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**Mental Health in Collegiate Student Athletes Post-Injury:
Triangulating Services at Western Oregon University**

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Mental Health in Collegiate Student Athletes Post-Injury

Triangulating Services at Western Oregon
University

By
Grace V. Knapp

An Honors Thesis Submitted in Partial Fulfillment of the
Requirements for Graduation from the
Western Oregon University Honors Program

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Abstract

Collegiate student athletes are in a vulnerable age group for many mental health concerns, and many athlete-specific stressors such as injury heighten these conditions. In addition to the physical ramifications of injury, student athletes often experience psychological reactions to injury such as depression, anxiety, identity loss, disordered eating, and substance abuse. To support the needs of injured student athletes, the NCAA Mental Health Best Practices guide states that student athletes should have easy access to mental health care providers of multiple disciplines through a cohesive network of coaches, the athletic department, athletic trainers, team doctors, and certified counselors working together for the athlete's wellbeing. Consequently, my thesis aimed to investigate ways to triangulate these sources at Western Oregon University (WOU) to better support the needs of student athletes following injury. To achieve this goal, I compiled peer-reviewed literature on mental health in collegiate student athletes post-injury, interviewed members of the athletic department, athletic training staff, and counselors at the Student Health and Counseling Center (SHCC), and made recommendations to the University regarding policies and procedures they can implement to better support the needs of injured student athletes at WOU.

Introduction

The primary goal of the project was to identify policies, procedures, resources, and attitudes about mental health in athletics at Western Oregon University (WOU), especially those pertaining to student athletes post-injury. The

three authoritative entities on campus identified as having the most direct interaction with and influence over student athletes following an injury were the athletic trainers, the athletic department, and the Student Health and Counseling Center (SHCC). To gather information regarding the policies, procedures, and attitudes related to student athlete wellbeing at WOU, I interviewed several members from this triangulation of sources. Then, I compiled the fundamental themes and messages commonly discussed and compared the sentiments expressed by those interviewed with the published literature on the topic. Based on the overlaps and gaps found, I made recommendations to the athletic department, athletic training staff, and SHCC on policies and practices that could be improved at WOU to better support the needs of student athletes following injury.

Literature Review

Mental Health

College Students

Depression affects 264 million people worldwide, with approximately 8.1% of Americans 20 and older suffering from a major depressive disorder, most of whom first experienced symptoms as teens or young adults (World Health Organization, 2020; Brody et al., 2018; Yang et al., 2007). In fact, depression is more prevalent in young adults than in any other age group according to the U.S. Department of Health and Human Services (Sarokhani et al., 2013), and university students are at a higher risk of depression than their non-student peers (Ibrahim et al., 2013). Likely linked to the large number of concurrent major life changes,

freshmen are at a greater risk for developing depressive symptoms than any other collegiate class (Sudano et al., 2017). In university students, depression has been linked to decreased grade point average and academic productivity, increased levels of drug use and alcohol consumption, and increased levels of anxiety and self-harming behaviors (Buchanan, 2012; Hunt & Eisenberg, 2010).

Another major mental health concern among college students is anxiety. According to the American College Health Association's National College Health Assessment, 66% of undergraduate students felt overwhelming anxiety within the last twelve months, but only 24% sought professional treatment for anxiety within this same time period (ACHA, 2019). Academic distress, financial stress, and family or peer support were significantly related to anxiety (Jones et al., 2018).

Although college students experience higher levels of mental health concerns than their non-college peers, specifics of this vary by gender. In general, women were more likely to report mental health related symptoms and concerns than men. Specifically, women are almost twice as likely to experience depression as men (Brody et al., 2018). However, many hypothesize depression prevalence rates among men are underreported, as men are typically less likely to seek and access help than women (Ibrahim et al., 2013; Etzel et al., 2006). Similarly, women reported overwhelming anxiety almost 20 percentage points higher than men, and women were almost 15 percentage points more likely to seek treatment for anxiety than men (ACHA, 2019).

Despite the prevalence of mental health related concerns, treatment rates among college students of all genders are low (Hunt & Eisenberg, 2010). Specifically,

a study conducted by Eisenberg and colleagues (2007) found that fewer than half of the students who screened positive for major depression or anxiety disorders received any mental health services in the previous year. This lack of treatment causes alarm among experts because failure to seek treatment early may result in a longer course of illness and more frequent relapses (Hunt & Eisenberg, 2010; Hingson et al., 2006; Ryan, 2003).

Student Athletes

A part of an already vulnerable age group, collegiate student athletes also experience stressors others their age do not. These stressors include practice and travel commitments, performance expectations, and injury, in addition to the normal pressures of college life. This added stress may lead to an increased risk of anxiety, depression, eating disorders, burnout, and other mental health concerns (Putukian, 2016).

The percent of collegiate student athletes with mental health challenges that warrant professional counseling is higher than the general college student population (10-15% compared to 8-9%, respectively) (Watson & Kissinger, 2007). Consistent with the general college population, gender and class standing were significantly associated with depression symptoms in student athletes, with freshmen and women at a higher risk for depression than other groups (Yang et al., 2007). In fact, a study by Wolanin and colleagues (2016) found that female college athletes were 1.85 times more likely to have clinically relevant depression symptoms than their male athlete counterparts. Although the exact causes for these

discrepancies in depression symptoms between genders is unclear, some hypothesize that female athletes are more willing to self-report symptoms than male athletes because of gender norms and societal expectations (Yang et al., 2007). However, researchers speculate that mental health concerns in athletes, regardless of gender, are gravely underreported due to inconsistent screening, methodology, and university reporting (Roa & Hong, 2016).

Emotional and mental health factors often impact many aspects of an athlete's life. Specifically, depression symptoms in athletes can decrease athletic and academic performance and aggravate other mental health concerns (Kroshus, 2016; Putukian, 2016). For example, in a review of depression and alcohol use in college athletes, Miller and colleagues (2002) found a strong correlation between self-reported depression symptoms and alcohol abuse, with severe depression leading to a significantly greater rate of alcohol use than those reported by athletes with low levels of depression. Furthermore, some evidence has linked depression with elevated risk of injury and reduced athletic performance (Kroshus, 2016).

In general, collegiate student athletes are at an increased risk for excessive alcohol consumption (Martens et al., 2006). In fact, student athletes report riskier patterns of alcohol use than their non-athlete peers, perhaps because of the unique stressors and social environments student athletes encounter (Yusko et al., 2008). Similarly, studies have found that athletes experience more negative alcohol-related consequences such as impaired academic work, getting into trouble with the police, later regretting one's actions, or getting hurt or injured, than non-athletes (Leichliter et al., 1998; Nelson & Wechsler, 2001). In addition to the general

concerns associated with alcohol abuse, studies have also linked alcohol consumption to an increased chance of injury, with “weekly alcohol consumption doubling the rate of injury” in student athletes (Yusko et al., 2008).

Finally, athletes of all genders are at a higher risk of developing eating disorders than their non-athlete peers (Joy et al., 2016). For female athletes, this is especially true in “aesthetic” sports, like gymnastics, or sports where being lean gives a competitive advantage, like endurance running and cycling. For male athletes, eating disorders were most common in weight-class sports such as boxing and wrestling (Schaal et al., 2011). Furthermore, the environment created by athletic coaches can significantly reduce or increase the risk of eating disorders (Currie, 2010). Ultimately, disordered eating can impair an athlete’s physical and academic performance (Putukian, 2016).

Injury

In addition to the normal stresses of college life, student athletes are subjected to the pervasive and constant possibility of injury, which has physical and psychological consequences in the student athlete’s life (Brewer, 2017). Although universities have historically focused on the physical treatment of injuries in student athletes, as demonstrated by athletic trainers and team physicians on staff, the emotional and behavioral reactions to injury have only recently begun to garner attention in academia and college athletic treatment facilities (Walker et al., 2007). Because the interplay of physical and emotional reactions to injuries have concrete ramifications on the student athlete’s wellbeing and recovery, components of both

physical and mental health deserve special training, focus, and action in athletic settings (Kroshus, 2016; Etzel et al., 2006).

Physical

Physical injury is cited as one of the most common and major stressors faced by student athletes, and it can trigger, unmask, or exacerbate mental health vulnerabilities such as depression, anxiety, disordered eating, and substance abuse (Putukian, 2016; Kroshus, 2016). However, a standardized definition of injury does not exist, making statistics hard to quantify. In the literature, researchers define injury in several ways, from an athlete's recall of an event to staff identification of an athlete who missed at least three weeks of sports participation (Appaneal et al., 2009). According to the Injury Surveillance Program created by the National Athletic Trainers Association and the National Collegiate Athletic Association (NCAA), 90% of student athletes report some form of sport-related injury, of varying degrees of severity and longevity, with approximately 40 to 50% of college athletes sustaining at least one injury that sidelines them from athletic participation for a notable period of time (Yang et al., 2007).

Although specifics vary across sports, the most common injuries for collegiate student athletes include concussions, ankle ligament sprains, and anterior cruciate ligament (ACL) injuries, with injury rates occurring significantly higher in competition than in practice (Hootman et al., 2007). Injury rates differ depending on sport type, with some high collision sports like football experiencing upwards of two athletes per game reporting injuries that prevent participation from practice or

competition for a period of time (Etzel et al., 2006). In fact, football has the highest rate of acute injuries for both games and practice, whereas women's softball had the lowest rate in games, and men's baseball had the lowest rate in practice (Hootman et al., 2007).

There is a positive association between stress and injury in athletic contexts (Singh & Conroy, 2017; Bauman, 2005). College athletes often experience the physical manifestation of stress, with symptoms such as low energy, headaches, and chronic pain commonly reported (Wilson & Pritchard, 2005), and stress can be a psychological risk factor for athletic injury because it increases muscle tension and places increased strain on muscles, joints, and ligaments (Singh & Conroy, 2017; Putukian, 2016). Additionally, stress causes physiological changes in the body, such as immune repression, and negative behavioral changes, such as poor sleep and diet, that leaves athletes vulnerable to injury.

Student Athlete Negative Reactions to Injury

In addition to physical symptoms associated with injury, research has shown that injured student athletes often experience psychological, emotional, behavioral, and social symptoms post-injury (Etzel et al., 2006). These reactions can range from normal to problematic, with the latter presenting as persistent, worsening, or excessive psychological symptoms (Putukian, 2016). Negative psychological reactions to injury in student athletes include depression, anxiety, disordered eating, and substance abuse (Kroshus, 2016). In general, injured athletes experience greater levels of psychological distress than their non-injured peers, with

depression presenting as the most common emotional reaction to injury (Appaneal et al., 2009). Similarly, negative cognitive responses to sports injuries such as reduced self-esteem and self-confidence in student athletes may adversely impact rehabilitation success (Brewer, 2017).

Following an injury, studies have found that athletes experience increased levels of depression and anger (Smith & Milliner, 1994), and suicidal ideation may increase as well (Putukian, 2016). For example, athletes who sustained an injury during the previous year reported significantly higher depression scores on the Center for Epidemiology Studies Depression Scale than athletes who had not been injured in that same time frame (Appaneal et al., 2009). Likewise, student athletes who sustained a sports-related injury had a 64% increase in the odds of being depressed than those who had not (Yang et al., 2007).

A major reason for this increased level of depression symptoms in injured athletes comes from the loss of athletic identity. Commonly, athletic identity—the extent to which an individual relates to the role of athlete and looks to others for acknowledgement of that role—can outweigh all other identities in collegiate athletes (Lockhart, 2010). For someone with a personal identity centered around being an athlete, an injury—especially one that sidelines athletic participation—may disrupt this personal identity and cause negative emotional and psychological reactions (De Groot et al., 2018).

Not surprisingly, the extent to which a student athlete self-identifies as an athlete also plays a role in their emotional response to injury. Lockhart (2010) found that individuals who highly self-identify as athletes, as measured by the

Athletic Identity Measure Survey, are more likely to experience depressive reactions post-injury than those with a lower athletic identity. Instead, someone without a strong athletic identity views sports as something they do, not something they are, so injury may not present as significant of a stressor for them (Lockhart, 2010).

Further contributing to depression, injury may interrupt an athlete's social structure and disrupt their concept of identity and self-worth (Roa & Hong, 2016). For many athletes, social support systems heavily rely on the athletic department, specifically coaches and other athletes (Martens et al., 2006). This can have major consequences on an athlete's sense of community and belonging following an injury. Mainly, many injured athletes feel isolated from teammates—a major component of their support system—following an injury, and these feelings can add to an athlete's perceived loss of athletic identity (De Groot et al., 2018). Similarly, student athletes commonly attributed these feelings of isolation to increased depressive symptoms (Kontos et al., 2016).

Additionally, athletes commonly perceive a shift in social support following an injury. While injured, student athletes often rely more on coaches, athletic trainers, and physicians for social support rather than on teammates and friends (Yang et al., 2010). Likewise, athletes with prolonged injuries are sometimes forced to take on a new role on the team—one that does not rely on athletic abilities or identity—and this adjustment can be difficult to manage and may exacerbate negative psychological responses to injury (De Groot et al., 2018).

For many athletes, the training and competition cycle provides a predictable routine and structured lifestyle. When injured, however, the disrupted routine may

contribute to negative emotional and behavioral responses (Bauman, 2005). Likewise, athletes commonly use sports and exercise as an outlet for processing issues and stresses faced in their life (Putukian, 2016). This poses a substantial problem for injured athletes, as they are left without a coping mechanism for dealing with the normal stress of everyday life as well as troublesome news like injury or loss of athletic identity (Brewer, 2017; Putukian, 2016).

Likely tied to these factors, depression severity following an injury in collegiate student athletes was significantly related to the self-reported impairment in sport participation and physician-rated recovery status (Appaneal et al., 2009). Similarly, the longevity and pervasiveness of an injury was also correlated with depression symptoms (Sheinbein, 2016). Specifically, athletes with injuries that lead to significant time loss from sports participation experienced greater emotional distress than athletes with injuries that required a shorter recovery period (Putukian, 2016).

Injury also heightens the risk for eating disorders, especially in athletes already vulnerable to disordered eating (Putukian, 2016; Kroshus, 2016). In one study, injured athletes restricted caloric intake because they felt they did not deserve to eat while they were unable to practice or compete (Putukian, 2016). Almost circularly, eating disorders also increase the risk of injury in athletes, as athletes with disordered eating behaviors were more than twice as likely to sustain a musculoskeletal injury during their competitive season than athletes with normal eating behaviors (Joy et al., 2016; Javed et al., 2013; Currie, 2010).

When they are able to return to play, many athletes experience re-injury anxiety. In fact, re-injury anxiety is one of the most common psychological reactions to injury a student athlete faces (Sheinbein, 2016), and this is especially true among athletes who experienced a serious injury such as a torn ACL (Brewer et al., 2017). For example, Short and colleagues (2004) found that previous injuries affect the subsequent perceived risk of injury, and this may have implications on future performance levels. Specifically, researchers found that a history of injury positively related to the athlete's perception of the probability, worry, and concern of injury, all of which negatively affected sports performance. Additionally, the same study found that previously injured female athletes perceived the risk of re-injury as significantly greater than previously injured male athletes (Short et al., 2004). Fear of re-injury also leads to decreased self-confidence which can further affect athletic performance and can prevent athletes from returning to sport even after physically healed (Sheinbein, 2016). Conversely, the urgency to return to play due to the short season of competition may lead some student athletes to prematurely return to practice or competition, and this can put the athlete at an increased risk of re-injury or poor sport performance (Brewer, 2017; Bauman, 2005).

It is important to note that many problematic psychological responses to injury happen concurrently (Kroshus, 2016). For example, student athletes who experience depression as a result of injury may self-medicate through substance abuse (Putukian, 2016). As another example, Leddy and colleagues (1994) found that injured athletes exhibited significantly lower physical self-esteem than non-injured athletes, and lowered self-esteem may contribute to problematic reactions

to injury such as disordered eating or decreased rehabilitation adherence (Milligan & Pritchard, 2006; Brewer, 2017). The compounding nature of negative emotional reactions to injury can have major implications on the treatment, recovery, and wellbeing of the student athlete that athletic trainers, team physicians, and coaches must consider.

Treatment and Support

Despite the implications of the negative psychological reactions to injury on rehabilitation, the recovery process following an injury has traditionally focused on physical healing. Recently, however, experts have noted the importance of mental health in the recovery process as well (De Groot et al., 2018). Because mental and physical health are strongly linked, a student athlete's emotional response to injury can impact physical recovery, especially regarding rehabilitation adherence and effectiveness (Brewer, 2017). As such, it is important for those treating and interacting with injured athletes to recognize, understand, and respond to a student athlete's negative emotional reactions to injury.

To assist student athletes with their emotional and psychological reactions to injury, proper education on early recognition of signs and symptoms of potential psychological concerns and effective referral to trained mental health professionals is necessary (Neal et al., 2013). The three authoritative entities identified as playing an important role in this process include athletic trainers and team physicians, the athletic department, and certified counselors.

Athletic Trainers and Team Physicians

Athletic trainers and team doctors treat physical injuries, but they also play an important role in recognizing and identifying mental health concerns in athletes following injury. Injured athletes commonly discuss emotional and behavioral problems with their sports medicine providers and team physicians before any other professionals (Kroshus, 2016), and the problems athletes disclose are not necessarily directly related to their injury, either. For example, in a survey conducted by Mann and colleagues (2007), injured athletes commonly discussed stress, anxiety, and burnout with their team physicians, as well as fears of re-injury, fears related to surgery, and frustration with the recovery and rehabilitation process.

Despite clear evidence for mental health needs in student athletes, nearly two-thirds of the physicians surveyed in a study by Mann and colleagues (2007) indicated that they rarely or never referred injured athletes to mental health professionals for injury-related problems. More than two-thirds of physicians reported that they rarely or never referred injured athletes to psychologists for non-injury related problems such as depression or eating disorders (Mann et al., 2007). The reluctance to confront or refer student athletes to mental health professionals may stem from the fact that athletic healthcare providers receive little to no formal education pertaining to the non-physical aspects of injury management, such as the psychological consequences of injury that many athletes face (Russell & Tracey, 2011). Because of this, many sports medicine providers feel incapable of addressing

the psychosocial aspects of injuries (Hamson-Utley et al., 2008; Russell & Tracey, 2011; Mann et al., 2007).

Despite the physicians' attitudes and responses described in the study by Mann and colleagues (2007), six leading sports medicine associations concluded that "team physicians must consider psychological, as well as physical factors, when treating and coordinating care for injured athletes" (American College of Sports Medicine et al., 2006) because these factors overlap and do not exist in isolation. In fact, an athlete's emotional response to injury noticeably impacts the rehabilitation process and recovery outcomes (Bianco, 2019). For example, negative emotional responses to injury decrease adherence to sport injury rehabilitation programs, and this negatively affects the duration and effectiveness of recovery (Brewer, 2017). As such, holistic treatment of both the physical injury and mental wellbeing is critical to the recovery of a student athlete.

Following an injury, collegiate athletes perceived a shift in their social support network, with an increased reliance on coaches, athletic trainers, and team physicians rather than teammates for emotional and physical support (De Groot et al., 2018; Yang et al., 2010). To address these social support needs, athletic trainers require specific education and training to provide psychological support to injured athletes which in turn assists the rehabilitation process (Yang et al., 2010).

In addition to education, it is recommended that athletic trainers—in conjunction with the athletic department and certified counselors—take inventory of the mental health resources available to develop a coordinated plan to best direct student athletes to necessary resources (Roa & Hong, 2016). Referral to a trained

mental health professional is the preferred course of action (NCAA, 2020; Etzel et al., 2006). However, because athletic trainers often provide the initial support to injured student athletes, athletic training staff must have knowledge about the signs and symptoms of common mental health concerns, best practices for approaching the situation, and readily available resources to direct the student athlete toward (Neal et al., 2013).

Because athletic trainers interact with student athletes on a daily basis, they are in a unique position to observe, interact, and recognize abnormal behaviors displayed by athletes (Neal et al., 2013). Thus, athletic trainers often serve as the first point of contact in managing a student athlete's mental health concerns (NCAA, 2020). As such, athletic training staff benefit from establishing a relationship with student athletes because this trusted association promotes disclosure of information regarding physical and mental health concerns (Roa & Hong, 2016). In fact, a study conducted by Russell and Tracey (2011) found that injured athletes wanted sports medicine healthcare providers—athletic trainers, physical therapists, and team physicians—to create an open environment that provided them the opportunity to comfortably ask questions. Having this caring and supportive environment serves as a facilitating factor in the rehabilitation process for many injured athletes (Tracey, 2008). Likewise, a relationship between athletic trainers and student athletes can assist in the process of providing support for injured student athletes, recognizing mental health concerns, and referring student athletes to formal mental health services (Neal et al., 2013).

To further highlight the importance of extensive mental health education and training, athletic trainers report that they struggle to distinguish the signs of mental health disorders from typical behaviors of student athletes. For example, if an athlete is exhibiting fatigue, it may be attributed to rigorous training rather than depression. Similarly, rigid eating and exercise behaviors may be attributed to dedication to sport rather than symptoms of an eating disorder (Kroshus, 2016). Because of this, the line between signs and symptoms for mental health related concerns and acceptable training behavior can be difficult to distinguish in some athletes, making proper education and training an important consideration. For this reason, careful observation of the personalities and attitudes of all student athletes is encouraged so drastic or concerning changes in these behaviors can be addressed (Etzel et al., 2006). Establishing and continuing education on mental health signs and symptoms assists in this process (Lockhart, 2010).

Fundamentally, the sports medicine staff can provide early referral and management of mental health concerns (Putukian, 2016). Because psychological problems commonly follow injury, athletic trainers should be knowledgeable about these issues, especially regarding the identity loss that accompanies athletic injuries (De Groot et al., 2018). In order to effectively implement proactive prevention as well as early and crisis intervention in student athletes with mental health concerns, athletic trainers and team physicians need to be familiar and comfortable with the specific mental health concerns student athletes commonly face in order to help facilitate discourse, disclosure, referral, and intervention in student athletes (Roa & Hong, 2016). Ultimately, athletic trainers and team physicians play a unique role in

helping student athletes understand that mental health concerns are as important to recognize and treat as other medical and musculoskeletal issues (Putukian, 2016).

Psychological Support and Counseling

When seeking professional advice following an injury, the resources available to a student athlete vary dramatically depending on the competition level, funding available, and administrative support provided by their institution. Some elite-level college programs have counselors—including a certified sports psychologist—trained specifically in addressing mental health concerns faced by student athletes (Moreland et al., 2018). However, this is not financially feasible for many universities. Instead, many athletic programs must rely on resources already available on campus or in the local community, although these programs often do not have staff trained in the specific needs of student athletes (López & Levy, 2010). Studies show that mental health professionals who exhibit a better understanding of the “world of athletics and the problems associated with the life of a student athlete” are generally viewed more favorably by student athletes (Neal et al., 2013). Thus, specific training in athlete specific stressors and issues improves the experience and attitudes of student athletes regarding counseling (López & Levy, 2010).

In order to treat mental health concerns in student athletes, trained mental health professionals employ targeted interventions and strategies. Although athletes have unique stressors and goals, few evidence-based programs are designed for sports-specific populations (Breslin et al., 2017), so more generalized interventions are used. These methods include socially driven interventions

(DeFreese & Smith, 2014), goal setting (Reese et al., 2012), and stress-reducing interventions. Because stress can reduce rehabilitation effectiveness and increase re-injury occurrences, psychological interventions for injured athletes commonly utilize stress management, relaxation, and goal setting as ways to combat these negative psychological reactions to injury. Studies have linked these stress-reducing interventions with decreased negative psychological reactions, reduced re-injury anxiety, and improved coping by the injured student athletes (Reese et al., 2012; Etzel et al., 2006).

Coaches, the Athletic Department, and the NCAA

As discussed earlier, Yang and colleagues (2010) found that student athletes rely on coaches more for social support following an injury, which again underscores the importance for coaches to understand their role in recognizing, referring, addressing, and treating mental health concerns in student athletes. Furthermore, because studies have suggested that psychological factors play a significant role in injury occurrence and recovery, it is important for coaches to understand the complex influence of emotional factors on injury and performance (Fernandes et al., 2014). Coaches often set the tone for how student athletes perceive mental health promotion and services in relation to the team dynamics (Drew & Matthews, 2019). Consequently, training coaches in mental health awareness and literacy may improve the wellbeing and performance environment for athletes (Breslin et al., 2017).

With an increased realization of the connection between physical and mental health, the NCAA has begun to focus more on how to better accommodate the emotional demands placed on student athletes (NCAA, 2020). For this reason, the institution recently released a Mental Health Best Practices guide that offers recommendations, resources, and procedures for coaches, athletic departments, administrators, athletic trainers, and others to assist student athletes with mental health related concerns. Some of the key components discussed in the guide include the importance of clinically licensed practitioners, procedures for identifying and referring student athletes, pre-participation mental health screenings, and creating a health promoting environment (NCAA, 2020).

In addition to the Best Practices document, the NCAA also requires all athletic personnel to undergo annual training, usually in the form of a module or webinar, on issues such as depression, anxiety, alcohol and drug use, and suicide. These continuing education courses increase competency in the stakeholders working with collegiate student athletes (NCAA, 2020), with the purpose of increasing awareness and understanding of problems student athletes face (Etzel et al., 2006).

Seeking Support

To effectively implement interventions, it is important to know and understand the specific barriers and facilitators collegiate student athletes face when seeking help. Many factors that promote help-seeking behaviors in college student athletes overlap with facilitators in the general college population, whereas

many of the obstacles that impede mental health service utilization are specific to the student athlete populations.

Barriers

Despite the heightened risk for several mental health-related concerns, studies have shown that student athletes are less likely to seek help than their non-athlete peers (Sudano et al., 2017). Additionally, athletes have a less positive attitude toward seeking help than their non-athlete peers (Gulliver et al., 2012). This is likely due, in part, to the negative stigma and perceived connotation of weakness surrounding asking for help (Putukian, 2016). The negative stigma about mental health varies by topic in athletics, however, with issues such as performance anxiety less stigmatized than depression (Gulliver et al., 2012).

Some studies suggest that sports culture celebrates mental toughness and disapproves of appearing weak, and many student athletes see mental health as contradictory to mental toughness (Jewett et al., 2019; Breslin et al., 2017; Bauman, 2016; Putukian, 2016). Some athletes associate seeking help with weakness because of the way they are conditioned to “tough it out” through physical pain and attempt to do the same with emotional problems (Putukian, 2016; O’Connell, 2012). Fear of appearing mentally weak or lacking commitment can lead many athletes to avoid seeking help because the perceived disadvantages outweigh the benefits (Breslin et al., 2017). These views likely prevent student athletes from seeking help for mental health related concerns, and this negative stigma in sports culture surrounding help-seeking behaviors often leads to underutilization of the mental

health resources available to student athletes (López & Levy, 2010; Etzel et al., 2006).

Fear of lost playing time or team standing also prevents many athletes from pursuing psychological treatment (Neal et al., 2013; Walker et al., 2007).

Specifically, student athletes may perceive the negative consequences of altered status on the team as outweighing the benefits of accessing help (Bauman, 2016), which leads to an underutilization of mental health services available to student athletes (Gulliver et al., 2012).

In addition to the stigma surrounding mental health, student athletes face other barriers to seeking help such as lack of services at times that fit their schedule, as student athletes work with limited flexibility in their schedule around practice times, travel commitments, and other obligations. In fact, in a study by López and Levy (2010), collegiate student athletes cited lack of time as the primary obstacle to utilizing mental health services provided by the university. Additionally, negative past experiences with mental health providers and limited mental health literacy also prevented student athletes from seeking treatment (Gulliver et al., 2012).

However, negative stigma and attitudes about mental health services in athletics may compound these issues and prevent student athletes from prioritizing help-seeking behaviors in the same way they prioritize physical treatment (Putukian, 2016).

Similar to the general population of college students, student athletes cite their own lack of mental health literacy as a barrier to seeking help (Gulliver et al., 2012). Issues such as being unsure where to go for help, uncertainty about services

available, and what constitutes normal levels of distress fall under the umbrella of mental health literacy. Similarly, lack of knowledge about mental health disorders, specifically regarding signs and symptoms, posed as a major barrier for student athletes (Moreland et al., 2018). For example, many athletes had a hard time distinguishing between normal fatigue due to physical exhaustion and those attributed to depression or anxiety (Gulliver et al., 2012).

Facilitators

Student athletes most commonly cited improved education and awareness about mental health concerns and services as the primary facilitator for help-seeking behavior (Gulliver et al., 2012). Education and awareness programs include informing about signs and symptoms of mental health concerns to look for in oneself and others, what services are available in the area, and what to expect out of those services (Breslin et al., 2017).

In general, social support provides a significant buffering and coping resource during the recovery process for injured student athletes (Fernandes et al., 2014). In fact, positive social support may help decrease post-injury stress levels and improve rehabilitation program adherence, and athletes commonly cite teammates as their most important social support factor (De Groot et al., 2018; Yang et al., 2010). Specifically, student athletes feel teammates are more receptive to hearing their emotional concerns and providing emotional support than coaches (De Groot et al., 2018). Additionally, social support has a positive effect on the psychological adjustment of an injured athlete (Malinauskas, 2010). As such, socially

driven interventions for mental health concerns may improve the psychological health of student athletes (DeFreese & Smith, 2014). Although social networks and teams may have protective factors against depression symptoms (Wolanin et al., 2016; DeFreese & Smith, 2014), an overreliance on these groups may be detrimental following an injury, in a similar fashion to athletic identity loss (De Groot et al., 2018). Mainly, student athletes commonly feel isolated from teammates post-injury because they are not as able to engage in practice and other team bonding activities, and these feelings of isolation from social support systems may exacerbate mental health concerns in injured student athletes. Consequently, student athletes should be encouraged to establish social support networks beyond athletic contexts (Lockhart, 2010).

Likewise, some student athletes considered coaching staff facilitators to help-seeking behaviors, while others deemed coaches as gatekeepers to services (Gulliver et al., 2012). For this reason, professionals urge coaches to “give the student athlete permission” to seek care and treatment, as an open attitude and acceptance of these help-seeking behaviors contributes to positive mental health in student athletes (Putukian, 2016).

As previously discussed, gender plays a role in mental healthcare seeking behavior. Overall, female athletes were more willing to seek mental health related services than male athletes. Similarly, female coaches and athletic trainers were more likely to refer student athletes for mental health services (Moreland et al., 2018). At the moment, however, there are no gender specific approaches to mental health assessment and intervention in athletic settings (Wolanin et al., 2016).

Operational Policies and Procedures

For physical ailments, physicians promote preventive care as the gold standard, and research shows the same approach should apply to mental health. The benefits of prevention are financial as well as psychological and emotional, so athletic departments must focus attention on preventive mental health services. The main approach to mental health recognition currently gaining traction in athletic training rooms is a mental health inventory and self-assessment included in the pre-participation physical exams required for all student athletes (Sudano et al. 2017; Kroshus, 2016; Putukian, 2016; Neal et al., 2013; Mencias et al., 2012).

In an attempt to identify student athletes who need help most, 40% of NCAA Division I universities screen for mental health concerns during the pre-participation physicals that take place before practice and the season of competition begin (Sudano et al., 2017). These screening practices help detect potential concerns early and can encourage help seeking behavior before an issue arises (Putukian, 2016). Additionally, these surveys can serve as a baseline for comparison following an injury.

Several studies have shown the effectiveness of early detection processes like those included in athletic pre-participation exams (Neal et al., 2013; Javed et al., 2013). The pre-participation exam can screen for depression, anxiety, substance use, mood disorders, attention deficit hyperactivity disorder, sleep disorder, grief, and other previous mental health issues that the student athlete discloses (Sudano et al., 2017). Ultimately, the pre-participation exam can help athletic trainers and

team physicians identify athlete and sport-specific risk factors to better target high risk groups for intervention (Roa & Hong, 2016). As a proactive approach to treatment, the pre-participation exam allows medical staff to provide support and set up services for student athletes before a crisis emerges (Sudano et al., 2017). However, without appropriate follow up—whether that be communication or referral to professionals trained in mental health services—screening offers limited benefits (Kroshus, 2016).

Although some studies claim that frequency and distribution of the pre-participation exam have increased in athletic training rooms recently (Mencias et al., 2012), other studies have found that fewer than half of sports medicine departments at U.S. higher education institutions have written plans or screening methods for identifying student athletes with mental health concerns or disorders (Kroshus, 2016). Of the collegiate programs that use pre-participation exams to screen athletes, Mencias and colleagues (2012) found that only one-third of Division I universities surveyed required annual updates for returning student athletes. Moreover, the screening forms recommended by the American College of Sports Medicine and the American Academy of Family Physicians do not include questions pertaining to disordered eating (Javed et al., 2013). Additionally, many sports medicine providers have a poor understanding of relevant screening tools, which reduces the effectiveness of evaluating athletes (Roa & Hong, 2016).

Because early intervention is more effective in resolving traumatic stress, programs aimed at recognizing, targeting, and addressing mental health concerns in student athletes shortly following injury should be implemented (Neal et al., 2013).

Injured athletes—especially those missing prolonged periods of participation—should be screened with mental health inventories until the athlete fully returns to athletic participation. These assessments would give a better gauge of the mental health consequences of injury and restricted participation (Roa & Hong, 2016).

There are challenges with athletes self-reporting mental health concerns. Mainly, many athletes may not self-identify as having problems due to secrecy or denial (Javed et al., 2013). For this reason, screening tools need tailored questions aimed at gathering an honest assessment of an athlete's beliefs, attitudes, and actions in mental health contexts. Similarly, athletic trainers should ask injured athletes direct questions regarding physical, psychological, and emotional distress following an injury, as Russell and Tracey (2011) found that many injured athletes would likely not initiate a dialogue about the psychological problems associated with injury.

The NCAA Mental Health Best Practices guide states that student athletes should have easy access to mental health providers of multiple disciplines (NCAA, 2020). One way to achieve this goal is through a cohesive network of support systems for student athletes—a network of coaches and the athletic department, athletic trainers and doctors, and mental health and counseling services—working together for the athlete's wellbeing. A cohesive model like this, called comprehensive or integrated care, improves the experience of injured athletes and allows them to feel more supported throughout their recovery process (Sudano et al., 2017). In fact, Yang and colleagues (2010) found that the more interaction between members in this network, the more supported the student athlete felt, as

each entity provides a unique understanding of an athlete's identity and experiences related to the injury. As Neal and colleagues (2013) discussed, a relationship between the campus counseling center and the athletic department would facilitate the referral and intervention process of injured student athletes.

Fundamentally, a comprehensive care plan is needed to screen for, detect, and manage student athlete responses to injury (Putukian, 2016). As indicated by Kroshus (2016), Roa and Hong (2015), and Neal and colleagues (2013), in order to develop an effective plan for addressing psychological concerns in student athletes, there must be collaboration among athletic trainers, the athletic department, and institutional administrators, as a cohesive network of support benefits student athletes. Consequently, this thesis examines the triangulation of care between these departments at WOU through interviews with members of the athletic training staff, the athletic department, and the Student Health and Counseling Center. Based on the findings of these interviews and the peer-reviewed literature, I make recommendations on what policies and procedures WOU should adopt or adapt to better support the needs of student athletes post-injury.

Methods

Setting

Western Oregon University is a midsized, public university in Monmouth, Oregon. Of the 5,336 students enrolled at the university, 325 are student athletes who compete in one or more of the thirteen NCAA Division II (DII) sponsored sports at WOU. Of these student athletes, 120 are women, and 205 are men. A part of the Great Northwest Athletic Conference (GNAC), WOU competes against other DII institutions in baseball, softball, men's and women's basketball, women's soccer, football, volleyball, and men's and women's cross country, indoor, and outdoor track.

To care for these student athletes, WOU employs four full-time athletic trainers (ATs) who work in one of two athletic training rooms on campus. Each trainer primarily oversees one or two sports per season of competition but can assist with other sports when needed. In addition to the fully trained ATs, training rooms are staffed with several master's student interns who study athletic training at nearby universities.

All current students at WOU have access to the Student Health and Counseling Center (SHCC) on campus. The SHCC is funded through mandatory student fees each term, which a student pays for regardless of their use of services. The SHCC offers three types of services: medical, counseling, and health promotion. Medical services offered to students include the treatment of acute injury and illness, women's healthcare services, STI testing, and immunizations. The SHCC staffs two nurse practitioners and two certified nurse assistants to complete these

procedures. For health promotion services, the SHCC offers wellness coaching and a rest and relaxation room, and two WOU employees oversee this program. For counseling services, the SHCC employs four licensed professional counselors and several part-time interns working toward a master's in counseling at nearby universities. Types of counseling services provided include individual, group, couples, alcohol and drug, and crisis counseling. The counseling staff host several support groups and workshops throughout the year as well.

Interviews

In order to understand how the athletic department, athletic training, and SHCC currently function at WOU, I interviewed seven university employees during the fall of 2019. Those interviewed included: three athletic trainers, three certified counselors, and WOU's NCAA Compliance Director. I first approached the interviewees by email to request a meeting and informed the potential interviewees about my project, its goals, and my interest in the subject. The email was then followed up by an approximately hour long, in-person interview. I asked all interviewees about their educational backgrounds and previous experience in the field and with mental health. All interviews ended with a question about what procedures and/or resources the interviewee thought could/should be improved at WOU. During the interview I took extensive notes, which I immediately typed up following the completion of the interview to ensure appropriate recollection of the events.

Results

Athletic Trainers

To understand the experiences and attitudes of athletic trainers at WOU, I interviewed the head athletic trainer Alyssa Asay, associate athletic trainer Bo Johnson, and assistant athletic trainer Brandon Walcott-Ayers. Each AT works with different NCAA sanctioned teams, but there was extensive overlap in their mental health education, opinions, and concerns. The common themes that emerged in these interviews were education and training, procedures at WOU, and referrals.

WOU trainers indicated that a master's degree in athletic training traditionally does not require specific classes in mental health as part of the curriculum. However, according to those interviewed, more schools are recognizing the need for ATs to understand and address mental health concerns, so graduate school programs in athletic training are starting to focus more on mental health education.

Predominantly, the ATs at WOU have a more traditional education, with no specific mental health training in school. The NCAA, recognizing that this may not best serve student athletes, has tried to augment this through continuing education courses on mental health. As such, all the ATs interviewed felt confident in their ability to recognize signs and symptoms of mental health concerns and to refer student athletes to trained professionals when applicable.

Symptoms of mental health concerns in student athletes that WOU ATs look for include lack of sleep, general disinterest—especially in things the student athletes once cared deeply about—and diminishing self-care and hygiene. These

symptoms can—but don't always—follow overtraining, burnout, or injury, so ATs try to recognize these stressors as well. However, the ATs I interviewed admitted that it can be difficult to recognize signs and symptoms of mental health related concerns in freshmen and transfers because the ATs are less familiar with their normal behavior, which makes recognizing changes difficult. As such, ATs at WOU prioritize establishing a relationship with student athletes under their care.

Even if ATs recognize the signs and symptoms, student athletes may not disclose mental health concerns because of fear of lost playing time. As a comparison, many student athletes do not tell athletic trainers about physical injuries they are experiencing (see Figure 1 for common athletic injuries) because they are worried it will limit practice and game participation.

Figure 1: Yearly average of reported athletic injuries at WOU by location of injury, 2017-2019

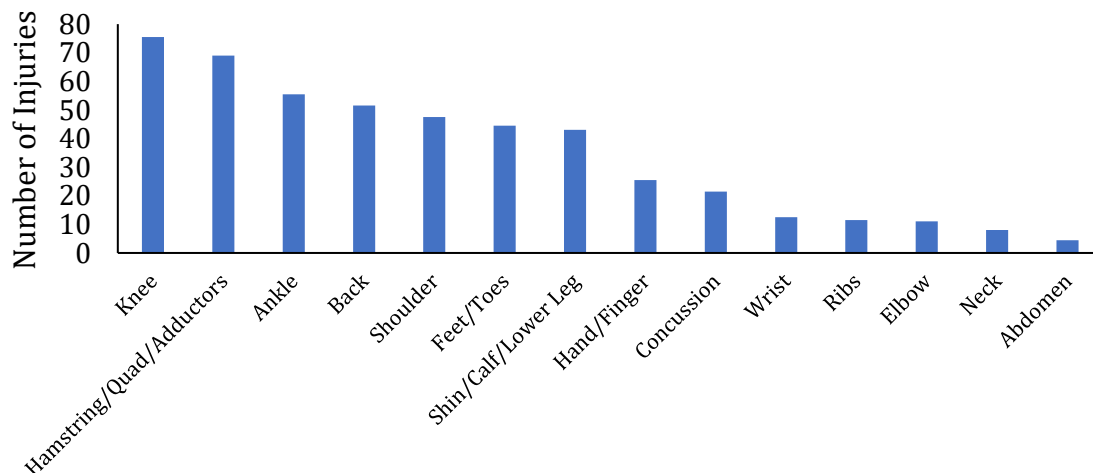


Figure 1: Injury data reported by student athletes to athletic training staff during the 2017-18 and 2018-19 academic school years, averaged and arranged by location of injury. Not included in the report were severity or longevity of these injuries, or specifics on sport or gender of those reporting the injuries. Source: Brandon Walcott-Ayers, Assistant Athletic Trainer at Western Oregon University.

In order to ensure confidentiality, gain trust, and combat fears, ATs at WOU only report issues to coaches that directly impact an athlete's ability to perform. However, ATs worry that student athletes are not aware of these policies, which may lead to un or underreported injuries. The same is likely true with mental health related issues, according to the ATs interviewed. For both instances, ATs think it would be beneficial to devote some time at the start of the season to go over their attitudes and policies with student athletes to create and foster a safe zone where athletes are comfortable sharing information.

Over the past few years, the ATs at WOU have worked with the athletic department to revamp and re-implement guidelines and procedures on how to handle mental health related concerns they might face. With these updates came an increased focus on the pre-participation mental health questionnaire required for all new and returning student athletes. Despite the move toward preventive mental health care, some ATs recognize the need for increased oversight in this process. Mainly, if the student athlete's responses raise a certain number of red flags, the ATs feel it would be beneficial for a mandated appointment with a mental health counselor. However, the feasibility of enforcing this mandate poses HIPAA concerns, which is why no such procedure currently exists at WOU.

Every AT interviewed agreed that improved communication with mental health resources on campus, especially those at the SHCC, would help them serve student athletes more effectively. For comparison, when ATs send student athletes to a doctor for an X-ray, they are able to generally inform the student on what to expect from the visit and procedure. Because of their limited interaction with the

SHCC, however, the same explanation cannot happen with a SHCC referral. As such, WOU ATs think it would be beneficial to know a generalized procedure of what happens after they have refer a student athlete for mental health concerns, so they could ease the nerves of anyone unsure of the process.

Student Health and Counseling Center

To gain a better understanding of the SHCC on campus, I interviewed the director of the student health and counseling center, Beth Scroggins, the head of counseling, Scott Perfect, and licensed counselor Miguel Gonzalez. They all had different areas of expertise, which provided various perspectives about the benefits of and obstacles to a more comprehensive care model. Additionally, Perfect and Gonzalez were collegiate athletes, so both have personal experience in the specific stressors faced by student athletes, especially those following an injury. Furthermore, Gonzalez is a recent WOU graduate who played on the football team here, so he was able to discuss time trends and a shift in attitudes toward mental health awareness on campus.

First, the counselors explained what resources and services the SHCC could offer to injured athletes. In addition to the standard counseling sessions, the SHCC can diagnose and treat depression, anxiety, and trauma—both the physical and the emotional aspects—that often follow injury. Additionally, the SHCC offers pain management options, which can be beneficial for some physical consequences of injury.

If an athlete comes to the SHCC, the counselors interviewed explained that they have no way of knowing that the student is a collegiate student athlete unless the patient decides to disclose that information themselves. Consequently, counselors often cannot treat the source of many psychological reactions to injury unless prompted by the athlete.

Following an injury that sidelines athletic participation, the SHCC counselors explained that athletes undergo biological changes due to decreases in exercise levels, which may contribute to symptoms of depression. Additionally, if an injury prevents practice participation, the student athlete no longer has the normality of the practice and weights schedule, and no idea what to do with this time, which Perfect experienced firsthand after a wrestling knee injury. These factors can heighten mental health concerns according to the counselors interviewed.

According to Perfect, several emotional reactions to injury can last beyond the physical manifestation. Specifically, after an athlete physically recovers and rehabilitates from an injury, the athlete may still experience a mental block that prevents peak performance. Perfect referred to this as a post-injury psychological trauma.

When asked about a comprehensive care model, as detailed by several literature sources, the primary concern the SHCC raised about enacting a system like that regarded confidentiality. Ultimately, there is a one-way flow of information at the SHCC; everything that happens at the SHCC stays there. The counselors fear this lack of feedback on what happens in the center can be difficult for coaches and the athletic department, but it is a necessary component of the counseling process.

The understanding that nothing that happens at the SHCC will be shared with coaches or affect their ability to be on the team allows student athletes to feel comfortable to talk about whatever concerns they are facing.

Furthermore, those interviewed mentioned how the high turnover rates of staff at the SHCC have created issues in implementing changes in their operations. At some point in the past, a formal process for referring student athletes existed, but those processes ceased as the parties involved with them moved on. However, an informal process of encouraging student athletes to seek help might actually be the preferred route anyway, according to the staff, because it would prevent student athletes from worrying about how their involvement with the SHCC would affect their playing time or standing on the team.

Improved awareness was another common theme that emerged for those interviewed at the SHCC. For example, the SHCC gives presentations in the residence halls and classrooms on a variety of mental health topics, and the same service could be provided for athletes and/or coaches. This would not only bring awareness to whatever selected issue, but it would also increase exposure of the SHCC to athletics which could encourage student athletes to utilize these resources more. Similarly, a representative of the SHCC could speak at the NCAA compliance meeting, and student athletes would be able to put a face to the program. This would again increase exposure and make student athletes more aware of the resources available to them.

The SHCC staff all agreed that improved education about mental health would benefit student athletes. For example, the NCAA mandates concussion

training so that athletes and coaches know how to recognize the signs and respond if the problem ever arises. Following the implementation of that mandate, concussion awareness and reporting increased. Consequently, the SHCC staff wonder if similar education requirements could be done for depression and other mental health related concerns.

In conjunction with education and awareness, counselors at the SHCC admitted that negative stigma in athletics surrounding mental health likely prevents student athletes from reaching out for help. From the SHCC staffs' perspective, attitudes in athletes about getting mental health care have improved, but they want student athletes to normalize going to the SHCC as part of their self-care routine. As Scroggins explained, student athletes are encouraged to eat healthy and sleep well; seeing a counselor should be added to that list of regular behaviors expected for peak performance.

Athletic Department

I spoke with Randi Lydum, the associate athletic director, director of compliance, and senior women's administrator. Lydum will serve as the interim athletic director during the 2020-21 academic year. The athletic director for the 2019-20 year declined to be interviewed.

As a former WOU student athlete herself, Lydum has a unique perspective on many issues facing student athletes, as she has both personal and administrative experience at this institution. In her view, WOU athletics has made progress on issues related to mental health, but there is still a long way to go to fully support the

needs of student athletes. Lydum feels like all parties involved in this issue—NCAA, GNAC, WOU administrators and coaching staff—recognize there is a problem, but now they are trying to figure out the strategies for how to fix it. Primarily, these strategies have focused on education: making sure coaches know how to approach issues and student athletes are aware of the resources available. However, on a small campus like WOU, many important issues do not have the funding they need to adequately solve the problem, so solutions instead try to utilize resources already available or partner-up with existing programs to solve the problem in creative ways.

Both the NCAA and the GNAC have recently set specific mental health education requirements that all schools under their jurisdiction must complete. These training sessions are usually some form of online module or webinar on a variety of topics, and they generally quiz the participant at the end on the information presented. Lydum admitted that sometimes it takes requirements and mandates to get people interested in and devoted to solving a problem that deserved attention on its own right. Regardless, the increased emphasis on mental health has been encouraging in Lydum's eyes.

For the past few years, the NCAA has required all athletic staff to participate in a yearly training module focused on a rotating set of mental health related issues. This year's topic was fostering positive mental health on a team. Additionally, the NCAA started a program to train all athletic staff on what to do in a mental health crisis situation. Other education programs the NCAA has offered in the past include alcohol abuse training, but Lydum felt like this training missed the underlying cause

of alcohol abuse for many student athletes: environment and mental health. In her experience, most student athletes who abuse alcohol do it for a reason, as a way to self-medicate or as a coping mechanism. Lydum referred to this module as an example of ways the NCAA is trying to increase education and awareness but sometimes goes about it in ways that are not as effective as they could be.

Because all schools in the GNAC are members of the NCAA, the mental health education and training requirements of the GNAC can be more specific and comprehensive than the NCAA's because a base knowledge from the previous requirements is assumed. Recently, the GNAC hired an independent mental health specialist to evaluate issues faced by student athletes and programs in the GNAC and provided four webinars about these issues. All coaches were required to listen to at least one of the webinars.

Beyond these training modules, Lydum mentioned how WOU athletics have addressed mental health needs through resources already available to the general student body. Primarily, Lydum encourages student athletes to utilize the counseling resources available on campus. Additionally, the athletic department has partnered with the SHCC to encourage stress management in student athletes through outreach events such as the scheduled utilization of the SHCC's Rest and Relaxation room. Overall, the recognition of mental health concerns and need to promote positive mental health in student athletes has increased in Lydum's experience. Yet, she recognizes improvements can still be made to help make sure student athletes don't "fall through the cracks" and miss out on the support they need.

Discussion

Interviews with athletic trainers, licensed counselors, and personnel in the athletic department highlighted the current policies, procedures, and attitudes related to student athlete wellbeing at WOU. Athletic trainers commonly mentioned education, recognition, and communication as important components of their role in addressing mental health concerns in injured athletes. Randi Lydum, the interim athletic director, also believed proper education and training on mental health was an important consideration for the athletic department. Lastly, the counselors at the SHCC deemed awareness, education, and outreach as the most important aspects for treating injured student athletes.

A common theme that emerged in interviews and the academic literature was the importance of utilizing on campus resources. Like López and Levy (2010) found in their survey of university mental health resources, the athletic department at WOU relies on resources already available on campus, such as the SHCC, to provide support to student athletes. However, as López and Levy (2010) also found, no counselors at WOU have specific training in the needs of student athletes. This may lead to student athletes viewing counseling services as less favorably and ultimately underutilizing these resources, which echo results found by Neal and colleagues in their 2013 study.

Both the literature and interviewees also stressed the importance of athletic trainers establishing relationships with student athletes beyond simply treating their physical needs. For example, athletic trainers at WOU said they work to foster a safe atmosphere where athletes feel comfortable talking about concerns, even

those not pertaining to medical issues, as studies by Roa and Hong (2015) and Russell and Tracey (2011) recommend. Additionally, athletic trainers at WOU emphasize establishing relationships with freshmen and transfer student athletes because they are at higher risk for depression than other college standing groups. This approach corresponds with the findings of Yang and colleagues (2007) indicating that freshmen collegiate athletes were at a higher risk for depression than other groups.

Additionally, the individuals interviewed and multiple sources highlighted the barriers to seeking treatment many student athletes face. For example, Bauman (2016) concluded that athletes sometimes avoid telling athletic trainers about physical and psychological concerns related to injury over fear of losing playing time, and the trainers at WOU echoed these findings. Furthermore, Breslin and colleagues (2017) and López and Levy (2010) found that student athletes associate help-seeking behaviors with weakness, which prevents them from utilizing mental health services. Because the athletic trainers at WOU recognize this negative stigma about mental health in athletics, they work to normalize talking about psychological concerns by creating an open and inclusive environment.

Additionally, several aspects related to gender patterns in mental health symptoms, referral, and treatment in student athletes arose in both published sources and interviews. For example, Moreland and colleagues (2018) found that female athletic trainers and coaches were more likely to talk with and refer student athletes about mental health related concerns. Echoing these findings, many of the changes in how WOU athletics handles mental health happened when there was a

female head athletic trainer, female director of the SHCC, and a female athletic director. These procedural improvements in how WOU athletics addresses mental health concerns create a more supportive environment for injured student athletes, which ultimately benefits their mental health and recovery status.

In contrast to the literature, my interviews with male athletic trainers and counselors showed that everyone, regardless of gender, expressed significant concern and support for student athletes with mental health concerns. This supportive environment should positively influence student athletes' attitudes regarding help-seeking behaviors. In order to get the most out of this supportive environment, additional emphasis on triangulating resources will better support the emotional needs of injured student athletes.

Another aspect of the recognition, referral, and intervention process highlighted in both interviews and the literature was the importance of pre-participation exams. As Roa and Hong (2015) and Sudano and colleagues (2017) found, the pre-participation exam helps screen for mental health concerns in student athletes and identify at risk groups to better inform treatment, referrals, and intervention plans. Corresponding with this, the athletic training rooms at WOU have moved toward more extensive and involved pre-participation exams over the last few years. Specifically, all new and returning student athletes must annually self-assess and report various symptoms related to mental health before clearance for athletic participation. However, both the literature and those interviewed voiced concern about the quality of data the exam can collect and called for a more encompassing assessment. Specifically, Kroshus (2016) found that pre-participation

exams and other mental health screening techniques are ineffective without adequate follow-up, and the athletic trainers at WOU voiced similar concerns.

Lastly, the literature highlighted the importance of adequate education and training about mental health concerns in student athletes. Mainly, the NCAA Best Practices (2020) document recommends establishing procedures for identifying and referring student athletes to clinically trained professionals. Similarly, Yang and colleagues (2010) and Neal and colleagues (2013) stressed the importance of early recognition of signs and symptoms of potential psychological problems and subsequent referral to appropriate resources. The importance of education and training was reiterated in interviews as well. Because improved education and awareness is a facilitator for help-seeking behaviors in student athletes, emphasis on increasing these aspects should be a priority for all entities and personnel interacting with student athletes.

Limitations and Future Research

This project had several limitations—some related to a global public health crisis, and others related to the still limited amount of research on student athlete mental health. The main limitation stemmed from the COVID-19 pandemic during Spring 2020. Primarily, some of the action-research activities I planned on completing were no longer possible. For example, I was invited to attend a GNAC Mental Health Workshop in early April to gain insight into the actions WOU's conference was taking to better support the mental health needs of its student athletes. The all-day workshop aimed to “increase awareness of student-athlete

mental health issues” and “operationalize the NCAA Mental Health Best Practices” on GNAC college campuses (official itinerary included in appendix). Additionally, I planned to speak with athletic trainers and athletic directors at other universities to see what other GNAC campuses of similar size and funding were doing to support the mental health needs of injured student athletes. However, the workshop was canceled due to COVID-19 concerns.

Additional limitations in my study include the narrow focus of my triangulation of sources, as I did not have the resources to properly include all authoritative entities with which student athletes commonly interact. In future considerations of mental health in injured student athletes at WOU, coaching staff should be included in the conversation, as they have the most direct interaction with and provide necessary social support for student athletes. Because coaches can greatly influence a student athlete’s emotional response to injury, future interviews and recommendations should focus on these crucial people in the athletic department.

Additionally, I made several attempts to interview WOU’s head athletic director (AD) Curtis Campbell, but all were declined. Future considerations of mental health in student athletes should include the head AD’s thoughts, as this position ultimately oversees and holds power over all aspects of an athletic program. However, after I conducted my interviews and compiled the results, Campbell announced his resignation as Director of Athletics at WOU, and Randi Lydum—who I interviewed for this study—became the interim Director.

As for limitations in the literature, the NCAA Injury Surveillance Program

began tracking data on sports participation related injuries in 1988 (Hootman et al., 2007), with the goal to “track and analyze medical illness and injuries that result from sports participation” to help inform policies, procedures, and practices in college sports (“NCAA Injury Surveillance Program,” n.d.). Starting in November 2018, however, the program placed an indefinite moratorium on data requests and releases. As such, many of the reported statistics on injury rates and prevalence used in my literature review were not up to date.

Unlike other medical fields, sports medicine historically has not examined gender differences in injury. However, potential gender differences in injury rates, types, severity, and longevity have implications in the treatment, rehabilitation, and emotional responses to injury in athletes, especially regarding help-seeking behaviors (Wolanin et al., 2016). Consequently, future research aimed at studying gender differences in injury is necessary and could impact the recommended mental health response for different genders.

Although, gender differences in the prevalence and risk factors for athletic injuries is not well studied (Wolanin et al., 2016), male athletes were disproportionately represented in the literature available about the psychological effects of injury in student athletes (Singh & Conroy, 2017), while women are primarily sampled in depression studies conducted on the general public, leading to a mismatch of data between these groups. Going forward, it is important to gather a more representative sample to help improve our understanding of gender-related factors that might influence psychological response to injury in college athletes.

Furthermore, gender norms have been linked to help seeking behaviors (Breslin et al 2017), but no specific studies have looked at whether this manifests in sports culture and attitudes. For example, are athletes who play football—a sport typically regarded as highly masculine—less willing to seek help than athletes of sports that do not emphasize traditionally masculine attributes as much? Further research into athlete attitudes grouped by sports are needed to better understand the specific barriers and facilitators student athletes face regarding mental health resources.

Similarly, because male athletes are less likely to seek help than female athletes (Wolanin et al., 2016; Yang et al., 2007), different screening practices and interventions based on gender may benefit student athletes. Consequently, future research should also look into whether gender-specific recognition, referral, and intervention programs significantly influence emotional reactions to injury and ways in which these gender differences can best be addressed to properly support the needs of college student athletes.

Interestingly, differences in social support for student athletes in team sports and individual sports have not been studied. Although some statistics on the rates of depression between sports have been conducted—with women participating in individual sports, like track and field, experiencing the highest rates of depression while men participating in team sports, like lacrosse, reporting the lowest—little research has been done to find the underlying cause of these differences (Wolanin et al., 2016). Similarly, injured athletes cited fear of losing their playing position to teammates as a major cause for emotional distress (Bauman, 2016); however, this

dynamic only applies to team sports. As such, future research looking at the differences in stressors, barriers, and facilitators in individual and team sports should be conducted.

Recommendations

Based on the academic literature and interviews I conducted, the lack of training, communication, and outreach between and among services present a major barrier for injured student athletes. Primarily, many practices and policies in the athletic training room could be altered to enhance the injured student athlete's experience. For example, during the compliance meeting at the start of an athlete's season, athletic trainers should be explicit about their policies on what information they will share with coaches and what will stay private, so student athletes feel more comfortable disclosing injuries and mental health concerns. At this same meeting, it would be beneficial to explain the signs and symptoms of mental health concerns student athletes should recognize in themselves and others, as well as highlight local resources available to student athletes and what to expect from those services. Additionally, because athletes are unlikely to initiate a dialogue about the psychological aspect of injury with their sports medicine providers, athletic trainers should regularly ask injured athletes direct questions about their emotional and psychological wellbeing following an injury. Furthermore, injured athletes—especially those who miss prolonged periods of athletic participation due to injury—should be regularly screened with mental health inventories throughout the recovery and rehabilitation process, and these inventories should be compared to

the baseline established during the pre-participation exam. Likewise, a more extensive and consistent follow-up on information disclosed on the pre-participation exam and other screening inventories should be implemented. Furthermore, injured athletes experiencing or exhibiting concerning emotional responses to injuries—as demonstrated through the direct questions or screening inventories—should be encouraged to visit the SHCC. This entails athletic training rooms placing additional emphasis on effectively referring a student athlete to trained mental health professionals when appropriate. To further destigmatize mental health in athletics, athletic trainers at WOU should regularly recommend utilizing SHCC services as part of their rehabilitation program following an injury.

To assist with the referral process, WOU athletics, working with SHCC and the athletic trainers, should create and share a coordinated plan for handling mental health related concerns. Currently, a plan for approaching a crisis situation exists, and this plan should be expanded upon for non-emergency situations. This training would help all parties involved feel more prepared and in control when the situation arises. Lastly, WOU athletics should advocate for the counselors at the SHCC to receive additional training on athlete specific stressors, concerns, and attitudes to better serve this vulnerable population. For example, the GNAC Mental Health Workshop recommended registering a representative from the campus counseling center to attend the conference. By including SHCC staff in available training resources, not only will counselors become more aware of student athlete specific issues, but also the services will become more triangulated. Because coordination and cooperation between available services increases the support a student athlete

feels, this interaction and integration of services will positively influence an injured student athlete's experience.

Conclusion

As a mid-sized, public university, WOU works within a limited budget to meet the needs of various student populations. Many programs rely on already available on-campus resources to provide services for their specific needs, and the athletic program is no exception. Given budgetary constraints, WOU athletics must find innovative ways to offer support and resources to student athletes facing mental health concerns. Thus, a focus on directing student athletes to available, on-campus resources such as the SHCC provides an economic solution to many problems. In order to effectively refer student athletes, education and training on the signs and symptoms of mental health concerns, especially those following an injury, is required. Because athletic trainers treat the physical ailments of injured athletes, they are in a unique position to provide emotional support and refer student athletes to the appropriate resources when applicable.

In my time as a student athlete at WOU, major strides have been made to destigmatize mental health in athletics, both at the university and beyond. Athletic training rooms have increased emphasis on mental health screening during pre-participation exams, and the NCAA and GNAC have expanded training on awareness and treatment of common student athletic mental health concerns. Going forward, my hope is that this thesis provides evidence-based guidance to further encourage the mental wellbeing of current and future WOU student athletes.

Reflection

Running has always been a major part of my life, and I specifically chose WOU so I could continue pursuing my passion at a higher level. The majority of my college friendships started because of our mutual involvement in track and field, and my personal identity centered around the sport.

Just as I started having confidence in myself as a collegiate athlete, I sustained an abrupt and debilitating injury that prevented me from running. After a prolonged period without any improvement, the athletic trainer and team doctor told me I would never compete again. My sense of self vanished in an instant, and I had no idea how to handle that.

Unable to run or compete, I felt like a burden bringing my struggles to my coach or the athletic trainers unless they were specifically related to the progress of my physical healing. I wanted to be strong, to be unphased by the setback, for that mental toughness is what allowed me to compete at the collegiate level in the first place. However, struggling alone negatively impacted many aspects of my life, including my academic motivation and overall well-being.

Running was my usual outlet for expression and repressed emotions, so without it, I was left with no mechanism for handling ordinary problems like stress from school, not to mention heartbreaking news like the injury itself. Likewise, much of my identity centered around being an athlete, so I felt lost and purposeless without running. Unable to run or process my grievances, I fell into a deep depression that I was unable to express effectively with others.

After researching this topic, I learned that the difficulties I faced following my injury are typical experiences for injured athletes. However, at the time I did not realize that was the case. I felt very alone in my struggles, and I had troubles reaching out for help.

Following extended physical and emotional battles, I returned to competition with an improved outlook and appreciation for the sport. However, not everyone receives such a happy ending following a major injury. I want to ensure that WOU is doing everything in its power to support the mental health of student athletes so that others do not feel alone in their struggles like I did. Ultimately, this experience is what prompted my interest in the topic, although outside factors also persuaded me into pursuing this topic as my thesis.

In many ways, the loss of my final spring season of track and field due to COVID-19 reminded me of my lost season due to injury, although this time I was equipped with more knowledge and experience. Abruptly, I lost my athletic identity, social support network, plans, and goals. However, this time, I was not alone in my loss and devastation. Every athlete, regardless of the level of competition or sport of participation, was facing the same battle as me.

When all sports were cancelled, both in practice and in competition, every athlete I know handled the news in different ways. Many went through variations of the seven stages of grief, and I felt myself in the denial phase for a long period of time.

Drawing parallels between student athletes' psychological reactions to injuries because of the cancelation of sports with the catastrophic impact of COVID-

19 might seem shallow, as the coronavirus has far reaching effects in the lives of so many. However, given my past experience with post-injury depression, isolation, and many other emotional and behavioral reactions to injury, as well as my research knowledge, makes it hard for me to deny the correlation, at least on some superficial levels.

Although the abrupt loss of athletic identity and the normalcy of practice and competition after the cancelation of spring athletics affected my psyche, I think the process of writing this thesis helped ground my experience in a tangible context that allowed me to process the news. Obviously, I wish my final season of competition as a collegiate athlete would have gone differently, but I think the experience gave me greater insight and context into the themes and notions explored in my thesis. I will count this trade-off as a small victory, and I hope the recommendations I make to the University will lead to improvements in the way WOU supports student athletes post-injury.

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Appendix



GNAC Mental Health Workshop

Date: April 2, 2020
Location: Portland, OR

Check-In: 8:00-8:30

Workshop Goals:

- Increase awareness of student-athlete mental health issues
- Encourage athletics engagement with campus colleagues
- Train athletics stakeholders in empathic response
- Operationalize the NCAA Mental Health Best Practices

Target Audience: This workshop is targeted toward athletic department and institutional personnel who interact with policies and procedures related to student-athlete mental health. This may include, but is not limited to, athletic trainers, academic advisors, athletic administrators, and campus mental health providers.

Institutional Team: Athletic Directors from each GNAC conference school have the opportunity to register **five** individuals from their campus to attend the event by February 28. One of the five individuals should be the athletic director. We highly recommend that one of your five individuals is your athletic trainer or someone from your campus counseling center. Additionally, the five total individuals could include individuals who typically attend the GNAC spring management council meetings (FAR/SWA/Compliance). If there are extra spots available after February 28, schools will have the opportunity to send additional individuals.

Session 1: 8:30 a.m.-12:00 p.m.

Welcome: Bridget Johnson Tetteh, GNAC

NCAA Update, Jessica Wagner, NCAA

Overview of Student-Athlete Mental Health: Rachel Rogers, WOU SAAC

Introduction to Mental Health: Cindy Miller Aron

World of Mental Health Icebreaker Activity: Jessica Wagner, NCAA

Campus Student-Athlete Mental Health Concerns: Gwen Koenig, CWU

Reflections and Sharing Activity: Gwen Koenig, CWU

Empathic Response Training: Cindy Miller Aron

Session 2: 1:00 -4:30 p.m.

Conference Charge: Theresa Hanson, SFU

Overview of Mental Health Best Practices: GNAC Athletic Trainer, Alice Loeb sack, SMU

Peer Group Activity: Cindy Miller Aron

Campus Athletic Wellness Team: Julie Barras, Dr. Pete Crabb, and Alison Graham Larson

Mental Health Best Practices Institutional: Cindy Miller Aron

Campus Collaboration Action Planning: Cindy Miller Aron

Evaluations: Bridget Johnson Tetteh, GNAC

Closing Comments: Dave Haglund, GNAC

Reception: 5:30 - 6:30 p.m.

Dinner: 6:30 -8:00 p.m.