# The Effects of Social Media Posts on Mental Health in Collegiate Athletes

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Master of Athletic Training Research Project

May 06, 2023

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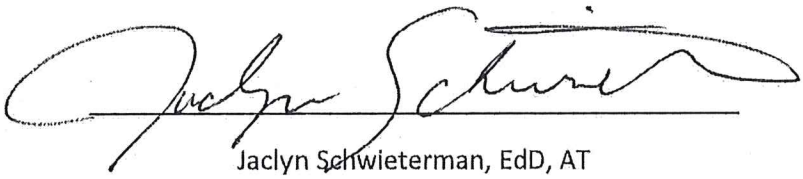
This thesis has been approved for the Department of Athletic Training and Sports Medicine of Marietta College by



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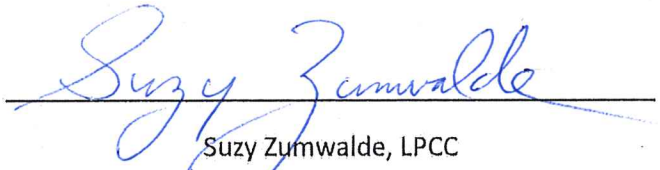

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## Abstract

**Objective**: Mental health has become an avid player in the sports community. Efforts have been made to improve the care and resources for those with mental health issues. Various entities have responded by implementing various programs to benefit student-athletes. Recently, elite athletes have begun to share similar struggles on social media platforms. This research aims to determine how influential social media posts are on the mental health of student-athletes. **Methods:** A survey was sent to head athletic trainers and student-athletes in the OAC and NCAC. Student-athletes were asked about mental health resources. Head athletic trainers were asked about resources and the completion of mental health trainings. A Pearson's Correlation coefficient was computed to assess the linear relationships between the influence of social media posts and student-athletes' perceptions of mental health, year in school and perceived influence, and the completing mental health training and perceptions of screening tools. **Results**: The results of this study show that no relationship is present between elite athletes' social media posts and the perceptions of mental health of student-athletes or between year in school and perceived influence of social media posts. However, a strong negative relationship was found between completing a mental health training and the perceived sufficiency of mental health screening. **Conclusion:** This study showed that information posted on social media by elite athletes did not influence student-athletes. However, more research needs to be conducted to determine the actual influence versus the perceived influence.



Keywords: social media, student-athlete, mental health

**The Effects of Social Media Posts on Mental Health in Collegiate Athletes**

Health has many facets to it. It incorporates three major ideas including the absence of disease, being able to perform at optimal levels from a physical standpoint, and a balance between oneself and their environment (Sartorius, 2006). Bhugra and colleagues (2013) define mental health as an individual's mindset that allows them to maintain social relationships and perform functions that fulfill basic needs. However, there has been a major push for the athletic population, especially collegiate athletes, to seek help and recognize early signs of poor mental health. A mental disorder is defined by Wakefield (1992) as occurring when a person's internal mechanisms fail to perform their normal function resulting in poor mental health. In understanding the risks involved and early signs of distress, there is the potential to mitigate the risk of poor mental in an athletic population. Athletes are put under physical and mental stressors that can lead to a decline in their mental health. These outside pressures can affect athletes, both men and women, resulting in psychological distress (Walton et al, 2021).

In 2020, a survey was given to collegiate athletes from the National Collegiate Athletic Association (NCAA), from Division I, II, and III, regarding their mental health. From this survey conducted, females responded that 38% percent reported feeling mentally exhausted almost every day, 16% were lonely almost every day if not constantly, and ten percent reported feeling hopeless (Johnson, 2022). The survey reported that 22% of male athletes reported feel mentally exhausted almost every day (Johnson, 2022). Over recent years, there has been an increase in elite athletes that have come forward about struggling with mental health disorders such as Hope Solo, Michael Phelps, Victoria Pendleton, and Jonny Wilkinson (Moesch et al, 2018). Through social media and recent events on the professional, national, and international stage, the public has become more aware of the challenges elite athletes face regarding their

mental health. The goal of this study is to measure the influence of social media on the perceptions of mental health in athletes and their effectiveness of campus resources that are available to student-athletes.

## Background

### History of mental health

Mental health is thought to have become an area of interest in the early 1900s with the beginning of the Mental Hygiene Movement (Bertolote, 2008). Both Clifford Beers and Adolf Meyer posed as the faces of the movement to improve the care that people experiencing mental health issues were receiving in hospitals at that time (Bertolote, 2008). Meyer explained the revisions that needed to be made in mental hospitals could be fixed by more training for physicians, more research and early treatment for individuals, and a better outlook from the public on mental health (Meyer, 1918). In 1909, Beers created the National Committee for Mental Hygiene (Parry, 2010). Following the movement in the United States, Beers was able to create the International Committee on Mental Hygiene (Bertolote, 2008). The national committee eventually became Mental Health America (MHA website), which is a nonprofit organization that promotes the needs of those living with mental disorders, as well as working to positively influence mental health in the public (*Our History,* n.d.). This initial movement to improve mental health treatment and acceptance opened doors for later advances in mental healthcare nationally.

In 1946, the National Mental Health Act was signed by President Harry Truman (*National Institute of Mental Health (NIMH),* n.d.). This Act resulted in the creation of the National Institute of Mental Health (NIMH), who's goal was to foster the understanding of mental health and the treatment of illnesses (*National Institute of mental health (NIMH,* n.d.).

As a result of this legislation, the Surgeon General had the power to help the mental health of the public by authorizing research for various disorders (*National Institute of Mental Health (NIMH),* n.d.). Shortly following, the World Health Organization (WHO) was created (*Who we are*, n.d) and determined that the definition of "health" should include other facets of an individual outside of their physical being (Bertolote, 2008). The individuals who created the constitution for the WHO included mental health which was a concept that was not previously thought of affecting overall health (Sartorious, 2006). The WHO also implemented the International Classification of Diseases-6 (ICD-6) in 1948 (*International Classification of Diseases (ICD)*, n.d.) that was created to improve data collection for various diseases, as well as mortality statistics (*International Classification of Diseases (ICD)*, n.d.).

Shortly after ICD-6 codes were put into effect in 1948, the American Psychiatric Association published the Diagnostic and Statistical Manual of Mental Disorders (DSM) (American Psychiatric Association, 2013) in response to mental disorders being included in the diagnostic codes created by the WHO (American Psychiatric Association, n.d.). The DSM included descriptions of various mental illnesses (American Psychiatric Association, n.d). The overall goal of the DSM was to provide a guide for classification for mental disorders, while allowing for further expansion in the future (American Psychiatric Association, 1952). Currently, the DSM-5-TR is the most recent edition of the DSM (American Psychiatric Association, n.d). This edition is a revision of the DSM-5, but with more emphasis on culture, children, and socially acceptable language (American Psychiatric Association, n.d.).

Throughout the following years, Mental Health America (MHA) utilized various initiatives and campaigns to bring awareness to mental health. In 1949, the group created Mental Health Week, which pushed for the education of individuals about mental health and illnesses

that can occur to help people understand concepts such as diagnosis and treatment (*Our History*, n.d.). Mental health week eventually turned into a month-long program in May (*Our History*, n.d.). During mental health month, various organizations implement different programs or initiatives to advocate for mental health such as blogs, stories, toolkits, and events (*Our History*, n.d.).

In 1963, the Community Mental Health Centers Act was passed by Congress (*Our History*, n.d.). This law moved to provide funds for facilities to be created and research to be conducted revolving mental disorders (*Affordable Care Act*, n.d.). In a letter from John F. Kennedy to Congress, he focused on objectives that the law should push to accomplish which included prevention of mental illnesses, increasing what is known about mental illnesses, and improving facilities used for treating individuals with mental illnesses (*Statements by the President*, n.d.). Within the act, there is a call to shift to more community services and reduce the number of people receiving care in larger institutions (*Our History*, n.d.). President Kennedy hoped to reduce the number of individuals in these institutions such as psychiatric hospitals by 50% or even more as a result of the Community Health Centers Act (*Statements by the President Upon Signing the Community Health Services and Facilities Act*, n.d.).

Following Kennedy's Presidency, Richard Nixon tried to cut budgeting to programs that were set up to help with research and education of mental health personnel (Gorman, 2019). Following this decision in 1972, Congress allotted funds for the programs anyway, which resulted in Nixon impounding them (*Our History*, n.d.). The American Psychiatric Association, Mental Health America, and other organizations sued the administration to get the funds released (Gorman, 2019).

A shift toward mental health awareness continued during President Carter's time in office. In 1977, he established a survey that would be administered to mental health professionals (*Our History*, n.d.). The President's Commission on Mental Health set out to change the vocabulary involving mental health (Grob, 2005). The focus for the Commission was to determine how individuals with mental health issues were being treated, figuring out a way to serve people with mental health illness, what research should be implemented to help find prevention and treatment techniques, and an estimate of the cost for mental health services (*Record group 220,* n.d.). The group that was appointed to the Commission, tried to create a plan to treat mentally ill patients using the Mental Health Systems Act and the National Plan for the Chronically Mentally Ill (Grob, 2005). Both plans were unable to provide the benefit that they were created to do and did not result in the creation of any systems that would care for patients with serious mental illnesses (Grob, 2005).

Throughout the 1980s, different movements were created through Mental Health America (*Our History*, n.d.). A lot of their efforts were looking for ways to raise money for research regarding mental illness (*Our History*, n.d.), and at the same time, the National Alliance on Mental Illness (NAMI) was also pushing for government support for those with mental health disorders (*NAMI*, n.d.). In 1986, the Comprehensive Mental Health Services Plan Act of 1986 was introduced to Congress (*NAMI*, n.d.). The goal of this bill was to require states to make a plan regarding mental health and implement them within the state (*State Comprehensive Mental Health Services Plan Act of 1986*, n.d.). Following this act, individuals with mental health illnesses and their families were involved in states implementing different programs *(NAMI,* n.d.*).*

The Americans with Disabilities Act was passed in 1990 (*NAMI*, n.d.). This legislation states that individuals with mental or physical disabilities cannot be discriminated against in schools, when working, and areas that are open to the public (ADA, n.d.). In the years to follow, different campaigns were launched including the National Public Education Campaign on Clinical Depression in 1993 and the Mental Health Parity Act of 1996 (*Our History*, n.d.). The Mental Health Parity Acts states that health insurances that provide coverage for mental healthcare cannot put stricter limitations on the services they cover (*Estimated Impact of ACA,* n.d.). Because of this, large group healthcare plans cannot declare a limit on mental health coverage that is less than the coverage they provide for other medical healthcare visits (*Estimates Impact of ACA*, n.d.).

In 1999, the White House hosted a Conference focusing on Mental Health (*NAMI*, n.d). The goal of the conference was to reduce the stigma surrounding mental illness, as well as allowing mental health to be taken more seriously (*White House Conference*, n.d.). There was a call to legitimize mental health and better understand the process of mental health disorders and treatments (*White House Conference*, n.d.). Both the NAMI and the MHA played vital roles in the shift for mental health to be advocated for in a government setting in the 1990s.

Throughout the early 2000s, surveys were conducted to further the knowledge on mental health. Surveys regarding bullying and bipolar disorder were conducted and results released by MHA (*Our History*, n.d.). In 2002, the MHA released the statistic that 78 percent of teens who were included in the survey were gay or thought to be reported being bullied by other students in school and other areas of the community (*Our History*, n.d.). The following year, the MHA conducted a survey that showed nearly two-thirds of the population had a lack of knowledge

about bipolar disorder, which further proved that the public lacked knowledge about mental health (*Our History*, n.d.).

Similar to the Mental Health Parity Act of 1996, another law was passed called the Mental Health Parity and Addiction Equity Act (MHPAEA) of 2008 and differed on inclusive of substance use disorders (*Estimated Impact of ACA*, n.d.). This newer version essentially explains that insurance companies must provide the same number of benefits when comparing medical coverage and mental health coverage (*Estimated Impact of ACA*, n.d.). The Health Care Education Reconciliation Act of 2010, otherwise known as the Affordable Care Act, allowed for changes within the MHPAEA (*Estimated Impact of ACA*, n.d.). The Affordable Care Act's purpose was to increase the availability of health insurance by making it more affordable, as well as expanding Medicaid to cover all adults with a lower income and eventually move toward techniques that can lower the cost of healthcare (*Affordable Care Act (ACA) – Glossary*, n.d.).

In 2014, MHA launched the Before Stage 4 campaign (*Our History*, n.d.). This campaign was used to advocate for many facets of mental health including prevention, early detection, treatment, and other organizations that can help an individual (*Our History*, n.d). The meaning is to relate mental health disorder to other diseases such as cancer (*Our History*, n.d.). That same year, MHA launched a free anonymous survey that would allow individuals to enter different symptoms they are experiencing and see if they are related to a mental health condition called OK2Talk (*Our History*, n.d.). Meanwhile, NAMI also launched an online network that allowed individuals to find support and connect with other individuals that may be experiencing similar things through their OK2TALK campaign (*NAMI*, n.d.). This campaign caught on and was broadcasted over televisions and radio stations (*NAMI2019*, n.d.). Organizations continued

to work on spreading information to the public about mental health and promote a community for those with disorders.

As more campaigns and awareness caught on, the MHA launched the *State of Mental Health in America* beginning in 2015 (*Our History*, n.d). This annual report provides data about various topics relating to mental health and mental health disorders (*Our History*, n.d.). Statistics range from prevalence and areas of research that can better guide future legislations pertaining to mental health (*Our History*, n.d.). NAMI also started another campaign to decrease the stigma within the population called StigmaFree (*NAMI*, n.d.). For this campaign, the Empire State Building used green lights to signify hope to individuals with mental health disorders that were feeling the negative results of the stigma (*NAMI*, n.d.).

In 2016, the Helping Families in Mental Health Crisis Act was passed (*Our History*, n.d.). Not only did this bill advocate for individuals suffering from mental disabilities, but it helped to address mental health in a primary care setting (*Our History*, n.d.). The same year, in 2016, the 21st Century Cures Act was passed (*NAMI*, n.d.). This law also helped with funding issues that individuals may be facing when trying to get the care they need (*NAMI*, n.d.).

Within the last five years, other advancements have been made. National organizations, such as the MHA began to release new reports regarding occupations and wellness reports like *Mind the Workplace* (*Our History*, n.d). This collection spanned over 17,000 employers from a variety of 19 industries nationwide (*Our History*, n.d). The NAMI has also reached other outlets from nationwide news broadcast and streaming mediums to advocate for decreasing the stigma and raising awareness for mental health within the population (*NAMI*, n.d.). More factors have been taken into consideration, organizations such as MHA have incorporated LGBTQ+ into their

various reports and research conducted to further understand the unique challenges that individuals in this community face (*Our History*, n.d).

**Mental Health Disorders**

In 1992, Jerome Wakefield was able to define a disorder as a failure of function (Wakefield, 1992). For mental health, he explained that an individual's internal mechanisms would have to be failing in a way that would cause them to be affected socially, as well as biologically (Wakefield, 1992). The DSM-5 acts as a guide for the diagnosis of these disorders (American Psychiatric Association, 2013). Today, the DSM-5 is divided into sections based on the type of disorder that one may be experiencing (American Psychiatric Association, 2013). Some of the categories include neurodevelopment disorders, schizophrenia spectrum and other psychotic disorders, depressive disorders, anxiety disorders, obsessive-compulsive and related disorders, feeding and eating disorders, substance-related and addictive disorders, and trauma and stressor related disorders (American Psychiatric Association, 2013).

Since 2017, there has been a 13% increase in mental health disorder cases worldwide (World Health Organization, n.d.). It is estimated that nearly one in five Americans will experience the effects of mental illness each year (*Mental Health by the Numbers*, n.d.). It has been estimated that 46% of Americans, if they were assessed, would meet the clinical criteria to be diagnosed with a mental health disorder (*Mental Health by the Numbers*, n.d.). Similarly, one in six children aged six to seventeen will be impacted with a mental health disorder each year (*Mental Health by the Numbers*, n.d.).

In an individual experiencing a mental health disorder, symptoms can affect various facets of life including mood, behaviors, and thought processes (Mayo Foundation for Medical Education and Research, 2022). Some of the common symptoms that may be affecting

individuals include feeling sad, excess worrying, tiredness, extreme mood changes, being less social, and anger/hostility (Mayo Foundation for Medical Education and Research, 2022). However, these common symptoms may present differently in children. Symptoms more common in children include changes in grades, nightmares, avoiding school or other tasks, showing signs of disobedience or even aggression (*Knowing the Warning Signs*, n.d.).

Many variables can influence mental health and have very serious negative consequences. A study was conducted to measure the different factors that influence mental health. Chow and Flynn (2016) determined that there were many reasons for increased stress including school, not having free time, financial situations, relationships, getting proper amounts of sleep, and living situations. As a results of these factors, individuals reported feeling tired, depressed, hopeless, and less motivated (Chow & Flynn, 2016). While these factors can play a significant role in individuals' daily lives, participating in a sport can be another stressor to athletes who participate in high level athletics.

Physical activity has been shown to reduce symptoms and act as treatment for specific mental disorders (Stohle, 2009), however, participating in competitive varsity athletics can add more stress to an individual (McCormick, Meijen, & Marcora, 2016). The time commitment, even though there are guidelines in place, is one area that can cause athletic-related stress (Lopes Dos Santos et al, 2020). Many other factors increase stress levels in student-athletes such as relationships with coaches and teammates, the need to perform, and injuries. Based on the analysis conducted by Lopes Dos Santos et al. (2020), training can affect other aspects of an athlete's life including competitions. The influence that such stressors were able to effect include athletic performance and cause negative emotions such as anxiety, guilt, and discouragement (McCormick, Meijen, & Marcora, 2016). This is an example of how the

competitive and stressful nature of athletic participation can negatively affect a student-athlete's mental health

**Mental Health Stigma**

Some commercials refer to the mental health stigma and ways in which the public can reduce it. When an individual is stigmatized for having a mental health disorder, they are marked as being different and can as a result be treated poorly (Healthdirect Australia, n.d.). A stigma occurs usually because of a lack of knowledge or understanding that can create fear (*Stigma, Prejudice and Discrimination,* n.d.). The results and negative impacts of a stigma can not only occur to the individuals with the diagnosis, but the family members, friends, and caregivers of that individual (*Stigma, Prejudice and Discrimination*,n.d).

The stigma can be present in a variety of ways. Describing an individual inaccurately, mocking an individual for seeking help, or prematurely characterizing an individual are all ways that are considered stigmatizing (Healthdirect Australia, n.d.). These actions can have negative results. Some of the effects of a stigma on an individual with a mental disorder include lower self-esteem, an increase of symptoms, lack of social relationships, and a potential for the individual to stop treatment (Healthdirect Australia, n.d.).

Although individuals involved with sport endure large amounts of stress and have been more open about what they are going through, a stigma is still present for those with poor mental health. According to data collected from Bharadwaj et al., (2017), 36.5% of people using medications used to treat depression do not report that they have been diagnosed with depression or anxiety. This group surveyed individuals in Australia to understand the extent of people who do not report their diagnosis of a mental illness (Bharadwaj, Pai, & Suziedelyte, 2017). The group concludes that the presence of the stigma can have a significant negative effect on

individuals who have been diagnosed with a mental illness preventing them from disclosing their diagnosis to others (Bharadwaj, Pai, & Suziedelyte, 2017).

In a study conducted by Kaier et al., (2015), found that athletes reported perceiving to be more stigmatized significantly than nonathletes. Cutler and Dwyer (2020) asked the question of how a student-athlete would perceive another student-athlete that received help for trouble with their mental health. The group concluded that student-athletes believe that teammates will not support them when they seek help regarding their mental health (Cutler & Dwyer, 2020). Yet, they also determined that teammates would continue to accept individuals who do seek help (Cutler & Dwyer, 2020). This study begins to show the transition that is beginning to occur in reducing the stigma in mental health treatment seeking behavior.

**Mental Health and the NCAA**

In 2013, the National Collegiate Athletic Association (NCAA) established a committee of scientist, clinicians, physicians, administrators, coaches, student-athletes, and individuals aware of mental health legislature (*Mental Health Summits and Task Forces*, n.d.). The group focused on how to ease the transitions and various stresses for student-athletes, as well as address barriers that may arise preventing student-athletes from seeking help (*Mental Health Summits*, n.d.). Within the committee, it had been decided that all injuries/illnesses needed to be addressed and that programs needed to be made to educate various athletic personnel on communicating with student-athletes on hurdles they may be facing (*Mental Health Summits*, n.d.).

Following the initial meeting, the group released a publication, *Mind, Body, and Sport: Understanding and Supporting Student-Athlete Mental Wellness*, a guide for school officials to support the mental health of their student-athletes (*An Introduction to Mind, Body, and* Sport, n.d.). The document addressed various aspects that influence mental health that would benefit

student-athletes. Some of the topics include stressors student-athletes may face, how some disorders are diagnosed, how to establish resources for student-athletes, the process by which staff should refer student-athletes, the outside factors that may affect student-athletes, and how harmful acts such as bullying and hazing can affect an individual's mental health (*An Introduction to Mind, Body, and* Sport, n.d.). Since then, other informational documents have been created and shared by the NCAA to inform student-athletes, parents, and institutional personnel about mental health.

The *Interassociation Consensus Document: Mental Health Best Practices for Understanding and Supporting Student-Athlete Mental Wellness (n.d)* was made following the publication of other works outlining techniques to use for student-athlete mental health and updated in 2020. The document outlines the top four best practices to be implemented for student-athletes which includes; the qualifications an individual must have to offer mental healthcare, the procedures in which an individual is to be referred to the appropriate clinician if they are presenting with any of the symptoms stated above, encouraging mental health screening for disorders such as ADHD, anxiety, depression, and disordered eating, and methods to make student-athletes more comfortable about talking about mental health and less likely to experience disorders (*Mental Health Best Practices*, n.d.). As a tool for college campuses, the NCAA suggest these best practices can be used by athletic departments, but also other entities on college campuses to better help individuals struggling with mental health (*Mental Health Best Practices*, n.d).

The Diverse Student-Athlete Mental Health and Well-Being Summit was held in 2020, however, the Mental Health Advisory Group was created and met for the first official time in 2022 to discuss advancements to be made to best practices utilized by the NCAA (*Mental Health*

*Advisory Group*, 2022). Committee members include mental health experts, student-athlete representatives from all three NCAA divisions, as well as individuals from other organizations such as the National Athletic Trainers' Association, the National Alliance on Mental Illness, the Trevor Project, and the United States Olympic and Paralympic Committees (*Mental Health Advisory Group*, 2022). The group plans on having their first recommendation for mental health best practices by January 2024 (*Mental Health Advisory Group*, 2022).

**Mental Health in Healthcare**

Healthcare providers that work with student-athletes must be prepared to recognize and refer when an athlete presents with the signs and symptoms of a mental disorder. While the NCAA presents suggestions for healthcare personnel, administrators, and coaches, individual governing bodies within the various fields of healthcare they each have their own set of procedures and recommendations. The National Athletic Trainers' Association, for example, has a position statement, relevant to eating disorders, that recommends appropriate steps in providing the care the athlete needs (Bonci et al., 2008). The position statement also lists signs and symptoms, risk factors, screening tools, and how to ensure appropriate patient care throughout the course of treatment (Bonci et al., 2008). The NATA also provides a consensus statement for athletic trainers to refer to when suspecting an athlete may have a mental disorder. This document includes certain behaviors to make note of, different factors that may influence a student-athlete's mental health, including mental health screenings in physical exams before sport participation, and other topics to consider without necessarily giving listed out procedures (Bonci et al., 2008). The consensus statement also includes other topics such as suicide statistics, catastrophic events, and confidentiality (Bonci et al., 2008).

Like the NATA, the Board of Certification also expressed the importance of athletic trainers to be prepared to deal with mental health crisis in student-athletes. An article by Katie Ostrovecky (2017), explains how athletic trainers are the first line of detection for student-athletes experiencing symptoms of mental health disorders. For athletic trainers, as well as other healthcare personnel, must know the predispositions, the signs and symptoms, and the protocols if there is a suspected mental disorder in a student-athlete (Ostrovecky, 2017).

Other various organizations implement their own position statements similar to those of athletic trainers. The International Olympic Committee issued their own consensus statement in 2019 (Reardon et al., 2019). This consensus statement is aimed toward physicians, psychiatrists, and other providers within the mental healthcare community (Reardon et al., 2019). Like the NATA position statement, this document gives an overview of mental health related topics such as prevalence of disorders, treatment options, suicide, and specific details about specific disorders (Reardon et al., 2019).

**Elite Athlete's Influence on Mental Heal in Student-Athletes**

In recent events, elite athletes, including those in professional sports, as well as Olympic athletes, have become overwhelmed with the mental health obstacles they face. Naomi Osaka and Simone Biles are two elite athletes competing in the US Open for tennis and the 2021 Tokyo Olympics. However, neither of these athletes completed their respective events (Walters, 2021). The article Walters wrote explains how stresses from sport, especially image, can influence the perceptions of young girls (Walters, 2021). Athletes such as Biles and Osaka are only a few of the elite athletes that have been more transparent about their battles with mental illnesses.

For a young athlete, their goal may be to win Olympic gold in their sport or a World Championship because their favorite athlete achieved the same accolades. Elite athletes, such as Simone Biles, Naomi Osaka, Michael Phelps, Serena Williams, and Kevin Love, can influence the aspirations of young athletes. A group conducted a study that interviewed youth athletes about the elite athletes that they looked up to (Ronkainene et al. 2019). Of the 18 adolescents that they interviewed, 25 role models were identified with 15 being elite athletes who participated in the individual's sport or one like it (Ronkainene et al. 2019). It is not uncommon for young athletes to idolize the top athletes in the sport they are playing. Their actions and behaviors impact young athletes and can make the foundation for the goals they want to achieve.

Young athletes can be influenced by elite athletes, so they not only aspire to reach their athletic goals, but as overall people and can show that a good work ethic can be valued, and encourage good behaviors (Piccolo, 2020). Yet, some elite athletes can prove to be poor influences (Piccolo, 2020). Some of the behaviors that elite athletes participate in can put young athletes at greater risk for mental disorders. As discussed by Piccolo (2020), recreational drug use and alcohol can be common behaviors by elite athletes that can ultimately negatively affect young athletes. While some athletes understand the role they may have in the life of a young athlete, some elite athletes are not aware the influence they may have on young athletes and did not necessarily sign-up to be a role model (Piccolo, 2020).

**Social Media and Mental Health**

Social media is an electronic platform in which various users can communicate and share ideas, experiences, or information (Merriam-Webster, n.d.). Athletes utilize social media to build their personal brand (Su et al, 2020). However, when using social media there is little

control as to what information is shared on these electronic platforms (Sanderson, 2018). Student-athletes have a strong presence on social media that can cause changes within their environment (Sanderson, 2018). Social media allows for individuals to participate in conversations regarding relevant social matters (Sanderson, 2018). Although there are ways to stay informed on current events, there are many problems that can arise as a result from social media postings. Student-athletes do not have anything preventing them from posting content that violates federal laws or NCAA rules (Sanderson, 2018).

While social media can allow for an individual to advocate for themselves and build their personal brand, there can be negative effects seen on mental health (Brahieri et al. 2022). In the study conducted by Brahhieri, Levy, and Markarin (2022), there were negative effects drawn to an increased amount of time on social media. Individuals begin to depend on the amount of activity they receive on their posts as positive reinforcements (Bashir & Bhat, 2022). The study by Bashir & Bhat (2022) highlighted the negative effects that social media can have on mental disorders such as depression and anxiety. Individuals, including student-athletes, are subject to harassment, stress, and loneliness through social media (Bashir & Bhat, 2022).

A main component that can allow for a positive influence from social media on mental health is the idea of healthy social media usage. In a study by Mesfin Awoke Bekalu, using social media to connect with others can have a positive influence on social well-being, mental health, and perception of health (Roeder, 2020). However, the study also found that individuals who did not participate in healthy social media use and having strong emotional connections to social media had negative effects on social well-being, mental health, and perceived health (Roeder, 2020). Social media can be treated as a tool that can be used to positively impact mental health when used appropriately (Roeder, 2020). How an individual is using social media,

as opposed to the amount of time they are spending on social media, is one of the main factors that can determine if social media can have a positive or negative influence (Berryman et al. 2018).

The goal of this study is to understand the influences on mental health that elite athletes have on collegiate student-athletes. Current events can cause more conversations about ideas and themes, but is that really facilitating student-athletes to get the help they need? While many may believe that more people are accepting of a diagnosis, there may have not been as large a shift as the population originally thought. As a healthcare provider, it is crucial to be prepared for any incident that may occur to a student-athlete regardless of if it is a physical injury or symptoms of anxiety during competition. From the research, healthcare professionals can become more aware of the different events that student-athletes are interacting with on social media in terms of posts, articles, and interviews, and be able to provide a more open channel of communication. Athletes and their support staff need to be aware of the resources that are available in the instance that help is needed.

## Methods

This study was developed to observe the relationship between student-athletes and mental health. Collegiate student-athletes face challenges that may affect their mental health. While most institutions offer resources, student-athletes may not know about them or feel comfortable using them. The methods utilized in this research and survey created were aimed to answer the following questions:

RQ1: Does the presence of elite athletes on social media influence collegiate student-athletes' perceptions of mental health?

RQ2: Is there a correlation between the year in school the student-athlete is and their perceived influence of elite athletes on their mental health?

RQ3: For head athletic trainers, does completing mental health trainings influence perceptions of mental health screening tools at their respective institutions?

**Research Design**

This study utilizes a cross-sectional quantitative survey design to determine the relationship between social media and college athletes' perceptions of mental health, as well as the resources that are available to athletes including their support staff and athletic trainers. This study design was chosen to look at a representative sample of the population (Jacobson, 2021). In other studies, surveys were utilized as a tool to collect data. Gouttebarge et al (2015) utilized a survey that encompassed questions pertaining to different symptoms that may arise as a result of a mental disorders. It pulled questions from other existing questionnaires that are used to diagnose disorders including the AUDIT-C, the 12-item General Health Questionnaire, and the Distress Screener, which is also based off a different distress screening survey (Gouttebarge et al., 2015). Another study looking at elite athletes in the United Kingdom also conducted a survey based on similar preexisting surveys (Foskett & Longstaff, 2018). The group utilized surveys such as the 12-item General Health Questionnaire, the Greenhaus Scale, and the Four-Dimensional Symptom Questionnaire to determine the mental health of athletes competing at the professional, international, or national levels (Foskett & Longstaff, 2018). For the current study, two separate surveys were created based off the aim of the study, as seen in Appendix A and Appendix B. This study was approved through the Human Subjects Committee at Marietta College prior to it being conducted.

**Recruitment**

The two populations that were included in the study was student-athletes and head athletic trainers. Individuals in these populations were found first by determining which NCAA Division III conferences were going to be utilized. From there, the schools were then identified from their respective conference websites. Schools affiliated with the Ohio Athletic Conference and North Coast Athletic Conference were chosen for this study. Table 1 outlines the schools in each of the conferences. Once the schools were determined, an Excel spreadsheet was made to organize information needed to contact potential participants.

**Table 1**

*OAC and NCAC Institutions*

| OAC | NCAC |
|---|---|
| Baldwin Wallace University | Denison University |
| Capital University | DePauw University |
| John Carroll University | Hiram College |
| Heidelberg University | Kenyon College |
| Marietta College | Oberlin College |
| University of Mount Union | Ohio Wesleyan University |
| Muskingum University | Wabash College |
| Ohio Northern University | Wittenberg University |
| Otterbein University | College of Wooster |
| Wilmington College | |

*Note:* The table lists the schools in each conference used for the study.

For student-athlete participants, head coaches from each of the varsity team's information was collected from the institution's website and placed in the spreadsheet with their name, sport, and email address. Each head coach was the contact point for the survey that was to be sent out to student-athletes. The coach was instructed to forward the email to all the individuals on their active roster so they could be included in the sample for the survey.

Student-athletes were included if they were 18 years old and a member of a team that is recognized as a varsity sport by the institution they attend. They could be completing their bachelor's or master's degree. The student could participate in a men's or women's sport at any institution in the Ohio Athletic Conference or North Coast Atlantic Conference. Student athletes were excluded from this study if they were no longer active on a varsity roster, not a student athlete within the OAC or NCAC, and if they were not at least 18 yeas of age or older.

Head athletic trainers at each of the institutions included in Table 1 were also included in the study. The head athletic trainers were selected based off their affiliation with respective schools and found utilizing the school's athletics website. Their information was also put into an Excel spreadsheet that included their name, school affiliation, and email address. Head athletic trainers received the survey directly through email.

A head athletic trainer includes any individual that has the administrative title of head athletic trainer or lead department administrator at their respective institution. This title must be held at least one month prior to taking the survey. The individual must be a licensed athletic trainer in the state of Ohio. The individual must be employed at an Ohio Athletic Conference or North Coast Athletic Conference institution. Athletic trainers were excluded if they were not the leader of the department or head athletic trainer at an NCAC or OAC institution. The head athletic trainer from Marietta College was not included in this study due to a conflict of interest.

## Participants

To be included in this study, a participant either must be a licensed head athletic trainer at the institution or a varsity athlete as defined by the institution. Overall, there were 18 head athletic trainers asked to participate in the study based on the assumption that there is one individual holding that title at every institution. There was close to 5,000 student-athletes asked to participate in the study based on average roster size at each institution. Individuals who met the inclusion criteria could vary in their demographic information.

## Procedures

*Recruiting the Head Athletic Trainer*

1. The conference websites (Ohio Athletic Conference and North Coach Atlantic Conference) were researched to identify the schools in each conference.
2. A list was made in a Word document of all the schools that were identified at each conference.
3. An Excel spreadsheet was made listing the institution, head athletic trainer position, name of contact, and email address.
4. Head athletic trainers were searched based on institution website.
5. Email addresses for the individuals were found and put in an Excel spreadsheet.
6. An email was sent using the spreadsheet to head athletic trainer that included the link to the survey and instructions to complete it .
7. A follow- up email was be sent two days, one week, two weeks, and three weeks following the initial email.
8. The survey was open for approximately ten weeks.

9. Data that was collected from the survey was kept in an Excel spreadsheet on a password protected laptop.

*Recruiting the Student-Athlete*

1. The conference websites (Ohio Athletic Conference and North Coach Atlantic Conference) were researched to identify the schools in each conference.
2. A list was made in a Word document of all the schools that were identified at each conference.
3. All the varsity sports were listed in a Word document from conference websites.
4. An Excel spreadsheet was made listing the institution, sport, name of head coach, and email address.
5. An email was sent to head coach that included the link to the survey and instructions to complete it to be forwarded to their student-athletes.
6. A follow-up email was sent to head coaches two days, one week, two weeks, and three weeks following the initial email to be forwarded on to their student-athletes.
7. The survey was open for ten weeks.
8. Data that was collected from the survey was exported to an Excel spreadsheet on a password locked laptop.

**Instrumentation**

The surveys was created to understand the effects of social media posts and the mental health resources used on college campuses on the perception of mental health to collegiate athletes. Each survey was electronic and sent out via email to the participants who are either head athletic trainers/head administrators or student-athletes within the DIII conferences of the Ohio Athletic Conference and North Coast Athletic Conference. Reminder emails were sent out

following the initial survey at two days, one week, and two weeks. Based on the response rate, an additional reminder was sent at three weeks.

The surveys that were provided to participants was created by the researcher. Careful analysis of other studies related to the topic, as well as the goal of the research questions, were taken into consideration in the creation of the instrument. The survey that was sent to the head athletic trainer at each institution had 17 questions and took approximately 25 minutes for participants to complete. The survey that was created for student-athletes had 25 questions and took approximately ten minutes to complete. The survey asked minimal demographic questions to protect the participant from revealing any identifying factors. The surveys were only to be completed once by each participant.

Surveys were validated by five athletic trainers working in a Division I collegiate setting, and five current student-athletes at the same Division I institution that were not included in the study. The survey was validated prior to the study being conducted within the sample population by asking the individuals to take the survey and provide any feedback on question clarity and flow of the survey. Feedback was taken to improve the survey prior to distribution. However, no changes were found necessary to the instrument. Informed consent was obtained as the first question of each survey including those utilized in the validating the survey. Each participant was asked if they consented to taking the survey, as well as being notified that they can end the survey at any time and their results were not reported.

**Data Collection**

Head athletic trainer survey included information regarding their training in mental health and resources they have on their campus for student-athletes to use was collected. Other information was collected including their years as a head athletic trainer, how long they have

been working as a certified athletic trainer, and the various resources the sports medicine department uses at their institution. Open-ended questions were asked to determine areas that can be improved at each institution. This included trainings they have participated in at their institution and individually, as well as screening tools that they give to student-athletes to assess their mental health. All these questions were a part of the survey that was distributed to head athletic trainers as a link embedded in an email.

Student-athletes that participated in the survey were asked questions including what social media platforms they use, if they follow professional athletes on those platforms, and if they believe those professional athletes have an influence on their daily lives. Student-athletes were also asked about the resources that are available on their campus, as well as the time it takes to be seen if they schedule an appointment with a mental health professional on their campus. The student-athletes then rated the accessibility and usefulness of those mental health resources. Open-ended questions included suggestions for potential changes to the mental health resources on their campuses. Head coaches were contacted initially and asked to forward the email to their student-athletes.

For efficiency and easy access, the survey was created on Microsoft Forms. This program automatically collected responses in real-time. Once the responses were received, the data collected in Microsoft Forms was transferred to an Excel spreadsheet for statistical analysis ten weeks after the survey was initially sent out. The Excel spreadsheet was kept on a password-secure laptop that only the primary researcher had access to.

**Data Analysis**

The survey included questions that are quantitative with follow up questions in which the participants could suggest potential changes. The survey asked the athlete participants which social media outlets they used, as well as if they believe the elite athletes they followed on those social media outlets, influenced their perceptions of mental health and their personal preferences (fashion choices, vocabulary, etc). The participants answered these questions with a simple "Yes" or "No". These questions were looking at the number of student-athletes that believed following elite athletes on social media either did or did not influence their perceptions of mental health, as well as other aspects of popular culture.

The questions in the survey intended to determine if a relationship is present between following elite athletes on social media and the influence that they may have on student-athletes' mental health in order to answer research question one. The correlation between the variables of following an elite athlete on social media and the perceived influence was used to determine the answer to the first research question. For this question, a Pearson's Product Moment Correlation was used to understand the statistical significance. Correlational statistics were run to observe the significance of following an elite athlete on social media, year in school, and perceived influence on mental health.

Research question two looked at the relationship between age and perceived influence of elite athletes on mental health. Year in school was asked as a demographic question to understand the sample population, with the same question about perceived influence on mental health being used as in the previous question. A Pearson's Product Moment Correlation was used to determine if a relation was present between the two variables.

The last research question was intended to look at a potential relationship between head athletic trainers participating in mental health and their perception of the mental health screenings that are conducted at their institution. Questions were asked within the survey about trainings they completed, as well as if screening tools were used at the institution. The question was a "Yes" or "No" question and posed as asking if the screening tools were sufficient. A Pearson's Product Moment Correlation was conducted for this question to observe any relationships being present between the variables.

## Results

The survey data was collected from student-athletes and athletic trainers in the OAC and NCAC. Data collection was open for ten weeks. After this time, data was exported from Microsoft Forms and was coded in an excel spreadsheet. Data from individuals that reported not attending or working for schools within the OAC or NCAC were excluded from the analysis. The coded information was transferred to JASP 0.16.2 statistical software for statistical analysis

### Validity and Reliability

The surveys, after being created and approved by the Human Subjects Committee, were tested for their validity. A test sample of student-athletes and athletic trainers were chosen at Robert Morris University. Five student-athletes and five athletic trainers participated in this process. Following their completion, the surveys that were used for the current study were deemed acceptable. No changes were made following the responses from the validation process.

### Descriptive Statistics

Of the 19 institutions that participated in the study, there were 74 student-athletes and six head athletic trainers that responded to their respective surveys. Table 2, 3, and 4 shows the distribution of the schools, sport, and social media use from which participants reported. Table 5

shows the distribution of conferences, years as a certified athletic trainer, and years as a head athletic trainer. The following results contain the research question, the statistical test, and the results found from the analysis.

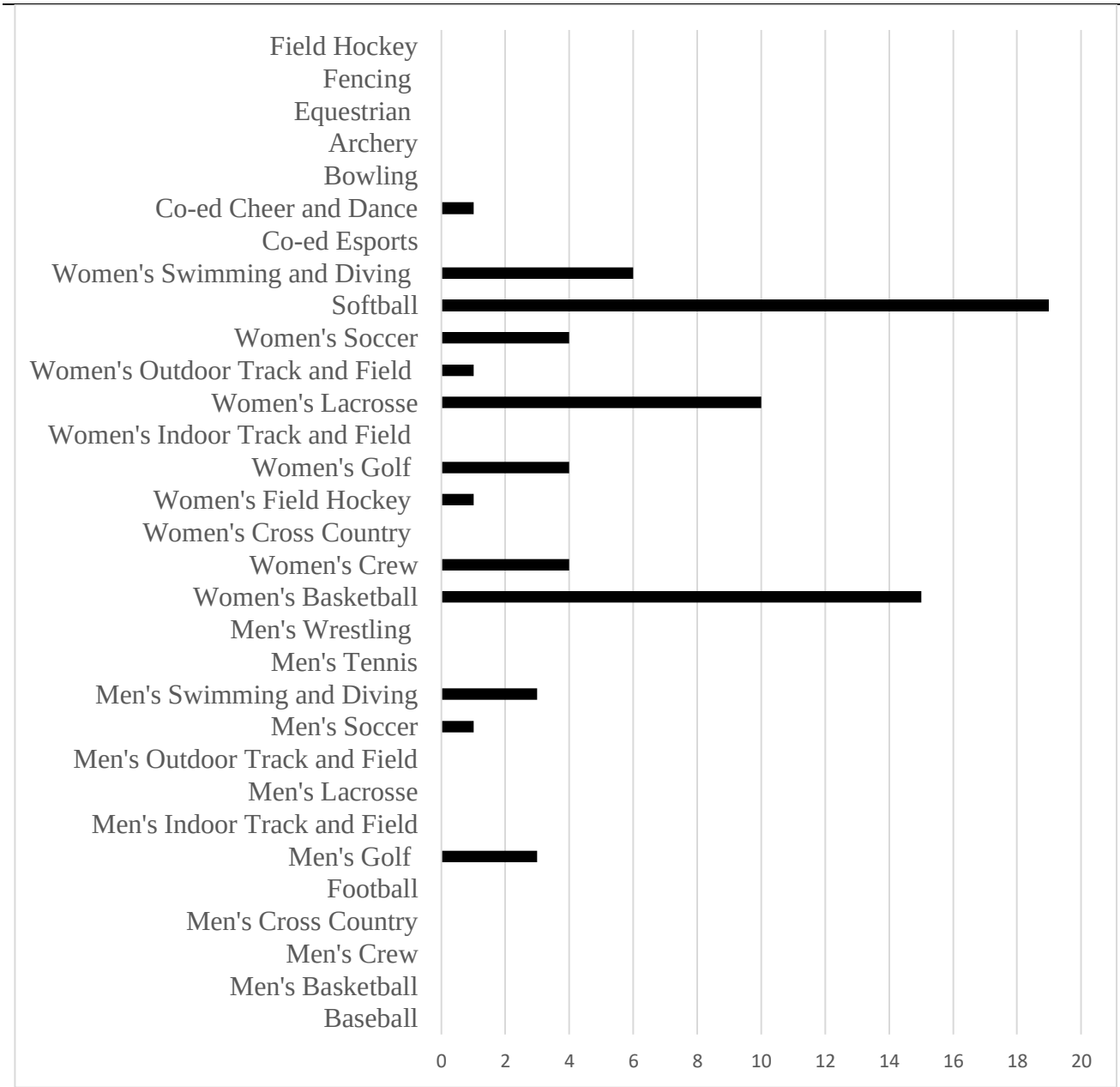
**Table 2**
*OAC and NCAC Participants*

| School | Number of Participants |
|---|---|
| Baldwin Wallace University | 6 |
| Capital University | 0 |
| Heidelberg University | 0 |
| John Carroll University | 6 |
| Marietta College | 31 |
| Mount Union University | 3 |
| Muskingum University | 0 |
| Ohio Northern University | 2 |
| Otterbein University | 0 |
| Wilmington College | 0 |
| Denison University | 10 |
| DePauw University | 0 |
| Hiram College | 0 |
| Kenyon College | 0 |
| Oberlin College | 12 |
| Ohio Wesleyan College | 1 |
| Wabash College | 0 |
| Wittenberg University | 0 |
| College of Wooster | 0 |

*Note.* This table depicts the number of participants from each school.

**Table 3**

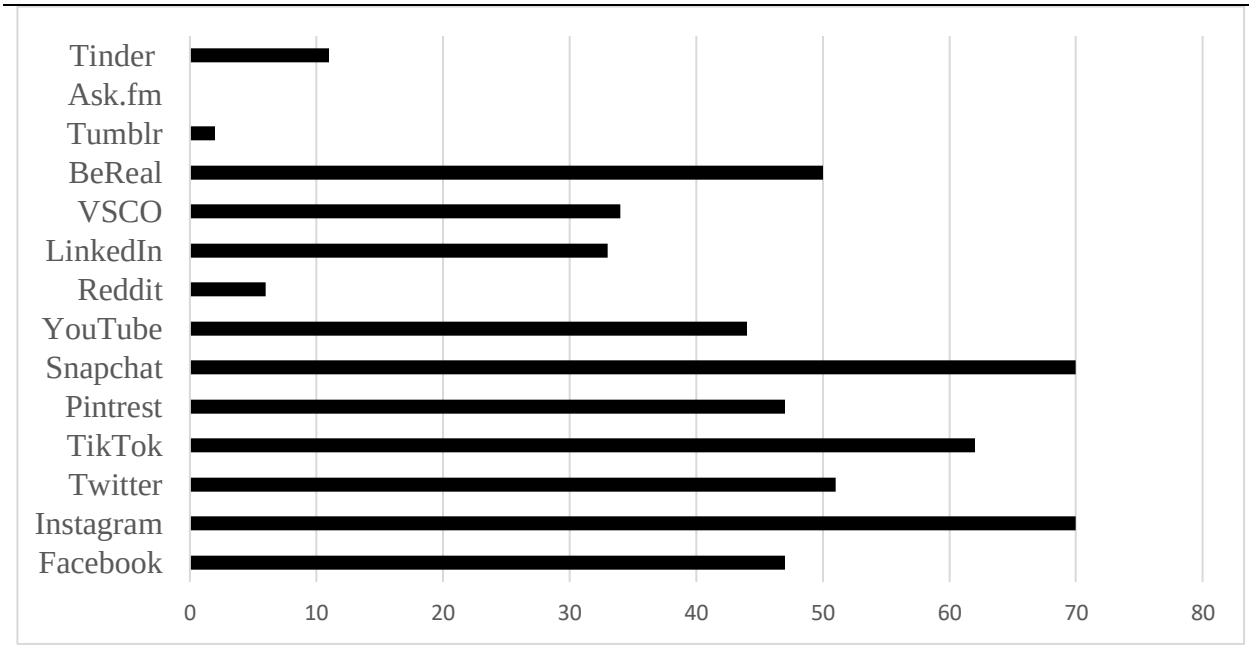
*Participant Sport Distribution*




*Note.* This table depicts the number of participants from each sport

**Table 4**

*Social Media Use Distribution*




*Note.* The table shows the data for social media apps participants had accounts for.

**Table 5**

*Head Athletic Trainer Demographic Information*

| Participant | Conference | Years as an athletic trainer | Years as a head athletic trainer |
|---|---|---|---|
| 1 | OAC | 11-15 | 2-5 |
| 2 | NCAC | 16-20 | 6-10 |
| 3 | NCAC | 11-15 | 6-10 |
| 4 | OAC | 11-15 | 2-5 |
| 5 | OAC | 16-20 | 6-10 |
| 6 | OAC | 16-20 | 2-5 |

*Note*. This table depicts demographic information for head athletic trainers.

**RQ1:** Does the presence of elite athletes on social media influence collegiate student-athletes' perceptions of mental health?

**$H_0$:** Elite athletes on social media will have no influence on student-athletes' perceptions of mental health.

**$H_1$:** Elite athletes on social medial will have a strong positive influence on student-athletes' perceptions of mental health.

A Pearson's correlation was calculated examining the relationship between following elite athletes on social media and perceived influence on mental health. No correlation was found ($r(71)= 0.190$, $p=0.109$, $p>.05$) (Table 6). Perceived influence on mental health of student-athletes was not affected by elite athletes on social media. This statistic allows for the null to be accepted and the alternative hypothesis to be rejected because no correlation was found that was significant between elite athletes' social media posts and perceived influence on mental health in student-athletes. Although the correlation found was not statistically significant, there is a chance that type 2 error was committed because 85 participants were needed to achieve power for this sample.

**Table 6**

*The Assumption of Pearson's Correlation in the Student-Athlete Survey*

| | Perceived Mental Health Influence | Follow Professional Athlete |
|---|---|---|
| Follow Professional Athlete | 0.190 | 1 |
| Perceived Mental Health Influence | 1 | 0.109 |
| N | 74 | 74 |

*Note:* *. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

**RQ2:** Is there a correlation between the year in school the student-athlete is and their perceived influence of elite athletes on their mental health?

**$H_0$:** There is no correlation between year in school and the perceived influence of elite athletes on their mental health.

**$H_1$:** There is a positive correlation between the year in school and the perceived influence of elite athletes on their mental health.

A Pearson's correlation was calculated examining the relationship between year in school and perceived influence on mental health. No correlation was found ($r(71)=0.010$, $p=0.931$, $p>.05$) (Table 7). Year in school and perceived influence on menatl health was not related. Based on the Pearson's correlation, the alternative hypothesis was rejected, and the null hypothesis was accepted that there is no correlation present between the two variables. Although the correlation found was not statistically significant, there is a chance that type 2 error was committed because 85 participants were needed to achieve power for this sample.

**Table 7**

*The Assumption of Pearson's Correlation in the Student-Athlete Survey*

| | Perceived Mental Health Influence | Year in School |
|---|---|---|
| Year in School | 0.010 | 1 |
| Perceived Mental Health Influence | 1 | 0.010 |
| N | 74 | 74 |

*Note.* *. Correlation is significant at the 0.05 level (2-tailed)
**. Correlation is significant at the 0.01 level (2-tailed)

**RQ3:** For head athletic trainers, does completing mental health trainings influence perceptions of mental health screening tools at their respective institutions?

**$H_0$:** Completing mental health trainings does not influence head athletic trainers' perceptions of mental health screening tools at their respective institutions.

**$H_1$:** Completing mental health trainings will positively influence head athletic trainers' perceptions of mental health screening tools at their respective institutions.

In the survey sent out to head athletic trainers, questions were asked regarding their completion of mental health trainings, as well as their belief on how effective mental health screenings are that their department gives their student-athletes. A Pearson's correlation was calculated examining the relationship between mental health trainings and beliefs that screening tools were sufficient. A strong negative correlation was found ($r(4)=-1.000$, $p<.001$) (Table 8), indicating a significant linear relationship between the two variables. This shows that a large effect size was observed for this sample population. Mental health trainings for athletic trainers positively influence the perception of mental health screening tools. With this information, the null hypothesis can be rejected and the alternative accepted that there is a relationship between completing a mental health training and the perceived effectiveness of mental health screening tools.

**Table 8**

*The Assumption of Pearson's Correlation in the Head Athletic Trainer Survey*

| | Sufficiency of Screening | Completing Mental Health Training as an AT |
|---|---|---|
| Completed Mental Health Trainings as an AT | -1.000** | 1 |
| Sufficency of Screening | 1 | -1.000** |
| N | 6 | 6 |

*Note:* *. Correlation is significant at the 0.05 level (2-tailed)
**. Correlation is significant at the 0.01 level (2-tailed)

## Discussion

Elite athletes have been using their presence on social media to share their stories and experiences. The goal of this research was to determine if there was a relationship between social media posts about mental health and student-athlete's opinion of mental health. The findings of the survey showed no correlations between elite athletes' posting on social media outlets and their perceived effect on collegiate student-athletes' mental health based on a Pearson's correlation.

The stigma surrounding mental health can hinder individuals from reaching out for the help they need. However, there may be other factors that prevent student-athletes from utilizing the resources that are available to them. Following the questions about social media use, there were open-ended questions that asked student-athletes about the resources they have available to them on their respective campuses. Feedback that was collected includes participants wanting an overall better awareness at the institution, putting an emphasis on mental health to students, and mental health professionals at the institution having a better understanding of the influence of sports on mental health. Other suggestions include adding counselors or mental health personnel to the counseling department and adding other mentat health resources to campus, both which will require additional funding.

The findings for the student-athlete survey show that there is no correlation that was statistically significant between following a professional athlete on social media and perceived influence on mental health. With this information, it can be assumed that the social media presence of professional and elite athletes does not have a perceived effect on student-athletes' beliefs surrounding mental health. Through this study, actual influence of elite athletes on perceptions of mental health was not studied, however, some participants answered that they did

believe social media posts from professional athletes did influence their perceptions of mental health, therefore further research would need to be done to consider a correlation in the future.

As studied by Rnkainene et al., many young athletes look up to elite athletes (2019). However, negative attributes can become apparent to the public with these elite public figures (Piccolo, 2020). Yet, a study by Bekalu, showed that social media does have a positive influence on users (Roeder, 2020). Other current research shows that social media posts related to mental health may be able to positively influence student-athletes in making them feel like they are not alone (Reoder, 2020). This can in turn create comfort in seeking treatment for the mental health disorder they may be facing.

By conducting this research, athletic administration, coaches and staff, and healthcare personnel, including athletic trainers, can utilize the open-ended feedback from participants. With knowing that there may be some influence by elite athletes on mental health perceptions, the proper personnel can be prepared to help student-athletes when posts occur from these athletes such as providing information on risk factors, signs and symptoms, and resources for individuals dealing with mental health disorders. While only so many resources can be provided, there are other means in which individuals can provide help such as various trainings that teach the signs of mental disorders, as well as how to appropriately carry out interactions with individuals with mental disorders. Athletic trainers, coaches, and athletic support staff spend countless hours with student-athletes not only during their athletic season, but in the off-season. It is important that they understand the early warning signs and are aware of social media trends.

The human brain is not fully developed until age 25 (Gavin et al., 2009). The age group of the student-athlete population was estimated to be between 18 and 22 based on the years in school of the participants. As written in a study by Kaier et al., (2015), athletes believe that they

are more stigmatized than their nonathlete peers. For the stress that college aged student-athletes undergo, their brains are still yet to completely developed. The current study showed that there was no significant relationship between the age of the student-athlete and their perception of mental health information on social media.

The final research question observed a strong negative correlation, which was statistically significant, between athletic trainers completing a mental health training course and their belief of screening sufficiency at their institution. This correlation shows that individuals who reported completing a training also reported that the screening tools their institution uses are not sufficient. Athletic trainers need to be informed on how to detect and approach an athlete with a mental health disorder. As written by Ostrovecky (2017), it is crucial for athletic trainers to be prepared to respond to mental health problems in student-athletes, as well as be able to detect predisposing factors and early warning signs. Therefore, athletic trainers should review their screening tools to make sure they are sufficient for the needs of the department. Conducting an annual review with the staff and stakeholders will allow departments to stay up to date on their screening tools.

By participating in a mental health training, individuals can be better equipped on how to respond and observe to mental health situations. While the specific trainings were not identified within the survey, it can be determined that the trainings were beneficial to the athletic trainers. The skills and tools that were potentially discussed within those trainings could have influenced the athletic trainers' beliefs of the screening tools that are utilized at their institution.

At the end of the survey, there were open-ended questions for the student-athletes and head athletic trainers to complete. Student-athletes had three opportunities to answer a question

about resources on campus throughout the survey. The head athletic trainers had one question to answer.

**Student-athlete Question**. This question asked participants to explain what changes they feel needed to be made on their college campus in regards to resources, access, and overall mental health support. There were several themes that emerged from this question. First, a lot of participants stated the need for more mental health counselors which may include sports psychologists. Second, some participants commented on the access to resources. The third theme was having more access to mental health screening tools including before, during, and after the season. Here are a few comments from the student-athlete participants:

- "I feel like the athletic department should hire a sports psychologist who specializes in college athletics, because the counselors very vaguely understand the struggles of collegiate student athletes."
- "More awareness and screenings and more availability to counselors/trainings."
- "More emphasis on mental health for student athletes year round. More checkins."
- "More counseling. Our nurses are usually booked and cant set up a meeting right away if you need to talk about your mental health."
- "There should be a sport psychologist who understands athletes more. They should hire qualified people-the counseling session I went to was ineffective. She was super unhelpful, never followed up, rushed the session, and offered no support. The counselor basically said "everyone deals with that" when I expressed how my anxiety was debilitating."

**Head Athletic Trainer Question.** Head athletic trainers were asked if their current mental health screening tools were sufficient. The five participants that answered no were then asked why they felt as though their current mental health screening methods were not sufficient. Some participants discussed the frequency, others which screening tool would be the best option. Below are a few of the comments that were made.

- "I would like to do more screenings throughout the academic year but we also have limited resources to address issues we may find."
- "Would like them to be more frequent."
- "They are sufficient for a moment in time but would be beneficial to do a mid season and or after season screening as well."
- "The only screenings students receive are at visits to campus wellness center for health or counseling visits and they do a PHQ9. In the past our counselors have been against us screening at physicals using the PHQ9 due to lack of resources"
- "We are working with the counseling department to find out how often they want us to take this"

Both student-athletes and head athletic trainers thought that mental health in student-athletes would benefit from more mental health professionals available or mental health workshops. From the responses above, participants have alluded to either bettering the resources that are already available, or trying to make more resources available. The major issue with the feedback that was consistently provided is a call for more resources which puts a financial burden on the institution that may not be able to support.

The input from the participants and findings from the statistics ran show that mental health has become a a topic of interest in the college setting. Both student-athletes and athletic

trainers have become aware of the importance of mental health in the media, the detriment that sports may have to mental health, and changes that could be made to help student-athletes overcome the mental health issues they may face. While student-athletes are beginning to see information regarding mental health more frequently on platforms they use, athletic trainers need to be prepared to respond when major events, such as athletes dropping out of major competitions as a result of their mental health, occur within society so that the athlete can be properly treated and properly referred.

## Conclusion

The major findings of this study suggest that a relationship was not present between social media posts by elite athletes and perceptions of mental health in student-athletes. With all of the mental health campaigns that are being led by elite athletes, it can be known that there is some influence on student-athletes. While only two conferences were utilized for this study, student-athletes undergo similar stressors and experiences through athletics. Mental health has been shown to pose a threat to student-athlete's academic and athletic performance, yet the stigma surrounding mental health has progressively decreased. Efforts should continue to be made in order to better equip healthcare professionals, mental health professionals, support staff, and student-athletes to help with mental health related issues.

### Limitations

Limitations of this study include the population sample. Two Division III athletic conferences were utilized for both groups which included 19 schools. Eight of those 19 schools had student-athletes respond. This can limit the information that was gathered regarding mental health resources available to students on campus. Another similar limitation is that not all sports teams were represented in the data. A final limitation from the student-athlete data is that head

coaches were the direct contact. Student-athletes were unable to be contacted directly so head coaches were relied upon to forward the survey to their student-athletes. Since coaches were responsible for contacting student-athletes in regards to the survey, incorrect or outdated information would prevent the survey from being sent to the appropriate student-athletes.

For the head athletic trainer survey, only six participants responded to the survey of the 18 institutions that were included. This could be a result of the time of year the study was conducted. Data collection began in November and ran through January, which is over winter break and athletic trainers are not consistently on campus unless their sport is in season. Head athletic trainers were only able to be asked what conference they worked for to prevent identifiable information from being disclosed. This limits the information about mental health resources that were offered at their respective institutions. Questions within the head athletic trainer survey also limited the information that could have been obtained in the mental health resources that are available at each respective institution.

**Future Directions**

The data collected in this survey could lead to further research on the influence of mental health-related information on social media. Future studies could further investigate the actual influence of social media posts from elite athletes on student-athletes. This could be testing individuals' perceptions before and after showing them social media posts about mental health to determine if there is a relationship between the two. A larger population could also be used to observe differences between divisions and sports. With the information from this research and previous research studies about the influence of social media, mental health campaigns and social media posts can be tailored to be more influential.

The athletic trainers and other healthcare professionals that work with student-athletes can be further investigated to understand their role in the mental health of the student-athlete. Sports medicine departments and health and wellness centers can be surveyed to determine not only what resources are available, but what resources prove to have the most benefit. Determining the best practices for mental health screening in terms of timing and screening tool, as well as what institutional barriers may need to be overcome would be beneficial for both the student-athletes and the healthcare professionals.

## Summary

Overall, this research study wanted to determine if a relationship could be observed between the actions of elite athletes on social media and how collegiate student-athletes perceived those actions. While no relationship was observed between a student-athlete posting about mental health on social media and the perceived influence it may have, the study gave insight that student-athletes are paying attention to what elite athletes are posting. Age was also shown to have little influence on how mental health-related posts were being perceived. Based on the open ended questions, there was a call from student-athletes to have access to more mental health resources which included mental health counselors. The major finding from this study is that completing a mental health training may better equip healthcare personnel, specifically athletic trainers, in how to assess ental health screening tools. While this study could have been conducted on a larger scale, it begins a conversation about the impact of mental health trainings in healthcare and mental health-related social media posts on student-athletes.

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## Appendix A

Appendix A is the survey that was created to be distributed to head athletic trainers. The survey is 17 questions. Question types include multiple choice, yes/no, select all that apply, ratings, and open-ended questions.

# Head Athletic Trainer Survey

Informed Consent

Title: The Effects of Social Media Posts on Mental Health in Collegiate Athletes.

IRB:

Primary Student Investigator: Alliya Duritza Ajd007@marietta.edu
Faculty Advisor: Jaclyn Schwieterman sj004@marietta.edu

Thank you for taking the time to participate in this research study. Before you begin the survey portion of this study, you are being asked to review the following before continuing. Below is information for you to consider prior to beginning the survey. If any confusion arises at any point, please direct questions to the Primary Student Investigator.

Purpose:
The purpose of this study is to investigate the influence that elite and professional athletes may have on student-athletes by understanding social media presence. The study also intends to look at student resources on college campuses and how student-athletes utilize those resources.

* Required

1. Risks and Discomfort:
   There are no known risks related to your participation in this study.

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Potential Benefits:

In participating in this study, you are allowing for a better understanding of the influence of resources and social media on student-athletes. Participants, as a result of their answers, may help to improve mental health resources that are available to students on college campuses.

Confidentiality:

Your answers will be kept anonymous throughout the study. No demographic information will be collected that would allow you to be identified. You will not physically sign a consent form. However, by continuing to the survey, it is implied that you have read this page and are consenting to the following survey.

Data Storage:

The data collected from the proceeding survey will be exported from the Microsoft Form to an Excel Spreadsheet on the student investigator's password locked laptop. The faculty investigator will be the only other individual that has access to the data that is collected from this survey. Following data collection and the conclusion of the study, the Excel Spreadsheet and Microsoft Form will be kept for six years following the study before being deleted permanently from the laptop.

Subject's Rights:

In continuing to the survey, you have consented to participating in this study. The study will take approximately five minutes for you to complete. However, at any time you may discontinue the survey. This study is completely voluntary, and you reserve your right to stop the survey at any time. As a result, your answers will not be collected, nor will you be penalized.

Questions or Concerns:

If at any time during or after your participation in the study you have any questions, please contact the primary student investigator or the faculty advisor. Student investigator, Alliya Duritza, can be contacted at any time using the email address ajd007@marietta.edu. Faculty advisor, Dr. Jaclyn Schwieterman, can be contacted at any time using the email address sj004@marietta.edu. Other questions can be directed to Dr. Mary Barnas, the chair of the Human Subjects Committee at Marietta College at barnasm@marietta.edu. Dr. Barnas and her committee was utilized in this study to ensure this study is ethical in nature and approved this study to be administered to the public

study to be administered to the public.

2. I verify that I am at least 18 years old *

- ◯ Yes
- ◯ No

3. What conference is the institution you work for in? *

- ◯ Ohio Athletic Conference
- ◯ North Coast Atlantic Conference
- ◯ Neither

4. How many years have you been working as a Certified Athletic Trainer? Round to the nearest year. *

- ◯ 0-5 years
- ◯ 6-10 years
- ◯ 11-15 years
- ◯ 16-20 years
- ◯ 21-25 years
- ◯ 26-30 years
- ◯ 31-35 years
- ◯ 36-40 years

5. How long have you been in the position of Head Athletic Trainer or Administrator for your department? *

- ◯ 0-1 month
- ◯ 2-6 months
- ◯ 6 months-1 year
- ◯ 2-5 years
- ◯ 6-10 years
- ◯ 10+ years

6. Have you completed mental health trainings in your time as an Athletic Trainer? * Yes

- ◯
- No
- ◯

7. When was the most recent training? *

- ◯ 0-1 years
- ◯ 2-3 years
- ◯ 4-5 years
- ◯ 6+ years

8. What trainings have you completed? *

9. Have you completed mental health training in your time at your current institution? *

- ◯ Yes
- ◯ No

10. When was your most recent training? *

- ◯ 0-1 years
- ◯ 2-3 years
- ◯ 4-5 years
- ◯ 6+ years

11. What training have you completed? *

12. What screenings, if any, does your department give to athletes regarding their mental health? Select all that apply. *

- [ ] Patient Health Questionnaire-9 (PHQ-9)
- [ ] Generalized Anxiety Disorder 7-item
- [ ] SCOFF questionnaire
- [ ] National Depression Screening Day Scale
- [ ] Beck Anxiety Inventory
- [ ] Alcohol Use Disorders Identification Test (AUDIT-C)
- [ ] Cannibis Use Disorder Identification Test (CUDIT-R)
- [ ] STOP-BANG Questionnaire
- [ ] Insomnia Severity Index
- [ ] Adult ADHD Self-Report Scale
- [ ] None
- [ ] Other

13. When does your institution, if at all, provide mental health screenings/surveys? Select all that apply. *

- [ ] Prior to the season starting
- [ ] During the season
- [ ] After the season
- [ ] None

14. Do you feel these screenings are sufficient? *

- ◯ Yes
- ◯ No

15. If you answered no, please explain why? *

16. How many mental health professionals are available on campus? *

- ◯ 0
- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5
- ◯ 6+

17. On average, how long does it take for a student to be seen by a counselor that your institution uses? *

- ◯ Less than a week
- ◯ 1-2 weeks
- ◯ 3-4 weeks
- ◯ 5-6 weeks
- ◯ 7-8 weeks
- ◯ 8 or more weeks

**Appendix B**

Appendix B is the survey that was created for student-athletes. The survey was created on Microsoft Forms and distributed as stated in the Methods section. The survey is 25 questions with yes/no, select all that apply, ratings, and open-ended questions.

# Athlete Survey

* Required

1. Do you consent to participate in the current study as your information will remain anonymous and secured throughout the duration of the study. You are able to discontinue the survey at any time resulting in your answers to not be counted. *

   ◯ I consent

   ◯ I do not consent

2. What conference is your school in? *

   ◯ Ohio Athletic Conference

   ◯ North Coast Atlantic Conference

   ◯ Neither

3. What school do you attend? *

- ◯ Baldwin Wallace University
- ◯ Capital University
- ◯ Heidelberg University
- ◯ John Carroll University
- ◯ Marietta College
- ◯ Mount Union University
- ◯ Muskingum University
- ◯ Ohio Northern University
- ◯ Otterbein University
- ◯ Wilmington College

4. What school do you attend? *

- ◯ Denison University
- ◯ DePauw University
- ◯ Hiram College
- ◯ Kenyon College
- ◯ Oberlin College
- ◯ Ohio Wesleyan College
- ◯ Wabash College
- ◯ Wittenberg University

5. What sport do you participate in? *

- ◯ Baseball
- ◯ Men's Basketball
- ◯ Men's Crew
- ◯ Men's Cross Country
- ◯ Football
- ◯ Men's Golf
- ◯ Men's Indoor Track and Field
- ◯ Men's Lacrosse
- ◯ Men's Outdoor Track and Field

Men's Outdoor Track and Field

- Men's Soccer
- Men's Swimming and Diving
- Men's Tennis
- Men's Wrestling
- Women's Basketball
- Women's Crew
- Women's Cross Country
- Women's Field Hockey
- Women's Golf
- Women's Indoor Track and Field
- Women's Lacrosse
- Women's Outdoor Track and Field
- Women's Soccer
- Softball
- Women's Swimming and Diving
- Co-ed Esports
- Co-ed Cheer and Dance

6. What year of school are you in academically *

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- ◯ Freshman/First year
- ◯ Sophomore/Second Year
- ◯ Junior/Third year
- ◯ Senior/Fourth year
- ◯ Fifth year/other
- ◯ Graduate

7. What social media apps do you currently have an account for? *

- [ ] Facebook
- [ ] Instagram
- [ ] Twitter
- [ ] TikTok
- [ ] Pintrest
- [ ] Snapchat
- [ ] Youtube
- [ ] Reddit
- [ ] LinkedIn
- [ ] VSCO
- [ ] BeReal
- [ ] Tumblr Ask.fm
- [ ] Tinder
- [ ] 8. What social media app do you believe you spend the most time on? *

- ◯ Facebook
- ◯ Instagram
- ◯ Twitter
- ◯ TikTok
- ◯ Pintrest
- ◯ Snapchat
- ◯ Youtube
- ◯ Reddit
- ◯ LinkedIn
- ◯ VSCO
- ◯ BeReal
- ◯ Tumblr
- ◯ Ask.fm
- ◯ Tinder

9. Do you follow any professional athletes on social media? *

- ◯ Yes
- ◯ No

10. Which of the following professional athletes do you follow on social media? *

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- [ ] Simone Biles
- [ ] Demar Derozan
- [ ] Tacko Fall
- [ ] Michael Phelps
- [ ] Gracie Gold
- [ ] Hayden Hurst
- [ ] Laurie Hernandez Lebron
- [ ] James
- [ ] Dwayne Johnson
- [ ] Chloe Kim
- [ ] Kevin Love
- [ ] Noah Lyles
- [ ] Brandon Marshall
- [ ] Michael Oher
- [ ] Naomi Osaka
- [ ] Paul Pierce
- [ ] Dak Prescott
- [ ] Aly Raisman
- [ ] Aaron Rodgers

Aaron Rodgers

- [ ] Ronda Rousey
- [ ] Serena William
- [ ] Linsey Vonn
- [ ] Other
- [ ]

11. Do you believe that posts from these athletes have influenced you as a person (fashion trends, vocabulary, product choices, etc) *

- ◯ Yes
- ◯ No

12. Do you believe that posts from these athletes have influenced your perception of mental health? *

- ◯ Yes
- ◯ No

13. Does your school provide you with a mental health screening/survey prior to, during, or after your sport's season? *

- [ ] Prior to the season starting
- [ ] During the season
- [ ] After the season
- [ ] None

14. What resources are available to you on campus regarding your mental health *

- ◯ Counseling
- ◯ Sport Pyschologist
- ◯ Mental health workshop
- ◯ 24/7 nurse's line
- ◯ Support groups
- ◯ Other

15. What resources have you used? *

- ◯ Counseling
- ◯ Sport Psychologist
- ◯ Mental health workshop
- ◯ 24/7 nurse's line
- ◯ Support group
- ◯ Other

16. How accessible are those resources? *

☆ ☆ ☆ ☆ ☆

17. Do you feel there should be changes to the resources on your campus? *

- ◯ Yes
- ◯ No

18. What changes do you feel should be made? *

Enter your answer



19. How useful are those resources? *

☆ ☆ ☆ ☆ ☆

20. Do you feel there should be changes to the resources on your campus? *

- ◯ Yes
- ◯ No

21. What changes do you feel should be made? *

Enter your answer

22. How long does it take you to get in to be seen by a mental health professional on campus? (You call to make an appointment and the next available appointment is in 21 days, 3-4 weeks would be the option that is selected) *

- ◯ Less than a week
- ◯ 1-2 weeks
- ◯ 3-4 weeks
- ◯ 5-6 weeks
- ◯ 7-8 weeks
- ◯ 8 or more weeks

23. Are there any resources your sport's team makes available to you? *

- ◯ Counselor
- ◯ Mental health workshops
- ◯ Sport Pyschologist
- ◯ Other

24. Do you feel that any changes can be made in order to improve the mental health resources on your campus? *

- ◯ Yes
- ◯ No

25. What changes could be made? *

Enter your answer