Chapter 28
Diagnosing Problems, Prescribing Solutions, and Advancing Athlete Burnout Research

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Please cite as: Madigan, D. J. (2021). Diagnosing problems, prescribing solutions, and advancing athlete burnout research. In Z. Zenko & L. Jones (Eds.), *Essentials of exercise and sport psychology: An open access textbook* (pp. 664–682). Society for Transparency, Openness, and Replication in Kinesiology. https://doi.org/10.51224/B1028

Chapter Overview

Burnout is highly problematic for athletes. It is unsurprising that, like outside of sport, there is growing interest in this area of research. However, while we know a lot about the correlates of athlete burnout, there are few guidelines for how to deal with burnout in practice. In the present chapter, my aim is to diagnose problems that are preventing progress in this regard. In doing so, I have identified nine key problems that I think are the most important issues currently facing athlete burnout research. These include conceptual (e.g., whether burnout is the same as depression), methodological (e.g., whether self-report is a sufficient means to measure burnout), and practical problems (e.g., whether current interventions work). I have also prescribed possible solutions. It is hoped that my proposed solutions can help advance the development of evidence-based guidelines and, in doing so, aid prevention and intervention of burnout in athletes.

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Introduction

Burnout is a growing public health concern. For example, several organizations and public health bodies including Health Education England (2019), the NHS (2019), and the European Union (2017) have all now formally recognized burnout as a serious problem facing individuals in many contexts. In addition, the World Health Organization recently revised and significantly expanded its description of burnout in the 11th revision of the International Statistical Classification of Diseases (World Health Organization, 2018). However, all these organizations have highlighted that there are few available guidelines on how to prevent, monitor, and reduce burnout. This is particularly the case in relation to burnout in athletes (Madigan et al., 2019). It is against this background that, in the present chapter, I have diagnosed problems that continue to hinder progress in this area. I have also prescribed possible solutions to these problems. To aid these discussions, I begin by introducing the concept of burnout and outlining its consequences for athletes.

What is Burnout?

Research on the phenomenon of burnout began in the human services professions in the mid-1970s. The term was coined to describe the process of gradual exhaustion and loss of commitment that had been observed in those working in these contexts. Based on these observations, burnout was defined as a multidimensional psychological syndrome that develops in response to chronic work stress (Maslach & Jackson, 1981). As a multidimensional syndrome, burnout is characterized by three symptoms, namely, reduced professional efficacy (feelings of reduced competence and achievement in one's work with people), cynicism (an unfeeling and impersonal response toward recipients of one's service, care, treatment, or instruction), and emotional exhaustion (feelings of being emotionally overextended and exhausted at one's work; Maslach et al., 1986).

To reflect differences in the context of sport compared to human services settings, the definition of burnout was contextualized for athletes. In this regard, athlete burnout reflects an extreme form of sport disillusionment and is comprised of three symptoms that mirror those in the work domain: a reduced sense of athletic accomplishment, devaluation or cynicism directed at sport, and physical and emotional exhaustion (Raedeke & Smith, 2001). Reduced sense of athletic accomplishment is characterized by a negative evaluation of one's sporting abilities and achievements. Sport devaluation is the development of a cynical attitude towards sport participation. Finally, physical and emotional exhaustion is characterized by the perceived depletion of emotional and physical resources resulting from training and/or competition.

Raedeke and Smith (2001) developed the Athlete Burnout Questionnaire (ABQ) to measure these symptoms in athletes. The ABQ consists of 15 items, with five items reflecting a reduced sense of accomplishment, five items reflecting sport devaluation, and five items reflecting physical and emotional exhaustion. Athletes respond to questions in relation to how frequently they are experiencing these symptoms, with higher scores reflecting a greater frequency (*almost never* to *almost always*). Since its development, many studies have explored the validity and reliability of the ABQ. In this regard, there is evidence to support its use with athletes of many ages, competitive levels, and across a large range of individual and team sports (Eklund & DeFreese, 2020). Consequently, the ABQ is currently considered the gold standard manner in which to measure athlete burnout. I have provided example items and the response format in Table 28.1.

Why is Burnout Important?

Several studies have explored typical levels of burnout in athletes. These studies have produced various estimates of how common it is for an athlete to experience burnout symptoms. Together, they suggest that approximately 10% of athletes experience moderate-to-severe burnout symptoms at any

particular point in time (Gustafsson et al., 2007). In addition, because burnout is considered to gradually develop over time, many more athletes are at risk of developing burnout symptoms throughout an athletic season (e.g., Cresswell & Eklund, 2006). Indeed, there is even evidence to suggest that most professional athletes will experience frequent burnout symptoms sometime in their career (e.g., Eklund & DeFreese, 2015).

Many studies have examined the antecedents, correlates, and consequences of burnout in athletes (see Eklund & DeFreese, 2020; Goodger et al., 2007; Gustafsson et al., 2017, 2018; Smith et al., 2019 for reviews). Research on burnout in athletes has now spanned several decades. The first systematic collation of this research was provided by Goodger et al. (2007). Across a total of 27 studies, these authors showed that a range of psychological (e.g., coping), demographic (e.g., age), and situational factors (e.g., training load) were all related to burnout. This systematic review was followed by a series of quantitative meta-analyses that focused on specific factors. For example, 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). Hill and Curran (2016) showed that, across 19 studies, perfectionism (a personality trait characterized by excessively high standards and overly critical evaluations of behavior) predicted more frequent burnout symptoms. Most recently, Pacewicz et al. (2019) showed that across 20 studies, social support was negatively associated with burnout, while negative social interactions increased the likelihood of burnout.

Aside from the factors that have been summarized in reviews, there is evidence that burnout has many other consequences. For example, not only does burnout reduce performance, but it also diminishes physical and psychological wellbeing (e.g., DeFreese & Smith, 2014). Other specific outcomes include an increased risk of depression, more frequent negative emotions (e.g., anxiety), and heightened fear of failure (e.g., Gustafsson et al., 2015). Burnout also negatively affects interpersonal relationships, perceived recovery, and reduces the likelihood that athletes enjoy their sport participation (e.g., Appleton & Duda, 2016). Perhaps most troubling of all, especially for youth athletes, are the links that have been found between burnout and dropout (see Larson et al., 2019). In particular, those who experience very frequent burnout symptoms are likely to leave their sport, and in some instances, never return.

Table 28.1

Symptoms, Example Items, and Adapted Response Format for Determining the Frequency, Intensity, and Duration of Athlete Burnout

			Frequency					**Intensity**					**Duration**				
Symptom	**Athlete report**	**Coach report**	Almost never	Rarely	Sometimes	Frequently	Almost always	Very mild		Moderate		Very strong	No time		Some time		A very long time
Reduced sense of athletic accomplishment	"I am not achieving much in my sport"	"My athlete does not think they are achieving much in their sport"	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Sport devaluation	"I feel less concerned about being successful in my sport than I used to"	"My athlete seems less concerned about being successful in their sport than they used to"	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Physical and emotional exhaustion	"I am exhausted by the mental and physical demands of sport"	"My athlete appears exhausted by the mental and physical demands of their sport"	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

Note. Adapted from Madigan et al. (2019). First published in The Sport and Exercise Scientist, Issue 61, Autumn 2019. Published by the British Association of Sport and Exercise Sciences - www.bases.org.uk

Diagnosing Problems, Prescribing Solutions, and Advancing Research

The summary of the literature clearly illustrates that burnout is problematic for athletes. It is somewhat surprising, then, that there are few guidelines for how to deal with burnout in practice. In the remainder of the chapter, I have diagnosed nine key problems that I think are preventing progress in this regard. I have also prescribed possible solutions with the aim of advancing research in this area. To aid in this goal, I have grouped my discussion into conceptual, methodological, and practical problems.

Conceptual Problems

I first discuss problems that pertain to the theoretical basis of burnout. These span (a) which theoretical lens is best to understand burnout development, (b) whether burnout is different from depression, (c) whether it is sufficient to measure only the exhaustion dimension of burnout, (d) should emotional exhaustion be differentiated from physical exhaustion, and (e) whether burnout is contagious.

Which Theoretical Lens is Best to Understand Burnout Development?

Many theories have been proposed to explain the development of athlete burnout (see Gustafsson et al., 2018). This includes stress-, commitment-, and motivational-based explanations (see also Cresswell & Eklund, 2006). Most research, however, has focused on two specific theories:

1. Smith's (1986) cognitive-affective model. This theory posits that burnout develops because of chronic stress. Specifically, 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. Over time, a chronic imbalance between perceived demands and resources will result in a range of emotions (e.g., anxiety) and rigid behavioral responses (e.g., withdrawal) that comprise the athletes' attempt to alleviate the negative experiences associated with chronic stress. This model argues that one such behavioral response is burnout development.
2. Deci and Ryan's (2002) self-determination theory (SDT). This theory argues that social-environmental conditions are fundamental to the progression or attenuation of self-motivated behavior 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). As such, athletes who are in particularly controlling environments (e.g., working with an authoritative coach) will have their needs thwarted, develop less intrinsic motives for participation, and, over time, this will lead to burnout development. For more on SDT, see 3 (Quested et al., 2021).

Many studies have sought to examine the validity of these theories (see Smith et al., 2019). However, empirical tests (studies) typically yield some degree of confirmation (e.g., a significant correlation coefficient). Enough, at least, to keep the theory being tested from being rejected. In burnout research, it is rare to see one theory pitted against another. Thus, despite a large empirical literature, there is still no consensus that one of these models of burnout is more accurate than the other or that certain variables are more influential than others (e.g., stress vs. motivation; see Weinstein, 1993). Researchers have yet to engage in the winnowing process that is necessary for scientific progress in this area. To help progress research in this regard, I recommend that researchers increase their focus on the refutation of burnout models. This should include explicit comparative tests of their predictive and explanatory validity (Meehl, 1967). These approaches will help develop this area of research into a mature scientific discipline.

Is Burnout More than Depression?

Since the scientific study of burnout as a phenomenon began, researchers have frequently discussed the overlap between burnout and depression (see Maslach & Leiter, 2016). There are certainly some similarities between these concepts. For example, they share similar developmental pathways (e.g., chronic stress) and manifest similarly in some regards (e.g., negative affect). Because of these similarities, some researchers have argued that they are not unique constructs but are instead one and the same construct (see Bianchi et al., 2015); a case of the so-called Jangle Fallacy (that two identical or almost identical things are different because they are labeled differently; Marsh 1994). This argument clearly has important and wide-ranging implications with one being bringing the entire empirical edifice of burnout research into question. For further discussion of exercise and depression, see Chapter 15 (Brush & Burani, 2021).

I think that burnout is distinct from depression for two main reasons. The first reason is that they are conceptually distinct. Depression is a pervasive affective disorder (Beck et al., 1998). That is, it affects all an individual's experiences, no matter what they are doing or where they happen to be. Burnout, however, is context specific (Maslach & Leiter, 2016). It manifests in specific domains of life such as sport, education, or work. Burnout may well have effects beyond a specific domain, but these are likely to be indirect, smaller in size, and unlikely to affect all areas of life. For example, individuals experiencing frequent burnout symptoms are still able to derive pleasure from other activities. Those suffering from depression are not (Pizzagalli, 2014).

The second reason is that they are empirically distinct. In sport, there are three studies that have examined the correlation between burnout and depression in athletes (N = 856; Cresswell & Eklund, 2006; Raedeke et al., 2013; Smith et al., 2018). On average, across the symptoms of burnout, this correlation is around .50. Although this is what is classically termed a "large" correlation (Cohen, 1992), these findings suggest that the majority of variance between burnout and depression–75%–is unique, rather than shared between the constructs. Interestingly, a relatively similar pattern of relationships is found across the burnout symptoms suggesting that all dimensions are similarly separated from depression.

Both conceptually and empirically, burnout diverges from depression. It is therefore appropriate to consider these distinct constructs, and to study them as such. Additional research is, however, required to explore their similarities. As a starting point, this work could examine whether burnout and depression do share similar developmental pathways (e.g., chronic stress).

Is it Sufficient to Measure Exhaustion on its Own?

Athlete burnout is multidimensional. Nonetheless, there is a growing trend for researchers to examine only the exhaustion component of burnout. There are likely many reasons for doing so. However, it would appear that the main reason for the shift to this approach is based on a recent conceptual debate that has arisen in the broader burnout literature. This debate centers around alternative models of burnout that define burnout simply as exhaustion, or subtly different forms of exhaustion (e.g., Shirom & Melamed, 2006). This is obviously at odds with the definition provided by Maslach and colleagues. While there is some evidence to support this notion in sport (e.g., some studies have shown that exhaustion shows the strongest relationships with various outcomes), this line of theorizing and operationalizing burnout is problematic. This is for several reasons. First, exhaustion is not always the strongest predictor of outcomes. For example, several reviews attest to the differential predictive ability of burnout dimensions (e.g., Li et al., 2013). Second, and perhaps more importantly, this line of argument brings into question the discriminant validity of the construct; if burnout is exhaustion, then why study burnout at all, why not study exhaustion? And so, we end up in a similar place as to where the discussions of the burnout-depression overlap led us.

There are inevitably going to be some instances where it is appropriate to examine only the

exhaustion dimension of burnout. For example, when researchers are interested in quantifying burnout but do not have the time to measure all three dimensions. If this does end up being the case, and only the exhaustion dimension is measured, it is essential that researchers are clear about this when they are reporting their findings (i.e., that they pertain to exhaustion, rather than burnout per se; e.g., Jordalen et al., 2016). I suggest that researchers wishing to measure burnout as originally defined (and contextualized by Raedeke and Smith [2001]), which is in keeping with the broader scientific consensus (World Health Organisation, 2018), measure all three dimensions of burnout wherever possible. This approach will ensure that burnout is measured in a manner consistent with its definition.

Is it Necessary to Differentiate Physical from Emotional Exhaustion?

As defined by Raedeke and Smith (2001), the exhaustion dimension of burnout comprises both physical and emotional aspects. In this regard, of the five-items that comprise the physical and emotional exhaustion subscale of the ABQ, three items focus on exhaustion in general (e.g., "I feel overly tired from my sport participation"), one focuses on physical exhaustion ("I feel physically worn out from sport"), and the final item focuses on mental and physical exhaustion ("I am exhausted by the mental and physical demands of sport"). It has been argued that as a consequence, researchers are unable to examine whether the forms of exhaustion (i.e., physical and emotional) are part of a single construct or if they are separate dimensions (Quested & Duda, 2010; see also Isoard-Gautheur et al., 2018).

It is currently unclear whether athletes make this distinction, or whether instead they experience a general sense of exhaustion. The notion that burnout shares some overlap with the consequences of physical training (e.g., overtraining) supports the latter idea (see Lemyre et al., 2007). Indeed, there is a small amount of empirical evidence suggesting training load is associated with athlete burnout (Goodger et al., 2007). In addition, factor analyses show that the five items of the ABQ (encapsulating different parts of exhaustion) load onto a single factor (rather than two or more), suggesting that the underlying latent construct of exhaustion is best represented by one factor. Together, these points question whether athletes do differentiate between different forms of exhaustion. It is possible that burnout represents a broad appraisal of one's resources relevant to sport. Future research is required to further substantiate these ideas.

Does Burnout Transfer from One Athlete to Another?

We have a limited understanding as to whether athlete burnout is "contagious". That is, whether burnout can pass from one athlete to another (Bakker & Schaufeli, 2000). Research in sport has explored the possibility for athletes to pick up and imitate others' emotions (see e.g., Friesen et al., 2013), and there is evidence that athletes are particular astute at doing so. Aside from this indirect evidence, however, we have little understanding of the potential of a burnout contagion in sport. Following work in other settings, and education in particular, that has found evidence for interpersonal burnout transmission (e.g., Madigan & Kim, 2021; Oberle & Schonert-Reichl, 2016), studies that look to explore this pathway as a mechanism of burnout development in athletes are warranted. In doing so, researchers should seek to examine the conditions under which this process may be exacerbated. These conditions could include competition failure (e.g., how the stress of losing affects the emotions and stress of players collectively) and coach-created environments (e.g., coach controlling practices). This line of research will help further understand whether burnout is not just an individual issue, but that other people also have a significant part to play in its development.

Methodological Problems

In the next section I discuss problems related to methodological, measurement, and analytical factors. These include (a) whether self-report is a sufficient means to measure burnout, (b) whether

frequency of burnout symptoms could be expanded upon, and (c) which designs and analyses are most appropriate for future burnout work.

Is Self-Report Enough?

Much like many other areas of sport psychology, we rely exclusively on self-report measures. Self-report is extremely useful, especially when the construct of interest is a primarily psychological phenomenon, as is the case for burnout. However, there are several issues associated with an over-reliance on this method of measurement. These issues include a high chance of methodological bias in terms of socially desirable responding; some athletes are likely to respond in a manner consistent with how they think they should respond based on perceptions of others (e.g., their coach; see Paulhus, 2002). This issue is even more relevant when the same source of report (i.e., athlete self-report) is used for both dependent and independent variables (for example, when athletes provide self-reports of burnout and its potential consequences). Here, the risk of common method variance is also inflated. This is when the explained variance is attributable to the measurement method rather than to the constructs that are trying to be measured (see also Podsakoff et al., 2003).

There are two proposed solutions. First is the development of observational tools for athlete burnout. This would provide a means for those working in sport –such as the coach– to monitor burnout in their athletes. This could be as simple as altering the referent of the ABQ (see Table 28.1 for examples). Exploring the viability of this option should be a priority of athlete burnout research. Second would be an increased emphasis on the measurement of potentially objective antecedents or outcomes of athlete burnout (see Gerber et al., 2018). In this regard, it would be very interesting to see more research on biomarkers. So far, three studies have been conducted examining biomarkers and athlete burnout. These studies have explored salivary Immunoglobulin A (a marker of immune function), cortisol (a marker of stress), and eucapnic voluntary hyperventilation (a test of lung function). Unfortunately, all studies have relied on small sample sizes and, unsurprisingly, have found small, non-statistically significant effects. The hunt for relevant biomarkers and objective correlates and consequences of burnout in sport continues (see Danhof-Pont et al., 2011).

Is Frequency Enough?

When Maslach and Jackson developed their original measure of burnout, it included frequency ratings and also intensity ratings; respondents reported how frequently they were experiencing burnout symptoms, and at what intensity (i.e., “how strong” from *very mild* to *very strong*; Maslach & Jackson, 1981). The utility of this approach was demonstrated in several early studies. However, Maslach and colleagues subsequently removed the intensity rating arguing there was a degree of redundancy between it and the frequency rating (see Maslach et al., 1996). In addition, research on other psychological constructs also includes duration ratings: for what duration do they experience symptoms (e.g., from *no time* to *a very long time*; see Arnold et al., 2013).

To date, neither the intensity nor duration rating methods have been employed in athlete burnout research. Why is this important? Doing so may allow for further insight and understanding of burnout in sport. In particular, it may allow for more detailed exploration of the temporal dynamics by which burnout develops over time (e.g., do increases in frequency precede increases in intensity, or vice versa?). It may also provide a means to differentiate those most at risk from the more severe consequences. For example, when athletes’ burnout experiences are not only frequent but intense and enduring. Likewise, these response formats may prove useful in further unpicking the determinants and antecedents of burnout. As such, including intensity and duration formats may be appropriate for athlete burnout. To aid burnout research in this regard, I have provided an example of these response formats in Table 28.1.

Which Research Designs Should We Use?

It is ever more commonplace for a review of a psychological construct to lament the lack of longitudinal studies. This is because temporal precedence (that one thing precedes the other in time) is a necessary (but not sufficient) condition for causal claims. It also allows researchers to test the direction of effects across time (including reciprocal effects between multiple constructs). There is indeed a growing tendency towards the use of longitudinal designs in the field of sport psychology as a whole, and this is also the case for research on athlete burnout. In fact, with over 25 longitudinal studies, athlete burnout research is leading the way. These studies have explored a range of antecedents (e.g., perfectionism; Madigan et al., 2015; 2016a; 2016b) and outcomes (e.g., motivation; Cresswell & Eklund, 2005) and provided us with important information about burnout development and consequences.

I am not calling for a change in designs—the increasing use of longitudinal designs is very promising—but I do have some comments regarding the ways in which such data are analyzed. Longitudinal studies will have a nested data structure (e.g., time points nested in individuals), and so the analyses must take this into account. Much longitudinal work in this area has, however, relied on cross-lagged panel models, which do not do so (Hamaker et al., 2015). Techniques that allow for a multilevel disaggregation of effects (e.g., intercept and slope) are necessary (see also Selig & Preacher, 2009). Thus, future studies are encouraged to use multilevel models to consider how burnout changes over time, and how its antecedents or consequences do too (see Madigan et al., 2020; Stenling et al., Lindwall, 2017).

Practical Problems

In the final section of the chapter, I focus on the main practice-based problem. This is how can we, as researchers, coaches, parents, and athletes, intervene to prevent and reduce burnout symptoms.

How Do We Intervene?

This is perhaps the most important, and yet most problematic issue. Important because of the numerous negative consequences of burnout, and problematic because so few interventions to reduce burnout symptoms have been tested using athlete samples. In fact, my search of the literature returned only three studies. Of these, two are observational studies that focused on student athletes and one is a randomized controlled trial focused on Gaelic football players. These studies are summarized in Table 28.2.

The earliest study adopted an observational design and examined the effectiveness of a self-regulation-based intervention in a small sample of athletes from various sports (Dubuc-Charbonneau & Durand-Bush, 2015). The intervention was informed by the Resonance Performance Model. This is a framework that is used to help individuals learn how to regulate how they feel, think, and behave to achieve congruency between their self and their environment (Callary & Durand-Bush, 2008). The intervention employed athlete and researcher discussions about topics such as perceived demands, resources, behavioral and emotional responses, preferred standards (e.g., how they wanted to feel), goals, preparation and coping strategies, and performance outcomes. Following 7–9 biweekly sessions, reductions in both exhaustion and reduced sense of accomplishment were found.

More recently, Gabana et al. (2019), also adopting an observational design, explored the efficacy of a gratitude-based intervention. Gratitude is defined as acknowledging a benefit received from someone else, or recognizing the value of a general benefit to one's life (Lambert et al., 2009). The intervention consisted of a workshop where gratitude was defined, participants reflected on what they were grateful for, and why they were grateful for it, and reflected on what meaning this brought to their life. Four-weeks following this single 90-minute workshop, reductions in athletes' total burnout were found.

As noted, the study by Gabana and colleagues, and that of Dubuc-Charbonneau and Durand-Bush (2015), were observational in design. Such designs are limited, however, because it is extremely difficult to determine whether changes in burnout are causally related to the intervention. In this regard, the final study (Langan et al., 2015) may provide stronger evidence for causality because it adopted a randomized controlled design. Specifically, the unit of randomization were the coaches (and their athletes), which is known as a cluster randomized design. Langan and colleagues based their intervention on SDT. In this regard, they trained coaches to adopt strategies designed to increase their provision of need support and reduce their use of a controlling interpersonal style (e.g., Reeve, 2009). In terms of need supportive behaviours, these included explanatory rationales, informational noncontrolling language, displaying patience and allowing time for self-paced learning. Following six training sessions in the experimental group, no changes in burnout were found, but increases in burnout were found in the control group. This finding suggests that the intervention may have attenuated any potential increases in burnout over the study period.

The findings in this area can be best described as preliminary, especially considering that two of the three studies did not include a control group. This being said, the evidence is promising given that all three studies reported beneficial effects to some degree.

Luckily, in addition to the small amount of evidence in sport, there is an abundance of intervention studies in other contexts (e.g., West et al., 2016). This includes studies in healthcare (e.g., physicians, nurses) and also education (e.g., teachers, students). While these contexts may reflect different experiences and environments than in sport, these studies can be used as a basis from which to help us intervene with athletes. I have recently made some suggestions in this regard (Madigan et al., 2019). This evidence suggests that the following strategies may be particularly useful. Cognitive-based therapies are effective in reducing burnout in other contexts, and are effective for other disorders in sport, so it is likely they will also be useful for athlete burnout (see Gustafsson et al., 2017). In this regard, developments from what is known as the third wave of cognitive behavioral therapy including mindfulness and acceptance have great potential. Mindfulness relates to the ability to stay attuned to the present, rather than ruminating about the past or worrying about the future and has a growing body of evidence supporting its use in relation to reducing stress and burnout (Suleiman-Martos et al., 2020). Furthermore, rational emotive behavior therapies are gaining traction in sport psychology (see Turner, 2016) and are useful based on evidence in other contexts. Such approaches seek to identify, challenge, and restructure irrational beliefs that are believed to underpin a negative pattern of behavior. Therefore, challenging irrational beliefs that may underpin burnout development (e.g., need for perfection) may also be worthwhile in sport. Taken together, these studies provide an excellent starting point from which to develop and test interventions for athlete burnout.

Table 28.2
Studies Examining Interventions to Reduce Burnout in Athletes

Study	*N* Exp	*N* Con	Sport	Burnout measure	Design	Mode of delivery	Duration	Intervention	Main Findings
Dubuc-Charbonneau & Durand-Bush (2015)	8	–	Hockey (*n* = 4), swimming (*n* = 2), fencing (*n* = 1), and basketball (*n* = 1)	ABQ	Pre-post design	In-person, individual [athlete]	7–9 biweekly sessions	Self-regulation intervention	E and RSA significantly reduced over the intervention period.
Gabana et al. (2019)	51	–	Wrestlers (*n* = 27) and swimmers (*n* = 24)	ABQ	Pre-post design	In-person, group [athlete]	90-minute workshop	Gratitude-based intervention	Total burnout significantly reduced at 4 weeks post intervention.
Langan et al. (2015)	3 coaches, 41 athletes	3 coaches, 46 athletes	Gaelic football (*n* = 87)	ABQ	Cluster randomized control trial	In-person, individual [coach]	6 sessions, 50–90 minutes	SDT-based intervention	Burnout (total and all dimensions) increased in control group but did not change in experimental group.

Note. ABQ = Athlete Burnout Questionnaire. E = exhaustion. RSA = Reduced sense of accomplishment. SDT = Self-Determination Theory. Exp = experimental. Con = Control.

Conclusion

Commensurate with the increasing interest in burnout in relation to public health, a growing body of work is examining burnout in athletes. We have begun to make significant progress in our understanding of the correlates and consequences of athlete burnout. My comments presented in this chapter are aimed to help advance our overall ability to protect athletes from this syndrome. In summarizing my thoughts, a focus on conceptual, methodological, and practical problems is integral to progressing the scientific study of athlete burnout. I hope that my prescribed solutions not only stimulate academic debate, but also provide impetus for better research that can be used to develop guidelines to protect athletes from burnout and its consequences.

Learning Exercises

1. What are the symptoms of athlete burnout?
2. What are the consequences of burnout for athletes?
3. In what ways does burnout differ from depression?
4. What are the problems with self-reporting burnout symptoms?
5. What strategies are currently available to reduce burnout in athletes?

Further Reading

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