4 THE DOWNSIDE OF SPORTS INJURY

POOR MENTAL HEALTH IN INJURED ATHLETES

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Despite the oft superhuman persona, athletes are not immune to poor mental health (Gorczynski et al., 2019). There are many reasons that athletes might experience poor mental health and let's not sugar coat this: but for a few specific examples, sport injury – especially severe sports injury – is something that athletes don't want to go through. Whilst it is possible for athletes to experience growth as a result of their injury and the associated experiences, a sport injury is something that athletes would rather avoid. Many athletes interpret severe sports injury as a major negative life event (Chang et al., 2020; Gouttebarge et al., 2019; Putukian, 2016; Souter et al., 2018), with experts viewing sudden and prolonged sports injury as a contributor to poor mental health in athletes (Gorczynski et al., 2019).

Whilst responses to such sports injuries are relatively individual in nature (e.g. Wiese-Bjornstal et al., 1998), they can be categorized under one of two broad categories: (1) typical responses (also referred to as normal responses) and (2) problematic or negative responses. These two broad categories refer to the notions that there are certain responses to a sports injury that can be reasonably expected as a natural part of the injury process (i.e. are quite typical or normal and, crucially, they subside), with examples of these including sadness, perceived isolation, anger, frustration, decreased motivation and altered sleep patterns (Forsdyke et al., 2016; Putukian, 2016). Conversely, more problematic responses to sports injuries are those which maintain (i.e. they do not subside), worsen over time, or where the severity of the symptoms seems excessive (Putukian, 2016). These responses can manifest at different stages of the sports injury, starting with the immediate response to injury and if not appropriately monitored and addressed, can remain after an athlete has returned to performance (e.g. Gledhill et al., 2020) and can negatively impact on rehabilitation outcomes (Forsdyke et al., 2016). Despite recognition of these views, support for athletes to manage these problematic responses to injury, or athletes who engage in help-seeking behaviours, is still stigmatized in certain environments and can be restrictive to athletes accessing this support (e.g. Gouttebarge et al., 2016).

Just as an athlete's physical health is one of their significant occupational resources (i.e. physically healthier athletes can perform better), so is their mental health. Indeed, the World Health Organization defines mental health as 'a state of wellbeing in which every individual realizes her or his own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community' (WHO, 2014). It stands to reason, therefore, that an athlete's mental health is a resource that could help them perform well, deal with stress and contribute to achieving team and individual goals. In the context of sports injury, this could mean they are better able to manage injury-related setbacks and work diligently towards achieving rehabilitation goals. However, an athlete's progress towards and subsequent return to physical health tends to be the prime focus of injury rehabilitation, with less attention afforded to mental health (Gouttebarge et al., 2016, 2019). Therefore, enhancing mental health literacy (MHL) (e.g. Gorczynski et al., 2019; Jorm et al., 1997) as pertains to the context of sports injury is an important function of this chapter.

Consequently, the purposes of this chapter are to (1) summarize knowledge on poor mental health, symptoms and disorders associated with sports injury; (2) discuss barriers and facilitators to help-seeking behaviours in sport; (3) provide evidence-informed strategies for improving mental health in injured athletes and (4) present an applied case study for consideration. Consistent with current expert and consensus statements (e.g. Castaldelli-Maia et al., 2019; Gorczynski et al., 2019), the terms 'poor mental health' and 'mental health symptoms and disorders' will be used throughout this chapter.

MENTAL HEALTH SYMPTOMS AND DISORDERS IN INJURED ATHLETES

The relationship between sports injuries and different mental health symptoms and disorders is well established across sports and populations (Gouttebarge et al., 2015, 2016, 2019; Putukian, 2016; Reardon et al., 2019). This section of the chapter will summarize the key relationships with this body of research, to demonstrate the scale of the problem and form the foundations of understanding the need for increased mental health support for athletes. The foci within this chapter will be on depression, fear, anxiety, post-traumatic stress disorder (PTSD), their associated symptoms, links to rehabilitation outcomes and their relationships to other maladaptive behaviours in injured athletes.

DEPRESSION AND DEPRESSIVE SYMPTOMS

Sports injury is a prominent risk factor for depression that has been reported and discussed across different contexts, including student athletes (Putukian, 2016), elite athletes (Gouttebarge et al., 2019), men athletes (Souter et al., 2018), men soccer players (Gouttebarge et al., 2015, 2016) and NFL players (e.g. Didebahni et al., 2013). As well as being problematic in and of itself, depression contributes to other responses (e.g. sleep disturbance, adverse alcohol and substance misuse; suicidal ideations) in athletic populations. These additional responses can be triggered by a sense of loss following severe injury, or not being able to play or

train following injury, and can have subsequent further injury risk. For example, according to the Biopsychosocial Model of Athletic Injury and Health (Appaneal & Perna, 2014), sleep disturbance is a risk factor for both illness and injury.

Reviewing literature into depression in student athlete populations, Putukian (2016) offered stark observations between depression, injury and suicide. When discussing Smith and Milliner's (1994) work examining suicide in student athletes, Putukian (2016, p. 146) summarized five common factors of people who completed suicide: (1) considerable success before injury, (2) serious injury requiring suicide, (3) long rehabilitation with restriction from play, (4) inability to return to pre-injury levels of performance and (5) being replaced in their position by a team mate.

FEAR OF RE-INJURY

Fear of re-injury is considered to be a biological response to the danger posed by sports injury (Walker et al., 2010). It is one of the most frequently investigated and reported negative responses to injury (e.g. Forsdyke et al., 2016; Truong et al., 2020). It is experienced by both adolescent and adult athletes (Forsdyke et al., 2016) and has been noted as a standalone (Ross et al., 2017) and contributory (Tjong et al., 2013) factor for poorer rehabilitation outcomes. Fear of re-injury can subsequently increase the risk of re-injury because of avoidance or reduced effort (Bateman & Morgan, 2019). Athletes experiencing fear of re-injury may be hesitant to fully engage within rehabilitation activities, with this lack of engagement contributing to reduced rehabilitation progress and recovery rates (Forsdyke et al., 2016; Hsu et al., 2017). For example, athletes with high levels of self-reported fear of re-injury (measured using the Tampa Scale of Kinesiophobia) were four times more likely to report lower levels of activity and those with high levels of self-reported fear were up to 13 times more likely to suffer a second ACL injury after ACL reconstruction (Paterno et al., 2018).

Appropriate psychological interventions can be used to reduce fear of re-injury (Hsu et al., 2017; Rodriguez et al., 2019). Hsu et al. (2017) summarized existing evidence on psychosocial interventions and their impact on sports injury, noting that education, goal setting, imagery, self-talk, social support and relaxation activities can all be used to manage fear of re-injury. Education can improve an athlete's knowledge of their injury and expected progress, which can reduce fear through a greater awareness and perceived control. Goal setting can provide direction and increase perceptions of treatment efficacy. Imagery can enhance sport and injury-related confidence, as well as reducing stress hormone secretion. Self-talk can help athletes to recognize and change negative thoughts. Social support is multifaceted but generally can increase an athlete's perceived connectedness to others as well as enhancing their feelings of being informationally supported. Finally, relaxation can be used to reduce tension and fear-related symptoms. As can be seen, there are different options that can be used to reduce fear of re-injury, as well as any concurrent re-injury anxiety (Gledhill, 2016; Gledhill et al., 2020; Hsu et al., 2017; Rodriguez et al., 2019).

ANXIETY

Anxiety is a prominent consideration with injured athletes (Forsdyke et al., 2016). Injured athletes report more severe generalized anxiety disorder symptoms than non-injured athletes (Reardon et al., 2019). Moreover, re-injury anxiety is a negative emotional response to injury with cognitive and somatic symptoms that manifest themselves due to the chances of injury recurrence, of the same type as the original injury (Walker & Thatcher, 2011). Re-injury anxiety can be caused by surgery, the timing of the surgery following injury, the requirement to perform under the same circumstances that elicited the injury, a lack of confidence in the injured body part and concerns over rehabilitation setbacks (Ardern et al., 2013; Forsdyke et al., 2016). It has been identified as a factor in reduced chances of successful return to sport (Forsdyke et al., 2016).

POST-TRAUMATIC STRESS DISORDER

PTSD is an exposure to trauma followed by at least 1 month of mental health symptoms, can be experienced by athletes as a result of sports injury (Reardon et al., 2019). Sport-related musculo-skeletal injury is associated with elevated PTSD symptomology (Bateman & Morgan, 2019; Padaki et al., 2018). PTSD symptoms – specifically avoidance, intrusion and hyperarousal – were recorded in patients who had suffered ACL injuries, with athletes in the 15–21 age range and those with higher levels of athletic identity displaying symptoms to a greater degree (Padaki et al., 2018). However, the elevated symptoms in the higher athletic identity group did not reach statistical significance.

Athletes who have experienced sport-related concussion also demonstrate PTSD symptomology (e.g. Brassil & Salvatore, 2018). Specifically, post-concussion athletes reported symptoms including struggling to get thoughts about the incident out of their head and having flashbacks.

Symptomology of PTSD can occur at any time, but particularly during situations similar to the original injury-inciting event (Bateman & Morgan, 2019). Trauma-related symptoms include avoiding physical and psychological reminders of the injury, re-experiencing symptoms (e.g. nightmares, flashbacks, intrusive thoughts), dissociation and irritability (Reardon et al., 2019). Trauma-related complaints may also include poorer rehabilitation progress, decreased sport performance and somatic complaints without any evident injury/re-injury (e.g. Gledhill, 2016; Reardon et al., 2019; Wenzel & Zhu, 2013). Poorer rehabilitation progress may be influenced by poorer immune functioning that can slow the healing process or as a result of the injured athletes' reluctance to engage with their rehabilitation activities fully (Aron et al., 2019). Finally, trauma-related complaints may contribute to athletes adopting maladaptive health behaviours such as substance misuse and disordered eating (Reardon et al., 2019; Wenzel & Zhu, 2013).

BARRIERS TO HELP-SEEKING BEHAVIOURS

It is common that athletes won't seek support with enhancing their mental health and there are many reasons for this (Castaldelli-Maia et al., 2019; Gorczynski et al., 2019; Gouttebarge et al., 2015; Stillman et al., 2019; Reardon et al., 2019).

As a result of this tendency to avoid seeking support, athletes may also then consequently place themselves at greater risk of poor mental health (Putukian, 2016). In order to develop strategies aimed at enhancing mental health in injured athletes, it is first important to understand the reasons that athletes may not seek support with improving mental health. These reasons extend from athletes' reporting time constraints and scheduling demands as a barrier (e.g. Watson, 2006), through to themes of MHL, sport culture and stigma (Castaldelli-Maia et al., 2019; Putukian, 2016; Reardon et al., 2019; Stillman et al., 2019).

MENTAL HEALTH LITERACY

MHL aims to (1) enhance knowledge of mental health problems, including risk factors and causes, symptom recognition, and self-care practice; (2) improve attitudes toward poor mental health and help-seeking behaviours and (3) increase intentions, and knowledge of how, to seek help (Gorczynski et al., 2019). A lack or low levels of MHL is considered a barrier in different levels of sport (Beauchemin, 2014; Biggin et al., 2017; Gulliver et al., 2012a). Athletes may not always know who to approach for support to improve their mental health (Coyle et al., 2017). Further, even in instances where athletes do know who to approach, they are less likely to seek that help (Stillman et al., 2019). Athletes have fewer positive attitudes to support with mental health than the general population (Barnard, 2016; Stillman et al., 2019) and are less willing to seek support as a result.

Education to increase knowledge about the most prevalent mental health symptoms and disorders (e.g. anxiety, sleep disorders, depression, eating disorders, and alcohol or substance misuse) is important for enhancing athletes' MHL (Castaldelli-Maia et al., 2019). Moreover, having easy access to appropriate mental health support (e.g. within the geographical locality and practitioners with an understanding of the nuances of sports injury) is likely to increase athletes' tendencies for help-seeking behaviours (Castaldelli-Maia et al., 2019).

SPORT CULTURE

The culture within sport also appears to be an important barrier to help-seeking behaviours, and the coach and teammates appear to be important cultural architects in this regard. For example, the world of professional football is typically closed off and can be dependent on support from within that world (Gouttebarge et al., 2015). In sport more broadly, it is not uncommon that athletes will be viewed as weak if they seek support (Putukian, 2016), which is a challenge in an environment that celebrates perceptions of toughness and belies a hypermasculine, pain-tolerant culture (Gorczynski et al., 2017; Putukian, 2016; Stillman et al., 2019). Furthermore, perhaps as a consequence of the sport culture, athletes may be afraid to disclose any mental health symptoms (Putukian, 2016). Moreover, athletes have concerns over selection if they seek support with improving their mental health, along with broader concerns over how they will be perceived by teammates and coaches should they seek support (Biggin et al., 2017; Delenardo & Terrion, 2014; Green et al., 2012).

STIGMA

Stigma is the most consistently reported barrier to help-seeking behaviours, evident across 18 studies included in a recent systematic review (Castaldelli-Maia et al., 2019). This stigma relates to both public stigma (stigma endorsed by the general public) and self-stigma (individuals' own stigmatized attitudes related to internalization of public stigma), and differences are evident in different levels of athletes, and between athletes and non-athletes. For example, Castaldelli-Maia and colleagues reviewed that elite athletes demonstrate greater levels of stigma, public stigma and self-stigma than non-athletes. Of all of the barriers to help-seeking behaviours, stigma is considered to be the most important (Putukian, 2016); therefore, ways of reducing stigma will likely be central to the success of any attempts to provide mental health support for athletes.

In summary, the main barriers to support-seeking behaviours in athletes are commonly related to stigma, low MHL, negative past experiences with seeking mental health support and scheduling or time demands (Castaldelli-Maia et al., 2019; Gorczynski et al., 2019; Stillman et al., 2019). Understanding these findings can support practitioners in designing interventions (e.g. stigma-reducing interventions) and developing effective climates for supporting support-seeking behaviours in athletes. Brief anti-stigma interventions, whilst not evidencing long-term change in mental health, do demonstrate promising initial results in overcoming barriers related to stigma (Castaldelli-Maia et al., 2019).

FACILITATORS TO HELP-SEEKING BEHAVIOUR AND IMPROVING MENTAL HEALTH

As with barriers to help-seeking behaviours, there are also many reported facilitators, each of which can be linked to the different barriers outlined above. Some of these facilitators are linked to the broader cultural considerations. For example, as professional football belies a closed-off approach, a major facilitator for help-seeking behaviours might be to have the support services coming from within football (Gouttebarge et al., 2015). Irrespective of the levels or types of sport, the approaches to facilitating mental health improvements following sports injury can be generally grouped under (1) evaluation and diagnosis, (2) goals and (3) treatments/interventions (Gouttebarge et al., 2019; Putukian, 2016; Stillman et al., 2019).

EVALUATION AND DIAGNOSIS

Understanding any barriers to help-seeking behaviours is an integral part of supporting athletes. Understanding these barriers can then form the basis of psychoeducation. This psychoeducation could include the athlete and those around the athlete (e.g. coach, agents, family members etc.) and should include education around the symptoms of poor mental health, as well as the benefits of engaging with a programme of support (Gulliver et al., 2012a and b; Putukian, 2016; Reardon et al., 2019; Stillman et al., 2019). Early diagnosis can be an important

step in facilitating help-seeking behaviours, as it can raise awareness of both symptoms and benefits for the athlete earlier (Gouttebarge et al., 2019).

Owing to the aforementioned reluctance for athletes to engage with support due to the stigmas attached with poor mental health, it may be important for the support work to be reframed as performance support (Stillman et al., 2019). It is also important to note, as part of the early stages of education, how the support will benefit both performance and quality of life (Gouttebarge et al., 2019). As sports injuries, particularly severe injuries, can elicit a perceived lack of control within athletes where they can feel like they are unable to keep developing as an athlete (Forsdyke et al., 2016), this multi-function approach of health and performance enhancement may be particularly beneficial for restoring a sense of control in injured athletes.

Exploring the multi- or interdisciplinary support opportunities, which include stakeholders from within the sport as well as outside it, may also form an important part of the initial evaluation and diagnosis (Putukian, 2016; Stillman et al., 2019). As athletes may be reluctant to disclose information, this wider support could be valuable in gaining information. Moreover, it can create a perception of a collaborative working alliance which could be important for enhancing an athlete's sense of social connectedness and the support from significant others may also facilitate adherence to mental health support strategies (Gouttebarge et al., 2015; Gulliver et al., 2012a and b; Putukian, 2016; Stillman et al., 2019). Where other stakeholders (e.g. coaches, agents, family members) are involved, maintaining client confidentiality is an important consideration. Agreeing limits of information sharing from the outset can be an important part of establishing productive working patterns (e.g. Gledhill et al., 2020).

GOALS

After the initial diagnosis, evaluation and needs analysis have been completed, it is important to establish clear goals (Stillman et al., 2019). Aside from the benefits of directing the mental health support for the athlete, having a collaborative approach to scoping and setting between the athlete and the support provider can create a sense of shared goal commitment within the therapeutic relationship. This is important as perceived shared goal commitment and working alliance are important common factors in the success of psychotherapeutic interventions (Wampold, 2015). Goals could be related to specific aspects of mental health symptoms and disorders (e.g. changes to substance misuse, improvements in sleep behaviours, engaging with CBT) or could also be related to rehabilitation goals.

TREATMENTS/INTERVENTIONS

Typically, interventions based on self-management are likely to be beneficial and can serve to empower the injured athlete towards sustainable health, functioning and quality of life (Gouttebarge et al., 2015). Individual approaches to supporting mental health in injured athletes include Cognitive Behavioural Techniques and Motivational Enhancement Techniques (Stillman et al., 2019). Whilst the

available trial-based evidence for these techniques in injury specific contexts is sparse, there are case examples where these techniques have been used to help athletes understand and reappraise their injury-related thoughts using CBT-based approaches, and to help injured athletes identify and resolve their ambivalence to injury-related change through motivational interviewing (e.g. Gledhill et al., 2020). Internet-based support interventions have been positively perceived and demonstrate promise in encouraging help-seeking behaviours (e.g. Gulliver et al., 2012b).

Support-based interventions with injured athletes can also serve to improve injured athletes' mental health (Podlog & Dionigi, 2010; Putukian, 2016; Stillman et al., 2019). Support-based interventions allow injured athletes to draw on their support networks to express their thoughts, experience empathy and a sense of social connectedness (Forsdyke et al., 2016; Putukian, 2016; Stillman et al., 2019). Furthermore, there is evidence that the support relationship can be beneficial for the support receiver and provider (Brown et al., 2018). As well as showing effectiveness as a treatment for anxiety and depression related symptoms in athletes, improving social networks within sport is also suggested as a complementary method alongside other treatments for potentially reducing the risk of suicide (Rao et al., 2015).

The International Olympic Committee consensus statement on mental health in elite athletes (Reardon et al., 2019) provides further guidelines for practitioners to overcome some common obstacles that can interfere with psychotherapy in elite athletes. These suggestions include that a practitioner should be flexible about timings of sessions (whilst being cognizant of avoiding repeated cancellations) and that practitioners should be supportive of or encourage couples or family sessions when relational issues impact on performance. Further guidelines also relate to the use of pharmacological therapy and treatments for substance misuse (see Reardon et al., 2019).

Collectively, all of these points are likely to create a sense of a more psychologically safe, supportive and developmental environments for athletes, which can be important in improving mental health (Putukian, 2016; Reardon et al., 2019; Stillman et al., 2019). As well as improving the injured athlete's mental health (e.g. by reducing anxiety/depression symptoms, increasing perceptions of social connectedness), creating this type of environment may also reduce the risk of further injury in athletes. By creating a safe and supportive environment, the athlete's experience of life stress will likely reduce, as will the magnitude of their stress response. Both of these are risk factors for sports injury (Ivarsson et al., 2017). However, future research is needed to explore the causal and sequencing of the relationship between mental health symptoms and disorders and subsequent injury risk (Gouttebarge et al., 2016).

EXISTING STUDY LIMITATIONS

Whilst the insights into mental health symptoms and disorders as a result of sports injury have experienced steady growth over the past 10 years, some limitations remain. For example, the body of research is awash with cross-section/correlational research, but longitudinal research is less evident (Gouttebarge

et al., 2019). Furthermore, many of the scales used within the body of research were not originally validated for use with elite athletic populations (Gouttebarge et al., 2019; Reardon et al., 2019), so there may be a need for further scale development specific for this sporting population or further consideration given more generally to mental health screening in sport (Reardon et al., 2019). Moreover, further examination of the efficacy or effectiveness of interventions specifically within injured athlete populations is warranted, to examine their impact on help-seeking behaviours, including any cultural influences on the support available for athletes (Reardon et al., 2019). For further detailed research applied directions arising from the recent International Olympic Committee Consensus Statement, see Reardon et al. (2019).

CONCLUSION

Sports injuries, particularly severe or recurrent sports injuries, are considered major negative life events for athletes and a significant downside of sports injuries is that can elicit problematic mental health symptoms and disorders in injured athletes. Despite this and the general need for intervention to support improvements in mental health, athletes are often reluctant to adopt help-seeking behaviours, with the stigma attached to mental health being the most significant barrier. However, appropriate support from key people within the athlete entourage (e.g. partner, family members, coach or agent) can serve to reduce these barriers and support to facilitate the athlete's engagement with strategies to improve their mental health.

Case study

Jamal is a 17-year-old academy football player, registered with the league one (third tier of English football) club in England. He has ruptured his Anterior Cruciate Ligament in training, suffering a non-contact injury that required surgical repair 6 weeks ago. His parents have contacted you as the sport psychologist for the club as they have some concerns about him following his surgery.

Jamal's mother shares with you that he keeps waking up during the night, sometimes, he will be screaming audibly, whereas other times he wakes up having had nightmares about his injury. Jamal has told his mother that he keeps 'seeing himself getting injured like he's watching on a video' when he is asleep and that he wakes up when he 'hears the pop'. Jamal has shared with his parents that he is concerned about his future in football, because he doesn't have any confidence that he won't get injured again. His mother tells you that he is really scared he will get injured again, but he doesn't want to admit that he is scared as he doesn't want 'the lads at the club to rip him' for it [colloquialism for constant banter and making jokes at his expense]. He also said that he doesn't really understand any of the information that the consultant has provided, but he didn't want to look silly by asking any questions. When she asked him how long he had felt like this, Jamal said 'since it happened and I had the op'.

When Jamal's mother asked him if he had spoken to anybody at the club, he said that he hadn't because he didn't want to look soft and he is worried that, if he does have to ask for help, his coach might think he isn't tough enough to be a football player. Jamal is one of the youngest players in his age group and the decisions regarding whether youth players will be released or retained are going to be made in four months' time.

1. What are the major factors influencing Jamal's health and are indicators of poor mental health?
2. What are the indicators of barriers to help-seeking behaviour?
3. How could you best facilitate Jamal in seeking help and what support would he benefit from?

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