese, 2020). In doing so, the psychometric properties of the instrument have held up under scrutiny (e.g., Gerber et al., 2018), leading burnout researchers to denote the ABQ as the current "gold standard" for athlete burnout assessment (Eklund & DeFreese, 2020).

How does Burnout Develop?

Many models have been used to understand the development of burnout in athletes. This includes models adapted from the broader organisational literature (e.g., commitment; Schmidt & Stein, 1991), models of optimal functioning (e.g., Self-Determination Theory; Deci & Ryan, 2002), and also sport-specific models (e.g., Smith, 1986). The models differ in regard to the main antecedents, but are similar in that they posit that both personal and organisational/environmental factors are causally linked to burnout. We discuss the three main models of athlete burnout below.

Smith's (1986) cognitive-affective model. This model postulates that burnout develops because of chronic stress. When athletes appraise an imbalance between the demands of a situation (e.g., training) and their resources to cope with these demands, they will experience

stress. If this imbalance between perceived demands and resources to cope becomes chronic, athletes will experience a range of emotions (e.g., anxiety) and rigid behavioral responses (e.g., withdrawal) that comprise their attempt to relieve the negative experiences associated with chronic stress. This model argues that one such behavioral response is burnout development.

Raedeke's (1997) commitment model. Commitment has also been proposed as an important factor in the development of burnout (Raedeke, 1997). In this regard, commitment represents the desire and resolve to continue sport participation (Scanlan et al.,1993). There are three factors affecting commitment. First, how attractive or enjoyable the activity is perceived. Second, which alternatives to the activity are viewed as in a greater or lesser degree as attractive. Finally, the restrictions the athlete perceives to withdraw from sport such as personal investments and social constraints. How the athletes interpret these categories determine whether the commitment is based on enjoyment or entrapment. The athlete whose sport commitment is based on entrapment can be described as participating in sport "because I have to" in contrast to "because I want to." According to this perspective, athletes who burn out do so because they are committed solely for entrapment reasons.

Deci and Ryan's (2002) self-determination theory (SDT). This theory contends that social-environmental conditions underlie the progression or attenuation of self-motivated behaviour and health via the satisfaction or thwarting of three basic psychological needs (autonomy, relatedness, and competence; Ryan & Deci, 2017). SDT assumes that characteristics of the social environment are critical to the level of need satisfaction that individuals experience (Ryan & Deci, 2000). Athletes therefore who are exposed to especially controlling environments (e.g., working with an authoritative coach) will have

their needs thwarted, develop more extrinsic motives for participation, and, over time, one wellbeing outcome is burnout development.

Many studies have sought to determine the usefulness of these models in understanding burnout development. This includes a large number of studies linking stress to athlete burnout (e.g., DeFreese & Smith, 2014). In fact, a recent meta-analysis of 48 studies has confirmed a strong relationship between the two (considered large-sized; Lin et al., 2021). Similarly, there is meta-analytic evidence to support the role of perfectionism (a stress-related personality trait) in burnout development (Hill & Curran, 2016; see also Madigan et al., 2015). To a lesser extent, research has also shown commitment to play an important role (e.g., Woods, Dunne, McArdle, & Gallagher, 2020). Finally, through the lens of SDT, Li et al. (2013) provided a meta-analysis of 18 studies examining motivation, psychological needs, and burnout. Burnout was consistently associated with need thwarting and maladaptive forms of motivation (e.g., controlled). These models therefore provide a useful base from which to consider which factors may be most important in the development of burnout in sport.

Why is Burnout Important?

It is commonly assumed that because the behaviours and activities that athletes engage in are generally considered to be healthy (e.g., physical activity, restricted diet), that they are less susceptible to mental health and wellbeing problems. There is, however, a growing body of literature that suggests this is far from the truth (e.g., Henriksen et al., 2020). Burnout in athletes serves to illustrate and reinforce this point. While samples generally present low-to-moderate average levels of burnout, a significant percentage are susceptible to moderate and severe levels (Gustafsson et al., 2007). Levels appear to increase as the competitive season progresses, with athletes gradually developing more extreme and frequent symptoms

(Cresswell & Eklund, 2006), and suffering from more extreme repercussions as a consequence. Burnout is very likely, therefore, more relevant to greater numbers of athletes than we may first assume.

A small, but growing literature has attested to the consequences of burnout for athletes. In this regard, there is evidence that burnout is a significant mental health and wellbeing issue. This is because of its strong direct links to depression (Frank et al., 2017), worry (Moen et al., 2017), and anxiety (Isoard-Gautheur et al., 2010). It will also affect athletes more broadly, and their wellbeing indirectly. For example, it is widely assumed that burnout will result in performance impairment (Gustafsson et al., 2011), and disengagement from sport-activities (e.g., Gould & Whitley, 2009). Given its prevalence, then, a significant proportion of athletes are likely to suffer from burnout-related mental health, wellbeing, and performance problems. Predictably, this issue has given those working to support athletes serious pause for concern.

Reducing Burnout in Athletes

Many researchers have called for interventions in sport to prevent and reduce burnout (e.g., DeFreese & Smith, 2014; De Francisco et al., 2016; Isoard-Gautheur et al., 2016). In this regard, at their broadest, interventions can target factors at the individual level (e.g., delivering stress management training) as well as at the organizational level (e.g., changing working hours; Maslach et al., 2012). Madigan (2021) recently reviewed interventions aimed at reducing burnout in athletes. This review, however, included only three studies that have sought to test the effectiveness of interventions for athletes (Dubuc-Charbonneau & Durand-Bush, 2015; Gabana et al., 2019; Langan et al., 2015). These studies employed interventions based on self-regulation, gratitude, and self-determination theory. Overall, all three studies

reported beneficial effects on athlete burnout, to some degree.

As highlighted by Madigan (2021), however, only one of these studies adopted a randomised controlled design. This is important because without a control group and random group allocation, our ability to draw causal conclusions is significantly impaired. For this reason, randomised controlled trials (RCTs) are the preferred evidence from which to inform practice. It is clear, then, that we currently have a very limited base in sport from which to derive recommendations to help athletes (i.e., one study). To the contrary, there is an abundance of interventions in contexts outside of sport. This work has examined many interventions in many different populations. As such, given the dearth of evidence in sport, it may be worthwhile to explore what interventions have been conducted elsewhere, and more importantly which, if any, are effective at reducing burnout. Such a review could help inform decisions in sport, and guide much-needed research in this area for the coming years.

Because so many studies have been conducted outside of sport, meta-analyses have proliferated the literature. Meta-analyses provide a quantitative summary of research. To do so, all studies examining a particular relationship or testing a particular intervention or set of interventions are collated. Statistical analyses that aggregate the effects are performed. Such analyses weight effects sizes as a function of each study's sample size – this way those studies with larger samples, and therefore more accurate estimates of population effect sizes, contribute more to the overall meta-analytic effect. In this way, meta-analyses can be considered the gold standard way in which to summarize and provide the best understanding of a relationship or intervention. It is for this reason that we provide a review of meta-analyses of burnout interventions, and because of their strength in testing causal inferences and informing practice, we focus on meta-analyses of randomised controlled trials.

The Current Review

The current review was based on an electronic literature search. This search aimed to identify meta-analyses of intervention studies to reduce burnout, which adopted randomised controlled designs. This search was based on several databases (PsycINFO, PsycARTICLES, SPORTDiscus) using the terms “burnout”, “intervention” and “meta-analysis”. The search was conducted in April 2021 and focused on peer-reviewed meta-analyses published in English. Our search identified 13 meta-analyses, which are summarized in Table 1.

We now provide a discussion of the meta-analyses in general, and then an examination of interventions grouped by type (individual, organisational, combined).

Table 1.

Meta-analyses examining randomized controlled interventions to reduce burnout

Study	Context	Number of studies	Intervention	Details	Total	Exhaustion	Cynicism	Reduced efficacy
Ahold et al. (2017)	Professionals	4	Individual	CBT, CBT stress management, Qigong, Cognitive coping	–	-0.30 [0.17, -0.77]	-0.24 [0.20, -0.69]	–
Busireddy et al. (2017)	Physicians	9	Organisational	Work hour limits	–	**-2.70 [-3.98, -1.41]**	**-1.43 [-2.54, -0.31]**	0.99 [-.004, 2.02]
De Simone et al. (2019)	Physicians	7	Organisational	Workload, Communication, Teamwork, Discussion Groups	**-0.45 [-0.62, -0.27]**	–	**-0.34 [-0.66, -0.02]**	**-0.32 [-0.06, -0.59]**
		13	Individual	MBSR, ACT Mindfulness, Communication, Stress Management, Exercise	**-0.18 [-0.33, -0.04]**	–	-0.17 [-0.34, 0.01]	**-0.29 [-0.10, -0.48]**

Dreison et al. (2018)	Mental health providers	13	Individual and organisational	Job training and education, Stress management workshop, REBT, Team communication, Clinical supervision	**-0.20 [-0.02, -0.38]**[1]	**-.021 [-0.04, -0.39]**	**-0.36 [-0.13, -0.59]**	-0.03 [0.26, -0.31]
Iancu et al. (2018)	Teachers	23	Individual	CBT, Mindfulness, professional development, Psychoeducational, Social Support, Socio-emotional skills, other	**-0.18 [-0.07, -0.29]**	**-0.18 [-0.06, -0.30]**	-0.03 [0.08, -0.14]	**-0.14 [-0.03, -0.25]**
Lee et al. (2016)	Nurses	7	Individual	Stress management, CBT	–	**-2.43 [-1.33, -3.54]**	**-0.96 [-0.39, -1.53]**	**-1.86 [-0.74, -2.98]**
Maricutoiu et al. (2014)	Professionals	12	Individual	CBT	–	-0.15 [.0.01, -0.31]	0.01 [0.23, -0.21]	0.08 [0.44, -0.28]
		6	Individual	Relaxation	–	**-0.51 [-0.11, -0.91]**	-0.08 [0.13, -0.30]	-0.17 [0.16, -0.51]
		4	Individual	Interpersonal	–	0.01 [0.22, -0.20]	0.08 [0.27, -0.12]	**-0.27 [-0.07, -0.47]**

[1]Effect sizes are Hedge's *g*.

		5	Individual	Role-related	–	-0.39 [0.01, -0.79]	-0.55 [0.60, -1.70]	0.22 [1.10, -0.66]
Ochentel et al. (2018)	Professionals	4	Individual	Exercise	-0.16 [-0.41, 0.09]	–	–	–
Panagioti et al. (2017)	Physicians	12	Individual	MBSR, self-confidence, communication, exercise	–	**-0.18 [-0.32, -0.03]**	–	–
		8	Organisational	Workload, teamwork, leadership	–	**-0.45 [-0.62, -0.28]**	–	–
Perski et al. (2017)	Patients (stress disorders)	3	Individual	CBT, Qigong	–	0.01 [-0.37, 0.38]	–	–
Reeve et al. (2018)	Direct care staff	4	Individual	ACT	-0.26 [0.14, -0.65]	–	–	–
Suleiman-Martos et al. (2020)	Nurses	2	Individual	Mindfulness	–	-1.32 [-9.41, 6.78][2]	-1.91 [-4.50, 0.68]	2.12 [-9.91, 14.14]
West et al. (2016)	Physicians	15	Individual and organisational	Stress management, communication skills	-6.00% [-19.00, 7.00][3]	**-2.06 [-3.86, -0.27]**[2]	-0.92 [-1.90, 0.05][2]	–

[2]Effects sizes are absolute mean differences.

[3]Effect sizes are mean differences in percent.

training, MBSR, work

conditions

Note. Effect sizes are Standardized Mean Differences [95% confidence intervals] unless otherwise stated. Negative effect sizes favour the experimental group (i.e., the intervention reduced burnout; all effects are reported in this manner). Effect sizes are based on the most complete data (i.e., pre-to-post intervention). Efficacy scores are reversed to reflect reduced efficacy.

Bold = statistically significant ($p < .05$).

CBT = cognitive behavioral therapy. ACT = acceptance commitment therapy. MBSR = Mindfulness based stress reduction. REBT = rational emotive behavioral therapy.

Overview of Meta-Analyses

The 13 meta-analyses included 151 studies and 45 effect sizes (across total burnout and its symptoms). They were all conducted in the last seven years. The meta-analyses focused on a variety of contexts and participants, this included physicians (*N* = 4), professionals (*N* = 3), nurses (*N* = 2), teachers (*N* = 1), patients (stress disorders; *N* = 1), mental health providers (*N* = 1), and direct care staff (*N* = 1). They employed an extensive range of individual and organisational interventions which are examined in more detail below.

Individual Interventions

Ten meta-analyses were focused on individual-level interventions. Across the burnout symptoms, there were 31 tests of intervention effectiveness. Interventions resulted in statistically significant reductions in burnout in 11 instances (35.48%). As such, interventions aimed at the individual level appear to work sometimes, but more often than not are ineffective. To determine which instances, and interventions, are effective, we discuss the specific intervention types next.

In terms of those interventions that were effective, the majority were cognitive-based therapies aimed at relieving stress. This included those using traditional Cognitive Behavioral Therapy (CBT) techniques, stress management, and relaxation, and also techniques from the third wave of cognitive behavioral therapies such as Mindfulness-Based Stress Reduction (MBSR). The former techniques are based around changing underlying cognitive processes and patterns which in turn lead to more adaptive behaviours (e.g., Shafran et al., 2009), while the latter relates to the ability to stay attuned to the present in a non-judgmental manner, rather than ruminating about the past or worrying about the future (Kabat-Zinn, 2003). These approaches seemed most effective in teachers, nurses, and physicians. However, they did not appear effective in professionals (i.e., in the general workforce). This last issue highlights the

possibility that the population, and therefore context, are relevant when considering individual-level burnout interventions.

Organisational Interventions

Three meta-analyses were focused on organisational-level interventions. Across the burnout symptoms, there were seven tests of intervention effectiveness. Interventions resulted in statistically significant reductions in burnout in six instances (85.71%). As such, although there are fewer interventions tested at this level when compared to individual level ones, it would appear that they have the potential to be more effective. To explore these further, we now discuss the specific intervention types.

In terms of the interventions that were effective, there appeared to be three main approaches responsible for the reduction in burnout. This includes those interventions based around altering workload, and those aimed at enhancing teamwork and communication. The former involved reducing the total number of hours worked or reducing the duration of individual shifts, the latter involved enhancing both interpersonal and hierarchical communication (e.g., from management to staff). Notably, all organisational interventions were tested among physicians. Although there is strong evidence these interventions are effective, it is unclear whether these findings would generalize to other contexts, especially to sport.

Individual and Organisational Interventions

In two instances, meta-analyses combined individual and organisational interventions (i.e., they did not run separate analyses for each type). In these instances, there were seven tests of intervention effectiveness. Interventions resulted in statistically significant reductions in burnout in four instances (57.14%). As such, the interventions summarized were effective to a similar degree as they were ineffective. It is difficult to identify which interventions

specifically were responsible for these findings. However, we have elaborated on each type below.

A range of interventions were included. This included individual level interventions as already discussed (e.g., stress management), but also Rational Emotive Behavior Therapy (where the emphasis is on identifying and changing irrational beliefs; Ellis & Dryden, 2007), and also organisational interventions already mentioned (e.g., communication). These analyses suggested the interventions were most effective in mental health providers, but that they were less effective in physicians, it is unclear unfortunately whether this pattern reflects a predominance of individual or organisational interventions.

Key Findings, Critical Considerations, and Recommendations

So as to help inform possible recommendations in sport, we now spend some time summarizing the main findings of our review.

The most important point that we note is that burnout interventions can work. That is, several different approaches were effective in reducing burnout symptoms, and did so across a range of different contexts. This is obviously promising in terms of our potential to help athletes when they develop similar symptoms in sport.

Another notable fact to arise from the present review is that there appears to be differences in terms of effectiveness between individual and organisational interventions. On the whole, organisational interventions were more effective than individual ones. However, there are two important caveats. First, many more individual intervention types have been tested, thus the interpretation of what particular mechanisms and aspects are responsible for the effectiveness is difficult to interpret. Second, organisational interventions have primarily been implemented and tested in physicians. In addition, individual level interventions were found to be effective in multiple contexts. In relation to sport, then, there is evidence that

both approaches could be applicable, but these findings also highlight the potential need for athlete-specific interventions to be developed.

We now use these findings to make some critical comments, and provide some recommendations for both practice and research.

Can these findings be directly translated and used to make recommendations for intervening with athletes? The evidence in relation to individual level interventions would suggest they are both feasible and relevant. According to the findings, the most effective guise would come in the form of cognitive behavioral therapies – providing athletes with the means to reduce stress (reappraise situations as less stressful) is likely to provide some protection against burnout. This point has also been made elsewhere (e.g., Gustafsson, DeFreese, & Madigan, 2017), and this recommendation aligns well with sport-specific theories of the development of burnout (Smith, 1986). Consequently, building on the relatively large literature in sport that adopts cognitive approaches in relation to performance and other wellbeing issues could be an excellent place to start intervening in practice and empirically testing their effectiveness.

Do the findings speak to any means to intervene with sport more broadly? The studies in physicians we reviewed have shown clearly that interventions at the organisational level are effective. In this regard, given the differences between the context of hospital surgery and sport, some intervention types may not be feasible or relevant (e.g., reductions in duty hours). Instead, it may be more appropriate for organizational based interventions in sport to consider SDT as a promising place to start as it provides the means to understand the role of the social environment in terms of well- and ill-being. This idea is reflected in the one randomised controlled trial in sport (Lagan et al., 2015). We therefore need more tests of SDT-based interventions in athletes, but also the development of new theoretically driven organisational

interventions that seek to account for the unique aspects of sport.

Addressing both the individual and organisational levels simultaneously may have the most potential in sport, as has been suggested elsewhere (West et al., 2016). Here, sport-specific interventions aimed at both the athlete and those that heavily influence their experiences (e.g., the coach) could be particularly impactful. A good place to start would be enhancing each individual's awareness and knowledge of burnout in sport. This would at least provide the means for athletes to recognize burnout symptoms in themselves, and coaches to recognize them in others. This is especially important as prevention based on early detection is preferable due to the potentially long way back from severe burnout (Gustafsson et al., 2017).

Finally, in the present chapter we have focused on randomised controlled trials. These are the strongest designs available to determine causal effects. For future work in sport, then, testing interventions with randomised controlled designs is essential. We have a long way to go, but through concerted efforts within the academic community, we can build an evidence base from which to protect athletes.

Summary

Athletes have never been more at risk of burnout. At the same time, we still have a limited understanding of how to intervene when athletes do experience frequent burnout symptoms. In the present chapter, we have summarised the best evidence from outside of sport in order to inform what should be done in sport. We conclude that cognitive-based individual interventions and SDT-based organisational interventions would be the best place to start. It is hoped these recommendations will act as a foundation from which to build a sport-specific intervention evidence base and, in doing so, provide those working in sport with a means to help recognise, prevent, and reduce burnout in their athletes.

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