

Mental Health: A Growing Concern in Collegiate Athletes

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Abstract

Mental health is a topic that has been gaining a lot of traction in recent years. Unfortunately, this topic has not gained as much traction in the athletic community. Mental health can affect anyone at any time. Collegiate athletes are constantly faced with stigmas and barriers when it comes to mental health, and often times do not get the support they need. Analysis of previous research shows that mental health issues are just as prevalent in collegiate athletes and in some cases more prevalent than their nonathlete counterparts. Barriers that collegiate athletes face, especially the stigma that is in the athletic community in relation to mental health is a major factor when considering why collegiate athletes don't get the help they need. Additionally, colleges and coaches can have a major contribution to the help-seeking behaviors of their athletes. Furthermore, previous research will support that strategies like resilience or resilience training, and mindfulness can have a very positive effect on a college athletes' psyche and should be considered moving forward if colleges want to lower the prevalence of mental health issues in their athletes. The purpose of this synthesis project was to review the literature on the mental health of collegiate athletes.

Chapter 1

Introduction

The National Institute of Mental Health has estimated that 51.5 million adults in the United States live with a mental health condition (Edwards et al., 2023). Of those numbers, mental health conditions are particularly prevalent among young adults between 18 and 25 years of age (29.4%) compared with adults aged 26 to 40 years (25.0%) and adults aged ≥ 50 years (14.1%) (Edwards et al., 2023). Young people are affected by these numbers the most and are more likely to have mental health issues than adults that are older than them. The population with the highest instances of mental health issues are those who are college aged students. College students already have a lot of things in their lives that they must balance in order to continue in their college careers. College students are at a vulnerable age for the onset of mental health issues. For those who participate in sport, the additional stress of balancing academics and athletics can exacerbate conditions (Beauchemin, 2014; Davoren & Hwang, 2014).

The common misconception that most people have is that student athletes are less likely to have mental health issues than those of their peers who do not play sports, usually because physical activity is known to be good for not only physical health, but mental and psychological health as well. Approximately 1 in 5 student-athletes experience some type of mental health concern. However, fewer than half of student-athletes who report mental health concerns seek mental health treatment (i.e., psychotherapy or medication) (Yoon & Petrie, 2023). Student athletes can perceive having mental health issues as a weakness or that people and their coaches will view them differently. Substantive numbers of collegiate student-athletes experience mental health concerns and despite recommendations that collegiate athletic departments have mental health professionals on staff, have procedures for identifying and referring athletes for mental

health care, conduct preparticipation mental health screening, and promote and support athletes' mental health through education and programming, approximately 60% of student athletes did not seek any form of psychological treatment (Yoon & Petrie, 2023). Whether the student athlete is concerned about playing time, performance, or coaches' perceptions of seeking mental health help, it is concerning that so many student athletes report mental health issues, but so few of them get the help they need. The culture and community of a school and its athletic program can be a huge factor on whether or not a student athlete seeks the help they need. Unfortunately, the stigma from external barriers leads many student athletes to deal with their mental health issues on their own. According to Yoon & Petrie (2023), student-athletes, regardless of gender and race, were more likely to identify their head coaches as a barrier to their help-seeking than any other stakeholder; the next closest stakeholder was assistant coaches.

It is becoming more common for colleges and universities to invest in professionals that work and address mental health concerns with college athletes. Psychologists have recently begun to take a more prophylactic approach to defend against these disorders through resilience education. Resilience education focuses on developing greater capacity to cope when mental and emotional challenges arise (Lyu et al., 2022). Resilience training is beginning to come about in the athletic world to help student athletes cope with the negative aspect that can come with being an athlete. Resilience is the ability to experience problems, defeat, embarrassment, challenges, and not only return back to the level where we were before, but to achieve greater success, happiness and mental strength (Grotberg, 2003; Fletcher and Sarkar, 2013; Everly et al., 2015). College and universities are doing what they can to tear down the barriers and stigmas that student athletes face when it comes to mental health treatment.

Mental health has been a topic of increased popularity recently and the growing prevalence it has amongst all people, but especially young people, specifically college aged people. Due to stigmas and stereotypes, collegiate athletes are often times left out of those situations because they are perceived as not part of the normal pool of people and above the average college student. The truth is that college athletes are just as susceptible to mental health issues as anyone else, and if barriers and stigmas are not broken, student athletes will continue to suffer in silence and be forced to deal with their mental health problems on their own.

Statement of the Problem

In the United States, mental health is gaining a lot of traction. It is becoming more and more of a priority for those struggling to learn ways to manage, cope, and cure their mental health issues. Unfortunately, mental health in collegiate athletes has not gained as much traction as when talking about the general population of people. There is a stigma and many barriers that collegiate student athletes face that prevent them from talking about it and getting the help they need. The fear that student athletes may be perceived as weak or not amongst the elite students on campus is a barrier for them to seek help.

Purpose of the Study

The purpose of these studies is to review the literature on the mental health of collegiate athletes.

Operational Definitions

- 1) Collegiate athlete/student athlete – describes an athlete who is a full-time student at a college or university at the division I, II, or III levels.

- 2) Mental Health – refers to the emotional, psychological, and social well-being. It affects how we think, feel, and act, and helps determine how we handle stress, relate to others, and make choices (What is Mental Health, 2023).

Research Questions

- 1) How prevalent is mental health issues in college athletes?
- 2) What barriers do collegiate athletes face as it relates to mental health?
- 3) What role do coaches and the college or university play in increasing or decreasing mental health?
- 4) What strategies can be implemented to assist student athletes with mental health issues?

Delimitations

- 1) Articles selected for review in this synthesis were related to mental health of collegiate athletes.
- 2) The ages of athletes in the studies reviewed for this synthesis were 18 and older.
- 3) Both males and females were included in the studies reviewed for this synthesis.
- 4) All articles included in this synthesis were from 2014-2024.
- 5) All articles included in this synthesis were peer reviewed.

Chapter 2

Methods and Procedures

The purpose of this chapter is to review the methods and procedures used to determine issues surrounding the mental health of collegiate athletes. The studies collected for this synthesis were located using the EBSCO database from SUNY Brockport's Drake Library. Within the EBSCO database, the following search engines were used: SPORTDiscus and Academic Search Complete. Studies were also collected using the database PubMed.

Data Collection

For this synthesis paper, the primary database used was EBSCOHOST. The search engine used in this database was SPORTDiscuss and Academic Search Complete. All searches used the key words *college athlete* because that was the sample group that was of focus for this synthesis, and *mental health* since that is the main topic of this synthesis. Using just those key words, it resulted in hundreds of hits of studies all related to the topic. To narrow the search down, other keywords that were used during the search were, *prevalence, barriers, burnout, and mindfulness, and coach*. In the PubMed database, the keywords used to search were *mental health trends, student athlete, anxiety, depression, and resilience*.

Using the EBSCOHOST database, the most studies were found using the SPORTDiscus search engine. The keywords *mental health* and *prevalence* and *college athlete* resulted in 44 hits. Of those 44 hits, 3 articles were chosen. The second search when using *mental health* and *college athlete* and *barriers*, there were 19 hits and 2 articles were chosen. The next search used *mental health* and *college athlete* and *burnout*, which resulted in 19 hits and 3 articles chosen from the critical mass. The final search in SPORTDiscuss used the key words *mental health*

trends and *college athlete*. The final search resulted in 10 hits, and 1 more source was chosen from that critical mass.

To continue the search in EBSCOHOST, the Academic Search Complete was used. The key words *mental health* and *college athlete* and *mindfulness* generated 10 hits and 1 source was chosen. An additional search in Academic Search Complete used the same words as the previous search, but the keyword *mindfulness* was replaced with the keyword *coach*. This search generated 39 hits and 1 article was chosen from the critical mass.

The other database used to search and collect studies for this synthesis was PubMed. In PubMed, two separate searches were conducted that allowed for two more sources to be collected. The keywords for the first search were the same as one of the searches in EBSCOHOST, those words were, *mental health trends* and *student athlete*. That source generated 51 hits and 1 source was taken from the critical mass. The last search in PubMed used the key words *anxiety* and *depression* and *college athlete* and *resilience*. That search had only 13 hits, and 1 source was taken from that critical mass as well.

The articles taken from the critical mass were from the following journals; the Journal of Athletic Training, the Journal of Psychological Research, the Journal of Athlete Development and Experience, the Journal of Issues in Intercollegiate Athletics, and the Journal of Clinical Sport Psychology,

Data Analysis

To collect data from the different studies, an article grid was created. The article grid breaks down the author or authors of the study, the title of the study, purpose, methods and procedures, analysis, findings, and discussion about the study. Out of the 10 studies collected and being used, two of the studies were qualitative in nature, and eight were quantitative in nature.

The critical mass of for this synthesis consisted of roughly 57,280 collegiate athletes from Divisions I, II, and III. One study also addressed 448,301 non athletes, but college students to compare results. All collegiate athletes were at least 18 years or older, and full-time college student athletes. Data in these studies were collected predominantly in the United States, but there was also data from China and Turkey as well. In these studies, there were a variety of different techniques used to collect data from the participants. Those techniques include, questionnaires, online and in-person surveys, semi-structured interviews, likert scales, and in-person screening. With the data collected in those studies, the methods for analyzing data included, IBM SPSS versions 25 and 26, chi-squares, content analysis, and descriptive statistics.

All studies used in this synthesis gathered information and data that pertained specifically to the purpose of this synthesis. The studies used different methods for collecting data as well as various means of analyzing the data, but all findings and results remained relevant to the topic.

Chapter 3

Review of Literature

The purpose of this chapter is to present a review of literature on the mental health of collegiate athletes. After rigorous research on the topic, there were 10 articles that were selected for this synthesis. The results from each article will be reported through the following themes: prevalence of mental issues in collegiate athletes, barriers to collegiate athletes seeking mental health help, and strategies to improve or cope with mental health.

Prevalence of mental health issues in collegiate athletes

Mental health struggles represent a significant crisis in collegiate athletes. The National Institute of Mental Health (2021) has estimated that 51.5 million adults in the United States live with mental health conditions. Mental health conditions are particularly prevalent among young adults between 18 and 25 years of age (29.4%) compared with adults aged 26 to 40 (25%) and adults aged 50 and older (14.1%). Valster et. al. (2022) suggests that college students are at a vulnerable age for the onset of mental health issues, when you combine that with sports, the additional stress of balancing academics and athletics can exacerbate conditions. A commonly examined mental health disorder is depression, which can be characterized as loss of interest in activities, insomnia or hypersomnia, a sense of worthlessness, and recurrent thoughts of suicide (American Psychiatric Association, 2013). “Of the approximately 8 million high school student athletes, about 186,000 will earn a spot on a Division I roster” (Irick, 2019, page 4). The competitive drive, and rigid focus on performance in the student athlete population could also put them at risk for mental health issues during their college careers. Due to the severe consequences for patients, it is vital to understand the prevalence and risk factors of depressive symptoms in various populations.

Edwards, Froehle, and Fagan (2023), looked at the changes in the mental health of student athletes over the past decade compared with that of nonathlete students. The survey they base their data off of is called the National College Health Assessment, this one was from 2011 to 2019. It is a national survey, so the sample size is quite large. The study included 54,479 college athletes and 448,301 nonathletes to compare data to. Participants completed the survey that prompted them to answer self-reported question in 5 mental health-related categories: recent mental health symptoms, recent mental health diagnosis, mental health treatment-seeking behavior, receiving mental health information from the institution, and the recent effect of mental health factors on academic performance. Results from this study showed that there was a substantial increase in rates of anxiety, mood disorders, and overall rate of any diagnosis in both groups (Edwards, et al., 2023). When looking at this study and being able to compare data with athletes and nonathletes, it becomes clear that athletes who to some are considered elite company on a college campus, deal with very similar mental health issues as the general population of nonathletes.

Similarly, Valster et. al. (2022) took a look at prevalence of mental health issues in collegiate athlete, but specifically at the Division III level. Research needs to be continued in the field of mental health, but also specifically at the Division III level. Most data that is conducted on this topic is predominantly focused on the Division I level. The sample size for this study was 1,068 Division III collegiate athletes, and the study was conducted over a 2-year period. Participants completed an in-person screening that used three valid and reliable mental health surveys. The purpose of this study was to identify the level of clinically relevant self-reported mental health symptoms in National Collegiate Athletic Association (NCAA) Division III athletes and variations based on sport participation (men's and women's athletics, team and

individual sports). The 3 surveys the participants completed were the General Index survey (GI), the Harvard Department of Psychiatry/National Depression Screening Day Scale (HAND), and the Beck Anxiety Inventory (BAI). The GI survey is a tool used to evaluate mental health distress like anxiety, depression, and suicidality. The GI contains 9 yes or no questions. Both the HAND and BAI use a 4-point likert scale to measure depression symptoms (HAND) and anxiety-related symptoms (BAI). Upon reviewing data, the study found that 10.1% of participants had a positive screening for mental health distress, while 9.4% of them described significant depressive symptoms (Valster et. al., 2022). In year one, 12% of participants screened positive for the GI screening, and 8.2% in year two (Valster et. al., 2022). And 9.2% and 9.5% of participants screen positive for depression symptoms in years one and year two, respectively (Valster et. al., 2022). Overall, it is clear that mental health issues have a prevalence on college campuses, and it's now up to the universities to provide the necessary services so that student athletes can seek help.

Another study took a similar approach and looked at mental health prevalence at the Division III level. The purpose of the study was two-fold. First, to assess the prevalence of depressive symptoms in NCAA Division III collegiate athletes. And secondly, to focus on the most commonly linked factors (anxiety, stress, and burnout symptoms) in an NCAA Division III athlete population. Wilson et al. (2022) found that 15.1% of participants reported moderate to severe levels of depressive symptoms. 22% of participants reported extremely severe anxiety (Wilson et al., 2022). Prevalence of elevated depressive symptoms was nearly 2.5 times higher in female athletes compared to male athletes (24.4% vs. 10%) (Wilson et al., 2022). In this specific study, there was a considerably higher prevalence of moderate to severe levels of stress (30.7%) and anxiety (40.8%) compared to depressive symptoms (15.1%) (Wilson et al., 2022). And

Wilson et al. (2022) suggested that the strongest predictors of depressive symptoms were psychological variables like stress, anxiety, and burnout. It is clear that just because they are at the Division III level, it does not exclude them from having mental health issues. This is a concerning finding when considering the lack of funding and resources most Division III schools have compared to Divisions I and II.

Lastly, in addition to information stated above, a study of 178 Division I athletes was conducted to examine the relationships between athlete anxiety, ritualistic behaviors related to sport performance, athlete burnout, and days off from practicing. When addressing the anxiety aspect of this study, research suggests that athletes' superstitious behaviors are viewed as a routine part of the athletic culture, masking a potential anxiety disorder and potentially preventing athletes from seeking help due to them thinking it is just a ritual (Cromer et al., 2017). Traditional views of athletes being perfectionists and creating good habits could lead to potential anxiety or depressive disorders. When looking at the 178 collegiate athletes in this study, emails that contained the surveys to this study were sent to their coaches, then the emails were passed along to the athletes for them to complete. The participants completed the Depression, Anxiety, and Stress Scale (DASS-21), The Sports Ritual Scale (SRS), and the Athlete Burnout Questionnaire (ABQ). The DASS-21 used 7 items from the anxiety subscale to assess anxiety levels in participants using a 4-point likert scale. The SRS is a 25-item scale designed to assess sport-related ritualistic behavior and the extent to which it occupies the individuals time, interferes with functioning, causes subjective distress, and can be controlled but the individual. The scale measures the responses using a 4-point likert scale. The ABQ is a 15-item questionnaire designed to measure 3 dimensions of athlete burnout (emotional/physical exhaustion, reduced sense of accomplishment, and sport devaluation) using a 5-point likert scale.

Results relevant to anxiety levels in participants show that sport ritual behavior is positively related to increased anxiety levels, and as the number of rituals an athlete does increases, the higher their anxiety levels increase (Werner et al., 2021). And athletes who already have underlying mental health issues while also partaking in ritual behavior could significantly increase levels of anxiety (Werner et al., 2021). In conclusion, there are traditions and habits in the sport world that have been around for generations, and it is starting to take a toll on the athletes who partake.

Barriers collegiate athletes face when seeking help

Mental toughness and mental health are seen as contradictory terms in the work of elite performance (Bauman, 2015). Although some progress has been made in recognizing mental health, and that it can affect anyone, collegiate athletes are still faced with numerous barriers that prevent them from seeking the help they need. Bauman states that “seeking help may expose an athlete to risks of losing playing time, their starting role, or even their contract to compete. Therefore, the incentives to ask for help and potentially get better are essentially outweighed by the negative consequences of appearing mentally weak” (2015, pg. 1). It should be a top priority nationwide for all colleges to try and eliminate as many barriers as possible for not only their athletes, but all their students on campus. Sport continues to primarily focus on improving the competitive ‘hardware’ (physiology and biomechanics) of young athletes to the exclusion of developing their health ‘software’ (mental health and performance psychology) (Bergeron, et al., 2015). Although substantive numbers of collegiate student-athletes experience mental health concerns and despite recommendations that collegiate athletic departments (1) have mental health professionals on staff, (2) have procedures for identifying and referring athletes for mental health care, (3) conduct preparticipation mental health screening, and (4) promote and support

athletes' mental health through education and programming (NCAA Sport Science Institute, 2016), approximately 60% of student-athletes did not seek any form of psychological treatment (Drew and Matthews, 2019). There are things being done at the collegiate level to help alleviate mental health issues in their athletes, but there are still several barriers that still stand in the way of athletes that are ultimately taking a heavy toll on their mental health.

Julian Jehoon Yoon et al. (2023) conducted a study that addressed barriers college athletes face when trying to seek help, and just how prevalent these barriers are for athletes. Yoon et al. mentioned that “fewer than half of student-athletes who report mental health concerns seek mental health treatment” (2023, pg. 1). When thinking about how large a lot of college athletic programs are, and then thinking about just how big the number more than half the athletic department is, it shows an extremely concerning issue with the lack of seeking help and barriers they face. The most frequently cited barrier college athletes face is mental health stigma. Different internal (beliefs and characteristics) and external (stakeholder attitudes) factors underlie the stigma and thus prevent athlete from seeking out and using the available psychological services (Chow, et al., 2021). For instance, internal factors include the fear of being perceived as weak, a lack of knowledge about mental health, a lack of time, and a belief in their own self-resilience; all are considered aspects of stigma that inhibit help-seeking behavior (Gulliver, et al., 2012). Student athletes also have indicated that external factors have an effect on them. Particularly the attitudes of stakeholders within the sport environment (coaches, athletic trainers, teammates, etc.), play a role in how they view and respond to mental health concerns (Wrisberg, et al., 2010). That is, when stakeholders hold negative views about the important of mental health or make pejorative comment about seeking help, athletes may become increasingly reticent to acknowledge, share, and seek help for their own psychological distress. The purpose

of the study conducted by Yoon, et al. was to determine the frequency of internal and external barriers to athletes seeking mental health care and examine the importance of athletes and sport psychologists sharing identities as a facilitator of seeking help. The study consisted of 266 Division I athletes, 123 males and 143 females, and participants were predominantly white. The study identified 9 internal factors that were considered to be potential barriers to athletes seeking help, as well as 7 external barriers (stakeholders). The 9 internal factors were, (1) lack of knowledge about mental health, (2) negative attitude towards seeking help, (3) lack of confidence that seeking mental health treatment would be effective/help, (4) belief in own self-resilience, (5) concern that info shared will not be kept confidential, (6) lack of time in schedule, (7) lack of awareness of mental health resources available, (8) previous negative experience with mental health professional, and (9) lack of support from family for seeking help. The 7 external factors were, (1) head coach, (2) assistant coach, (3) academic staff/counselors, (4) teammates, (5) strength and conditioning staff, (6) athletic trainers, and (7) other athletic department staff (athletic director, compliance staff, etc.). Yoon et al., discovered that “regardless of gender or race, a lack of knowledge about mental health disorders and symptoms ($\text{mean} \pm \text{SE} = 0.420 \pm 0.032$), having a negative attitude toward seeking help (0.383 ± 0.031), a lack of confidence that mental health treatment will be effective (0.391 ± 0.031), a belief in your own self-reliance (0.490 ± 0.031), and not enough time in your schedule (0.487 ± 0.031) were the most frequently endorsed internal barriers” (2023, pg. 4). Additionally, head coaches were mentioned as significant barriers to seeking mental health help due to them having negative attitudes about the importance of mental health. Results from this study show that college athletes face many barriers, some are completely within their own control, but also there are barriers that are out of their control, and that is when the college or university needs to step in and address the problem.

Collegiate student athletes experience psychological stressors everyday due to rigid schedules, team conflicts, and injury. These factors can result in symptoms of mental health conditions, decreased daily functioning, and suicidality (Young, et al., 2023). With the prevalence of mental health conditions and stressors that are faced by Division I athletes, mental health resources are underused because student athlete's perceptions of lack of access, and scrutiny from others is something they have to deal with every day (Young, et al., 2023). And that was the focus of this study, to explore the Division I student athletes' experiences with mental health and access to and experience with mental health resources at their university. Eighteen female and 5 male collegiate athletes participated in qualitative interviews that included 7 demographic related questions, and 6 mental health related questions, with follow-up questions about their specific experiences. All interviews were conducted separately and were audio recorded and transcribed verbatim. Yoon et al. found that multiple participants expressed the challenge of time management as a barrier and stressor (2023). Yoon et al. also found that many student athletes found resources helpful, but they had negative perceptions of therapists and counselors because they felt that they did not understand their role as a student athlete (2023). This information supports the idea that seeking help and talking to someone works, but it could be potentially worthwhile for colleges to invest in sport psychologists who can better understand and relate to the athletes and their current situations more than most therapists and counselors. Some participants commented that asking for help, although there has been some reduced stigma, will still lead to negative perceptions from within the athletic culture and community (Young, et al., 2023). Lastly, depending on their views, coaches had positive and negative effects on the premise of mental health (Young, et al., 2023). The world and society are beginning to

open up more to the concept of mental health, but there are still steps that need to be taken in order to open up fully on the topic.

In an article previously mentioned, Edwards et al. was looking at the changes of mental health of student athletes over the past decade compared with that of nonathlete students. One of the most important concerns with the rise in prevalence of mental health is the lack or underuse of mental health services. Barriers to seeking treatment included not only limited time and a lack of services but also social and self-imposed stigmas for seeking treatment originating from family, community, teammates, and cultural contexts (Wilkerson, et al., 2020). Such stigmas exist in the broader society but may be exacerbated among athletes, for whom concepts such as “mental toughness” contribute to a reluctance to address mental health conditions. Due to these stigmas, Edwards, et al. found that student athlete’s treatment-seeking behavior for mental health was lower in student athletes compared to nonathlete students. These impediments to seeking the appropriate diagnosis and treatment can have detrimental effects on well-being and quality of life, as well as on athletic and academic performance.

Strategies to improve mental health

There has been an increasing interest in resilience in the sport domain, ranging from identifying the factors that might predict resilience in this cohort, to how to make athletes more resilient to the stressors they face (Galli & Gonzalez, 2015). Alongside resilience, a willingness and ability to engage in help-seeking is an important self-care behavior which can help to protect young adults from the negative effects of mental illness (Fallow & Bowles, 2001; Rickwood, Deane, Wilson, & Ciarrochi, 2005). Moreover, mindfulness of one’s feelings and mental state is another strategy to help improve mental health. Increased mindfulness is associated with lower levels of anxiety, depression, and stress (Bajaj, et al., 2016).

The basic definition of resilience comes from mammalian adaptation literature and refers to the life-preserving ability of an organism to adjust, and even thrive when confronted by repeated environmental vicissitudes (Kendell et al., 2003). A study taken from the critical mass took a deeper look at the relationship and effectiveness of resilience in relationship to depression and anxiety. Lyu et al. conducted a study on 599 collegiate athletes in China, specifically looking at exploring the complex relationship between depression, anxiety, and resilience for collegiate student athletes. For humans, resilience is the mental capability that helps individuals withstand physical or emotional difficulties (Charney & Nemeroff, 2004). Questionnaires were given to participants on the basis of demographics to gather information about them. Participants also completed the Connor-Davidson Resilience Scale (CD-RISC 25), the Beck Depression Inventory (BDI-II) and the Beck Anxiety Inventory (BAI). The CD-RISC 25 features 25 statements that measures the extent to which individuals are able to recover from, or adapt positively to personal problems, illness, pressure, failure, and painful feelings, answered are measured using a 4-point likert scale. The BDI-II consists of a 21-item self-reported instrument that assesses depression levels using a 4-point likert scale. Lastly, the BAI uses a 3-point likert scale to assess participants levels of anxiety. The American Psychiatric Association and substantial other research indicated the depression and anxiety are remarkable linked together (Canstonguay & Oltmanns, 2013; Naragon-Gainey et al., 2016; Weber et al., 2018). Lyu et al. found that high levels of anxiety can induce severe depression, and depression may yield a lower level of resilience (2022). Results also indicate a significant inverse relationship between depression and anxiety with resilience, meaning as resilience levels increase, depression and anxiety levels decrease. Additionally, it was found that athletes with high levels of resilience are able to cope more effectively with depression and anxiety than those with lower levels of resilience. Athletes have the burden of

balancing multiple levels of stressors while in college, from academics to athletics, that most students in the general population do not have to do. This can take a toll on a student athletes mental health. Resilience training could be a path that colleges can take to help their student athletes cope and help manage their stressors, and in return, mental health issues should decrease, or student athletes should at least be able to cope with their mental health issues more effectively.

In a similar study, Drew and Matthews (2018) employed a cross-sectional study with 185 collegiate athletes (65% male, 35% female). Their purpose was to navigate the prevalence of depressive and anxiety symptoms within student athletes and to examine protective factors which may act as a buffer against mental ill-health. Participants took part in an online questionnaire to assess self-reported symptom prevalence, resilience, and help-seeking behavior. The DASS-21 and the CD-RISC scales were used to measure levels of depression, anxiety, stress, and resilience. Also looked at were both formal and informal behaviors. Alongside resilience, a willingness and ability to engage in help-seeking behavior is an important self-care behavior which can help to protect young adults from the negative effects of mental illness. Linear regression showed that resilience was a significant predictor of both depression (8%) and anxiety (12%) (Drew & Matthews, 2018). In addition, 78% of student athletes reported speaking about their personal problems with someone, primarily speaking to a friend (44.8%, n = 64), a family member (35.7%, n = 51), a teammate (8.4%, n = 12), a coach (1.4%, n = 2) or another unspecified person (9.8%, n = 14). This study further supports the inverse correlation between resilience with depression and anxiety. Furthermore, talking to others about mental health problems can show a positive effect on athlete's mental health.

Coaches are the backbone of most athletic programs at any level. With a positive coach-athlete relationship, they can be an important source of support and can instill confidence in their athletes. With a negative coach-athlete, coaches can be a source of stress with a poor coach-athlete relationship adding stress in the athletes' lives (Chyi, Lu, Wang, Hsu, & Change, 2018). The coach-athlete relationship is strongly related to an athletes' basic psychological needs and has the potential to be helpful during physically, psychologically, and emotionally challenging times (Choi, Cho, Huh, 2013). From the critical mass, Powers et al. (2020) took 79 Division I athletes and looked to investigate if coach-athlete relationships could predict student athletes' mental health outcomes (well-being, anxiety, and depression) beyond the known effect of gender and personality on mental health. To accomplish this, participants completed a questionnaire on the Big Five Factors, the Ten Item Personality Inventory. It consisted of 10 statements, 2 for each factor, and responses were measured on a 7-point Likert scale. To measure mental health, the WHO-Quality of Life (WHOQOL-BREF) was used. It consisted of 26 questions and 4 domains; this study specifically focused on the psychological health domain. Powers et al. found that coach-athlete relationships showed a clear association with psychological quality of life and depression (2020). Furthermore, when looking at predictors, only coach-athlete relationship was a significant predictor, where stronger coach-athlete relationships was associated with lower depression scores. "A coach and his or her approval or disapproval could play a major role in the athletes' psyche" (Powers, et al., 2020, pg. 7). Coaches can be the first step in either preventing mental health issues or seeking mental health help. Coaches have the ability to instill confidence in all their players and build them up both physically and mentally. The ability of the coach and the athlete to build a strong relationship is a strong indicator of those factors.

From a psychological standpoint, athletes may experience symptoms of depression and have negative self-perceptions, and feelings of despondency or uselessness if they feel that they performed inadequately in the contests, or if the outcome of the competition did not match their expectations (Hammond, et al., 2013). Tingaz et al. (2022) examined the mediating role of depression, anxiety, and stress in relationship between mindfulness and self-rated performance. Collegiate athletes (363) in Turkey were asked to complete the Mindfulness Inventory of Sport (MIS), the DASS-21 scale, and the Self-Rated Performance Questionnaire. The MIS consists of 15 items and 3 sub-dimensions consisting of awareness, non-judgement, and refocusing. The items were measured using a 6-point likert scale. And for the Self-Rated Performance Questionnaire, participants were asked to answer one question, "How would you rate your performance in training over the last week?" using a 10-point likert scale. According to the Oxford dictionary, the word "mindfulness" means, "the quality or state of being conscious or aware of something." In this case, what are the effects that being mindful can have on an athletes' mental health and athletic performance. Results found that mindfulness was positively related to performance, which in turn had a positive effect on participants mental health. Moreover, mindfulness was negatively related to depression, anxiety, and stress. Lastly, in addition to this study, a study conducted by Gross et al. comparing the traditional Psychological Skills Training (PST) and Mindfulness-acceptance-commitment (MAC) programs, it was notably found that the MAC intervention reduced depression, anxiety, and distress in athletes (2018). More research needs to be conducted in the realm of mindfulness to further support the claims listed above, but there is data found that mindfulness does have a positive effect on mental health issues like depression, anxiety, and stress.

Summary

“Despite efforts to bring more awareness to the causation and effective treatment of mental health issues, stigma persists both socially and in the athletic culture (Bauman, 2015). The themes discussed above show the ever-growing prevalence and concern for mental health issues in some of the most elite college athletes in the world, and the little progress that has been made in improving mental health. Once stigmas can be reduced and colleges and universities change the way they approach mental health and improving/treating mental health, that is when progress can be made. Creating and maintaining positive relationships with coaching can improve student athlete’s mental health drastically. Student athletes being more mindful and aware of their mental health issues has been linked to being able to address and better themselves. Stigmas although improving in recent years, still have a tight grip on the athletic world and its athletes when it comes to getting help. Student athletes face numerous internal and external barriers that are preventing them from seeking help. Some athletes have stated a more open view to mental health and seeking help, but many still perceive a stigma related to weakness when discussing the topic of mental health. Although further research needs to be conducted to better understand mental health, ways to cope, and improve treatment, the findings on these topics are still relevant and are consistent with studies done previously.

Chapter 4

Results, Discussion and Recommendations for Future Research

The purpose of this chapter is to present the results of the review of literature on the mental health of collegiate athletes and how these results align with the purported research questions which guided this synthesis project. In addition, recommendations for future research as it relates to mental health in collegiate athletes are presented.

The results of this review of literature revealed several conclusions in relation to the mental health of collegiate athletes. First, an understanding of just how prevalent mental health issues are in the collegiate athlete community. Second, the research provided an understanding of the barriers collegiate athletes face on a regular basis when it comes to seeking help for their mental health. Lastly, the research provided information on strategies college athletes can use to help manage and cope with their mental health issues and what roles coaches and the universities can have in that process.

Discussion

Interpretations

As part of this literature review, several research questions were posed. The first research question was, how prevalent is mental health issues in college athletes? The results from the previous studies showed that there is a high prevalence of mental health issues in collegiate athletes. The American Psychiatric Association and substantial other research indicated the depression and anxiety are remarkable linked together (Canstonguay & Oltmanns, 2013; Naragon-Gainey et al., 2016; Weber et al., 2018). Mental health conditions are particularly prevalent among young adults between 18 and 25 years of age (29.4%) compared with adults aged 26 to 40 (25%) and adults aged 50 and older (14.1%) (Edwards, et al., 2023). In fact, the

rate in which college aged people reported mental health issues have increased as a whole, including both athletes and nonathletes. There was a substantial increase in rates of anxiety, mood disorders, and overall rate of any diagnosis in both groups (Edwards, et al., 2023). Valster et al, found that 10.1% of participants had a positive screening for mental health distress, while 9.4% of them described significant depressive symptoms (2022). Wilson et al. (2022) found that 15.1% of participants reported moderate to severe levels of depressive symptoms. 22% of participants reported extremely severe anxiety (Wilson et al., 2022). Prevalence of elevated depressive symptoms was nearly 2.5 times higher in female athletes compared to male athletes (24.4% vs. 10%) (Wilson et al., 2022). In addition to high prevalence of mental health issues, the things athletes do through the lens of superstitions and ritualistic behavior adds to their mental health issues. Research suggests that athletes' superstitious behaviors are viewed as a routine part of the athletic culture, masking a potential anxiety disorder and potentially preventing athletes from seeking help due to them thinking it is just a ritual (Cromer et al., 2017).

The second research question was, what barriers do collegiate athletes face as it relates to mental health? The most frequently cited barrier college athletes face is mental health stigma. Different internal (beliefs and characteristics) and external (stakeholder attitudes) factors underlie the stigma and thus prevent athletes from seeking out and using the available psychological services (Chow, et al., 2021). Internal factors include, the fear of being perceived as weak, a lack of knowledge about mental health, a lack of time, and a belief in their own self-resilience (Gulliver, et al., 2012). The main external factors include stakeholders within the athletic program (coach, athletic trainer, teammates, etc.) (Wrisberg, et al., 2010). In addition to stigma, regardless of gender or race, a lack of knowledge about mental health disorders and symptoms, having a negative attitude toward seeking help, having a negative attitude toward

seeking help, a belief in your own self-reliance, and not enough time in your schedule were the most frequently endorsed internal barriers (Yoon et al., 2023). Also, head coaches were mentioned as significant barriers to seeking mental health help due to them having negative attitudes about the importance of mental health (Yoon et al., 2023). Mental health resources are underused because student athlete's perceptions of lack of access, and scrutiny from others is something they have to deal with every day (Young, et al., 2023).

The third and fourth research questions were, what role do coaches and the college or university play in increasing or decreasing mental health and what strategies can be implemented to assist student athletes with mental health issues? Both of these questions were answered in the final topic of this synthesis. There has been an increasing interest in resilience in the sport domain, ranging from identifying the factors that might predict resilience in this cohort, to how to make athletes more resilient to the stressors they face (Galli & Gonzalez, 2015). Universities and athletic programs can be offering resilience training classes to their athletes to build resilience levels and help athletes manage the hardships of being a collegiate athlete. Results also indicate a significant inverse relationship between depression and anxiety with resilience, meaning as resilience levels increase, depression and anxiety levels decrease (Lyu et al., 2022). Additionally, it was found that athletes with high levels of resilience are able to cope more effectively with depression and anxiety than those with lower levels of resilience (Lyu et al., 2022). Alongside resilience, a willingness and ability to engage in help-seeking behavior is an important self-care behavior which can help to protect young adults from the negative effects of mental illness. Linear regression showed that resilience was a significant predictor of both depression (8%) and anxiety (12%) (Drew & Matthews, 2018). In addition, 78% of student athletes reported speaking about their personal problems with someone, primarily speaking to a

friend (44.8%, n = 64), a family member (35.7%, n = 51), a teammate (8.4%, n = 12), a coach (1.4%, n = 2) or another unspecified person (9.8%, n = 14) (Drew & Matthews, 2018).

Additionally, the coach-athlete relationship is strongly related to an athletes' basic psychological needs and has the potential to be helpful during physically, psychologically, and emotionally challenging times (Choi, Cho, Huh, 2013). With a positive coach-athlete relationship, they can be an important source of support and can instill confidence in their athletes. With a negative coach-athlete, coaches can be a source of stress with a poor coach-athlete relationship adding stress in the athletes' lives (Chyi, Lu, Wang, Hsu, & Change, 2018). Powers et al. found that coach-athlete relationships showed a clear association with psychological quality of life and depression (2020). Furthermore, when looking at predictors, only coach-athlete relationship was a significant predictor, where stronger coach-athlete relationships was associated with lower depression scores (Powers et al., 2020). "A coach and his or her approval or disapproval could play a major role in the athletes' psyche" (Powers, et al., 2020, pg. 7). Moreover, mindfulness of one's feelings and mental state is another strategy to help improve mental health. Increased mindfulness is associated with lower levels of anxiety, depression, and stress (Bajaj, et al., 2016). Mindfulness was positively related to performance, which in turn had a positive effect on participants mental health (Tingaz et al., 2023). Gross et al. compared the traditional Psychological Skills Training (PST) and Mindfulness-acceptance-commitment (MAC) programs, it was notably found that the MAC intervention reduced depression, anxiety, and distress in athletes (2018).

Implications

Research on mental health in general and specifically the mental health of collegiate athletes is still evolving. In recent years, mental health has become an important topic in today's

society. Unfortunately, college athletes have lagged behind being included in this topic because of stigmas and lack of research on the topic. Fortunately, the findings from the review of literature in this synthesis would agree that there will likely be an increased focus on this population of young adults. The results from these studies provided a light to shine on a community of people who have been casted into the dark on the topic of mental health because they are stereotypically seen as stronger than the average person or their nonathlete counterparts. The results showed that elite collegiate athletes are just as susceptible to mental health issues as any other person their age, and that they typically face more barriers and stigmas to seeking the help they need and deserve.

Recommendations for Future Research

In reviewing the database on the mental health of collegiate athletes, the following limitations were noted regarding the studies under review. The studies used in this synthesis focused on a very specific group of young adults at a specific point in their lives. Another limitation within this synthesis is that the topic of mental health is still relatively new and there aren't extensive amounts of research that can support or deny claims found in the studies reviewed. The last limitation in this synthesis is outside factors beyond academics and athletics were not considered when measuring athletes' levels of mental health issues. The studies in this synthesis looked at specifically college aged student athletes and looked at it through the lens of only athletes.

Based on these limitations and other insights related to the literature, the following recommendations for future research should be considered:

1. Future research should continue to develop studies that occur over a longer time period as well as when the college athletes are not in season for their sport. Extending the length of

the study beyond the sport season could potentially allow researchers to pinpoint the toll being a collegiate athlete can take on an athlete's mental health as well as comparing mental health levels while in season versus out of season.

2. Future research should continue to develop studies focusing on the topic of mental health in general, and specific to college athletes. It was only as of recent that mental health started to gain serious traction in the public eye. Researchers and mental health experts only know so much at this time about mental health, giving more time to develop studies and research the topic could give experts the potential to open up new doors into what causes mental health issues, as well as how to better treat them.
3. Future research should continue to develop studies that look at the whole person rather than specific parts of their lives. When looking at participants' mental health, it could be worthwhile for the researchers to consider all factors of their lives and the impact those factors have on the person's mental health.

Summary

The purpose of this literature review was to determine the mental health of collegiate athletes. Delimiting variables were used to do an extensive data-based search which yielded 10 articles. These articles were then systematically used to determine the mental health of collegiate athletes. Research revealed that the prevalence of mental health issues in collegiate athletes is just as common, and in some cases more common than their nonathlete counterparts. This was primarily due to the added stressors they are faced with managing athletics on top of academics. An additional factor and finding from this review of literature is the barriers that collegiate athletes face when talking about mental health and looking to seek help. This is mostly due to the old stereotype within the athletic community that you are "weak" if you have mental health

issues or need help, or the notion that you will lose playing time or a spot on the roster if you have mental health issues. Lastly, this synthesis reviewed multiple strategies athletes can use to help manage and cope with their mental health issues. Resilience was linked strongly to higher mental health levels and the ability to cope with challenging situations in an athlete's life like sports. The coach and their ability or lack of ability to build a strong and positive relationship with his or her players is a major factor in the mental health of athletes. And lastly, an athlete's level of mindfulness can give a good gauge of their mental health. When athletes are more aware of their mental health issues and what may cause them, they are more likely to be able to treat, manage, or cope with them.

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| Author | Title | Source | Purpose | Methods & Procedures | Analysis | Findings | Discussion/Recommendations |
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| Brian Edwards, Andrew Froehle, Siobhan Fagan | Trends in Collegiate Student-Athlete Mental Health in the National College Health Assessment, 2011-2019 | Edwards, Brian, et al. "Trends in Collegiate Student-Athlete Mental Health in the National College Health Assessment, 2011-2019." <i>Journal of Athletic Training</i> , vol. 58, no. 4, Apr. 2023, pp. 361-73. | To examine changes in the mental health of student-athletes over the past decade compared with that of nonathlete students. | Data was obtained from the NCHA survey of the American College Health Association. Survey was administered nationwide to students at participating institutions. Participants were 54,479 varsity college athletes and 448,301 nonathletes. | This study was a cross-sectional study that used the National College Health Assessment from between 2011 and 2019. Survey was distributed nationwide. | <ol style="list-style-type: none"> 1) The frequencies of <i>yes</i> responses were lower amongst athletes compared to nonathletes. 2) Substantial increase in rates of anxiety, mood disorders, and overall rate of any diagnosis in both groups. Rates were 7% lower in athlete's vs nonathletes for anxiety, 6% lower in mood disorders for athlete's vs nonathletes, and 7% lower for overall. 3) Athletes displayed lower rates (32.7% vs 42%) for | <ul style="list-style-type: none"> • Although the rates of mental health issues may be lower in some cases in athlete's vs nonathletes, athletes still are faced with these mental issues. • Athletes are less likely to have had mental health help and less likely to seek out help in the future. • Rates for all mental health issues increased from 2011 to 2019. • Athletes receive more information about |

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| | | | | | | <p>past treatment and lower rates for consideration of future treatment (69.5% vs 74.6%)</p> <p>4) Athletes receive more info about mental health, but by small margins.</p> <p>5) Nonathletes showed more anxiety towards academic performance than athletes.</p> | <p>mental health than nonathletes but still suffer from such issues and do not report.</p> |
| <p>Chengjie Lyu, Rong Ma, Ronald Hager, Dave Porter</p> | <p>The Relationship between resilience, anxiety, and depression in Chinese Collegiate Athletes</p> | <p>Lyu, Chengjie, et al. "The Relationship between Resilience, Anxiety, and Depression in Chinese Collegiate Athletes." <i>Frontiers in Psychology</i>, vol. 13, Aug. 2022, p. 921419.</p> | <p>The study employed a survey research design to explore the complex relationship between depression, anxiety, and resilience for</p> | <p>The Structural Equation Modeling (SEM) was employed to account for any measurement error between the observed items and the latent</p> | <p>All participants in this study completed multiple unspecified questionnaires. Data analysis was conducted using IBM SPSS Statistics, version 26.0. The structural equation model was used to examine the</p> | <ul style="list-style-type: none"> • Research established that those with high levels of resilience are able to cope more effectively with depression & anxiety. • High levels of anxiety can induce severe depression, and depression may yield a | <ul style="list-style-type: none"> • Those with high levels of resilience, cope with depression and anxiety and higher rates than those with low resilience. • Results show a significant inverse relationship |

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| | | | <p>collegiate student athletes.</p> | <p>variables (anxiety, depression, and resilience). The relationship for this study is an inverse relationship between anxiety and depression on one hand, and resilience on the other hand. 599 collegiate athletes (398 males, 201 females) from 6 universities were the sample size.</p> | <p>significant mediated effect and relationship between a two-factor model in anxiety and depression, and three-factor model in resilience. SEM was used to compare these variables.</p> | <p>lower level of resilience. Results showed a significant relationship between resilience, anxiety, and depression.</p> | <p>between depression & anxiety with resilience. As resilience went up, anxiety and/or depression should go down.</p> <ul style="list-style-type: none"> • Injured athletes were more susceptible than their non-injured peers to symptoms of anxiety and depression. • An increase in anxiety had a positive relationship to depression. Anxiety goes up, depression goes up. • This study indicated that there is not a significant |
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| | | | | | | | t difference in levels of depressio n and anxiety between male and female. |
| Megan Powers, Jana Fogaca, Regan A. R. Gurung, Callan M. Jackman | Predicting Student-Athlete Mental Health: Coach-Athlete Relationship | Powers, M., Fogaca, J., Gurung, R. A. R., & Jackman, C. M. (2020). Predicting Student-Athlete Mental Health: Coach-Athlete Relationship . Psi Chi Journal of Psychological Research, 25(2), 172–180. | The purpose of this study was to investigate if coach-athlete relationships could predict student athletes' mental health outcomes (well-being, anxiety, and depression) beyond the known effect of gender and personality on mental health. | Participants completed a questionnaire related to personality based on the Big Five factors, the Ten Item Personality Inventory (consisted of 10 statements, 2 for each factor rated on a 7-point likert scale). The Coach-Athlete Relationship Questionnaire (CART- | All participants completed the questionnaires digitally using Qualtrics. Statistical Package for the social sciences was used for the 3 major data analyses. The major predictor variables personality and coach-athlete relationships were correlated with measures of mental health. And 3 hierarchal multiple regression analyses were used to assess if the coach-athlete | <ul style="list-style-type: none"> Coaches relationships with their athletes showed a clear association with psychological quality of life and depression. <p>The first multiple regression had depression as the dependent variable. In predicting depression, only the model including coach–athlete relationship as a predictor was significant, with a medium effect size, $F(7,61) = 2.22$, $p = .045$, $R^2 = .21$. The combination of gender, personality, and coach–athlete</p> | <ul style="list-style-type: none"> Not a lot of research done on coach-athlete relationship. Coaches approval or disapproval can play a major role in the athletes' psyche/mental health. |

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| | | | | <p>Q) was used to assess coach athlete relationships (11 items and 3 subscales, answered using a 7-point likert scale). To measure mental health, the WHO-Quality of Life (WHOQOL-BREF), 26 questions and 4 domains (physical health, psychological health, social relationships, and environmental health), all questions used a likert</p> | <p>relationship could predict major mental health measures beyond gender and personality.</p> | <p>relationship predicted 21% of the variance in depression scores.</p> <ul style="list-style-type: none"> • Emotional stability was positively correlated with quality of life and negatively and moderately correlated to depression and anxiety. | |
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| | | | | scale for measurement. Sample size for this study was 79 D1 student athletes (56 females, 23 males). | | | |
| Katelin Valster, Keith Jones, Kristen Cochran, e-Snyman, Daniel Smith | Mental Health Prevalence in NCAA Division III Collegiate Athletes | Valster, K., Jones, K., Cochran, K., Snyman, K., & Smith, D. (2022). Mental Health Prevalence in NCAA Division III Collegiate Athletes. <i>Journal of Athlete Development & Experience (JADE)</i> , 4(1), 37–55. | To understand the prevalence of mental health symptoms in NCAA Division III collegiate athletes. | In-person screening was used to have a better understanding. Three valid and reliable mental health surveys were used to determine the prevalence of mental health symptoms in collegiate athletes over 2 academic years during the COVID- | This study used 3 screening tools to measure mental health symptoms. The 9-question General Index, 10-question Harvard Department of Psychiatry/ National Depression Screening Day Scale, and the 21-question Beck Anxiety Inventory. Each have a numerical score range indicating severity of | <ul style="list-style-type: none"> • In all surveys and both years, women collegiate athletes had a higher self-reported prevalence of mental health distress compared to men in regard to general and anxiety symptoms. • No significant difference between sport type and mental health disorders. • 9.4% of participants described significant | <ul style="list-style-type: none"> • Inconsistent research/ results on topic. • Research does show that student athletes suffer from mental health issues. |

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| | | | | <p>19 pandemic and if symptoms were different between genders and by sport participation. Sample size was 1,068 Division III athletes, 289 of them participated both years of study.</p> | <p>symptoms followed by recommendations for intervention.</p> | <p>depression symptoms.</p> | |
| <p>Julian Jehoon Yoon, Trent Petrie</p> | <p>Barriers to and Facilitators of Collegiate Athletes Seeking Mental Health Services</p> | <p>Yoon, Julian Jehoon, and Trent Petrie. "Barriers to and Facilitators of Collegiate Athletes Seeking Mental Health Services." <i>Journal of Athletic Training</i>, vol. 58, no. 9, Sept. 2023, pp. 715–21.</p> | <p>To determine the frequency of internal and external barriers to athletes seeking mental health care and examine the importance of athletes and sport</p> | <p>Cross-Sectional study to determine what number of collegiate athletes suffer from mental health issues, what internal and external barriers they face to seeking</p> | <p>Student athletes responded to 9 binary (yes or no) prompts related to internal barriers and 7 reflecting external barriers. Regarding facilitators of mental health seeking, student athletes rated how important it was for</p> | <ul style="list-style-type: none"> • Head coaches were mentioned as significant barriers to seeking mental health help due to them having negative attitude about important of mental health. • regardless of gender or race, a lack of | <ul style="list-style-type: none"> • Schools should be doing more to endorse seeking help for mental health. • Coaches and school stakeholders should create a culture of positive mental health in relation to positive |

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| | | | psychologists sharing identities as a facilitator or of seeking help. | help, and what the college is doing to facilitate seeking help. Sample size is 266 student Division I athletes (53.8% women, 46.2% male, 42.5% white). | them to share each of 10 identities with their sport psychologist from 1 (not at all important) to 5 (extremely important). | knowledge about mental health disorders and symptoms (mean \pm SE = 0.420 ± 0.032), having a negative attitude toward seeking help (0.383 ± 0.031), a lack of confidence that mental health treatment will be effective (0.391 ± 0.031), a belief in your own self-reliance (0.490 ± 0.031), and not enough time in your schedule (0.487 ± 0.031) were the most frequently endorsed internal barriers. | play/performance. |
| Cali Werner, | The Pre- | Werner, C., Waite, L., | The purpose | Emails were sent | Survey data was | <ul style="list-style-type: none"> • Sport ritual behavior is | <ul style="list-style-type: none"> • Sport rituals can |

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| <p>Lennie Waite, Karina Turner, Eric A. Storch, Thröstur Björgvinsson, Elizabeth McInglave</p> | <p>Performance Ritual: A Recipe for Success or a Path to Burnout?</p> | <p>Turner, K., Storch, E. A., Björgvinsson, T., & McInglave, E. (2021). The Pre-Performance Ritual: A Recipe for Success or a Path to Burnout? <i>Journal of Issues in Intercollegiate Athletics</i>, 325–341.</p> | <p>of this study was to examine the relationships between athlete anxiety, ritualistic behavior s related to sport performance, athlete burnout, and days off from practicing.</p> | <p>to either coaches or athletic advisors with an anonymous online survey, and answers were collected using an online survey tool called CheckMarket. Participants were asked to provide general demographics and sport specific information. It also asked about patterns of ritualistic behaviors and impairment in overall functioning or sport performance</p> | <p>analyzed using SPSS statistical analysis software to see if there was a relationship between ritualistic behaviors, anxiety, burnout, and days off. The DASS-21 was used to assess participants. The Sports Ritual Scale was used to assess sport-related ritualistic behavior (SRS). And burnout was measured by using the Athlete Burnout Questionnaire (ABQ).</p> | <p>positively related to burnout and anxiety.</p> <ul style="list-style-type: none"> • The number of rituals an athlete does is not related to burnout but is related to anxiety. • Burnout is positively related to the numbers of days off an athlete takes a month. • Anxiety fully mediates the effect of sport ritual behavior on athlete burnout. | <p>be seen as a positive thing that gets an athlete focused and can increase performance, but it can also hurt the athlete in the long run.</p> |
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| | | | | nce due to these behaviors. Measures asked questions about feelings around their sport, mental health, and overall well-being. | | | |
| Sayre Wilson, Sebastian Harenberg, Tara Stilwell, Justin Vosloo, Lindsey Keenan | Prevalence and Predictors of Depressive Symptoms in NCAA Division III Collegiate Athletes. | Wilson, S., Vosloo, J., Harenberg, S., Keenan, L., & Stilwell, T. (2022). Prevalence and Predictors of Depressive Symptoms in NCAA Division III Collegiate Athletes. <i>Journal of Athlete Development & Experience (JADE)</i> , 4(1), 56–70. | The purpose of this study is two-fold. First, the purpose is to assess the prevalence of depressive symptoms in NCAA Division III collegiate athletes. Secondly, the purpose is to | Survey was administered to student athletes in person, in a classroom setting with no members of the coaching staff present. Survey was anonymous. Sample size was 218 student athletes (64% male, | Student athletes were given a survey looking at 3 different measurements. Depression, Stress & Anxiety, and Burnout. All categorical variables were summarized in counts and percentages. | <ul style="list-style-type: none"> • 15.1% of participants reported moderate to severe symptoms of depression. • Prevalence of elevated depressive symptoms was nearly 2.5 times higher in females compared to males (24.4% vs 10%). • Basketball, volleyball, and softball teams all reported more than 20% prevalence | <ul style="list-style-type: none"> • Division III athletes face the number of depressive symptoms as their Division I and II counterparts. • Females tend to show/report more depressive symptoms than males. |

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| | | | focus on the most commonly linked factors (anxiety, stress, and burnout symptoms) in an NCAA Division III collegiate athlete population. | 36% female). | | of depressive symptoms. <ul style="list-style-type: none"> • 22% of participants reported extremely severe anxiety. | |
| Reann D. Young, Elizabeth R. Neill, Lindey E. Eberman, Tara A. Armstrong, Zachary K. Winkelmann | Experiences of Current National Athletic Association Division I Collegiate Student-Athletes with Mental Health Resources | Young, R. D., Neil, E. R., Eberman, L. E., Armstrong, T. A., & Winkelmann, Z. K. (2023). Experiences of Current National Collegiate Athletic Association Division I Collegiate Student-Athletes with Mental Health Resources. <i>Journal of Athletic Training</i> (Allen | The purpose of this study is to explore NCAA Division I student athlete's experiences with mental health and access to and experiences with mental health resources at their university. | Consensual qualitative research study with data being collected using 1 on 1 interviews ran by 5 athletic trainers. Sample size was 23 D1 student athletes (18 women, 5 men) | Participants completed a semi-structured interview focused on their experiences with mental health. Participants were asked 7 questions that were about demographics and 6 questions were about mental health, with follow-up questions about their specific experiences. All | <ul style="list-style-type: none"> • 2 domains emerged from the experiences of the participants <ul style="list-style-type: none"> ○ Expectations of student athletes ○ Resources & management • Balancing role as a student and athlete was | <ul style="list-style-type: none"> • Schools are taking steps to provide support for student athletes • Student athletes face barriers for seeking help • Student athletes struggle to manage student and athlete role while also performing well at |

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| | | Press), 58(9), 704–714. | | | interviews were transcribed verbatim. | <p>reported as a stressor</p> <ul style="list-style-type: none"> • Sport anxiety based on performance was mentioned as stressor • Coaches had positive and negative effect on premise of mental health • Student athletes reported both support and little support for seeking help | same time. |
| Breanna Drew and James Matthews | The Prevalence of Depressive and Anxiety Symptoms in Student-Athletes and the Relationship with Resilience and Help-Seeking Behavior. Journal of | Drew, B., & Matthews, J. (2019). The Prevalence of Depressive and Anxiety Symptoms in Student-Athletes and the Relationship with Resilience and Help-Seeking Behavior. Journal of | The purpose of this study was to navigate the prevalence of depressive and anxiety symptoms within student athletes and to | The study employed a cross-sectional design taking an online anonymous questionnaire or a hard-copy to assess self-reported symptom | This study was a cross-sectional study that used the Depression, anxiety, and stress scale (DASS-21), and the Connor-Division Resilience Scale (CD-RISC). | <ul style="list-style-type: none"> • Prevalence of student athletes reporting elevated levels of depression and anxiety was 27% and 34.1%. • Moderate to severe levels of depression were 16.2% • Moderate to severe | <ul style="list-style-type: none"> • Study shows that although student athletes tend to be more resilient than nonathletes, but it does not make them immune to depressiv |

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| | <p>Help-Seeking Behavior</p> | <p>Clinical Sport Psychology, 13(3), 421–439.</p> | <p>examine protective factors which may act as a buffer against mental ill-health.</p> | <p>prevalence, resilience, and help-seeking behavior. Sample size was 185 student athletes (65% male, 35% female).</p> | | <p>levels of anxiety were 25.4%.</p> <ul style="list-style-type: none"> • Elite student athletes reported significantly higher levels of depressive symptoms than competitive student athletes. • 21% of student athletes reported they needed professional help for serious problems in the last year. • Males were 6.86 times less likely to speak to someone about their issues than females. • Male student athletes reported higher levels of resilience than females. | <p>depressive symptoms</p> |
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| | | | | | | <ul style="list-style-type: none"> Linear regression showed that resilience was a significant predictor of both depression and anxiety. 8% and 12% for both symptoms. | |
| Emre Ozan Tingaz, Serdar Solmaz, Meryem Altun Ekiz, Murat Atasoy | The Relationship Between Mindfulness and Self-rated Performance in Student - Athletes: The Mediating Role of Depression, Anxiety and Stress | Tingaz, E. O. Solmaz, S., Ekiz, M. A., & Atasoy, M. (2023). The relationship between mindfulness and self-rated performance in student-athletes: the mediating role of depression, anxiety and stress. <i>Sport Sciences for Health</i> , 19(2), 657–663. | The purpose of the study was to | Participants were asked to complete the Mindfulness Inventory of Sport (MIS), the Depression Anxiety Stress Scale-21 (DASS-21), and the Self-rated Performance Questionnaire. The sample size was 363 SAs | All measurements in this study were collected through Google Forms. The MIS used a 6-point likert scale. The DASS-21 used a 4-point likert scale. And the Self-rated Performance Questionnaire, participants were asked a single question and to answer using a 10-point likert scale. | <ul style="list-style-type: none"> Mindfulness was positively related to performance. Mindfulness was negatively related to depression, anxiety, and stress. | Mindfulness can be a powerful tool in combatting depressive symptoms and can ultimately improve performance. |