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The Perceptions, Barriers, and Facilitators to Seeking Mental Health Help in College Student-Athletes (PBaS-MH and PFaS-MH): A Mixed-Methods Pilot Study

A Thesis

Presented to the Faculty of the
Department of Sports Medicine
West Chester University
West Chester, Pennsylvania

In Partial Fulfillment of the Requirements for the
Degree of
Masters in science of athletic Training – Post-
Professional Concentration

By

Margaret Hunt

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Abstract: Through the COVID-19 pandemic, 1 in 10 NCAA student-athletes reported feeling so depressed it has been difficult to function (NCAA, 2020). Despite this, student-athletes are significantly less likely to seek mental-health help than their non-athlete peers. The present study sought to develop and validate the Perceptions of Barriers to Seeking Mental Health Help in Student-Athletes (PBaS-MH) and the Perceptions of Facilitators to Seeking Mental Health Help in Student-Athletes (PFaS-MH) surveys in college student-athletes, as well as determine predominant barriers and facilitators they experience with seeking mental health help. A convergence mixed-methods research design was conducted to triangulate results. The surveys were administered to 550 student-athletes at one NCAA Division-II university during scheduled team meetings. A total of 312 (56.7%) student-athletes completed the quantitative portion, while 277 (50.4%) completed the qualitative portion of the surveys. Qualitative analyses revealed awareness was the predominant theme when it comes to mental health literacy. The predominant barrier themes were self and accessibility while the predominant facilitator themes included Accessibility and community. Quantitative analyses revealed the PBaS-MH and PFA S-MH both demonstrated excellent reliability, $\alpha=0.924$ and $\alpha=0.960$, respectively. One factor (eigenvalue = 9.685) explained 32% of the variance and one factor (eigenvalue = 14.429) explained 48% of the variance, for the PBaS-MH and PFA S-MH respectively. The development of this survey is the first step towards accessing mental health barriers and facilitators in student-athletes, but further research needs to be done to assess mental health help seeking in this population in a larger sample.

Keywords: Mental health; Perceptions; Barriers; Facilitators; Validity; Reliability; Awareness; Accessibility; Survey

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Review of Literature

This study aimed to examine the barriers and facilitators of seeking mental health in collegiate athletes. The background information to understand this research study will be explained in the following sections: (1) mental health, (2) mental health in athletes, (3) attitudes towards seeking mental health help, (4) attitudes towards seeking mental health help in athletes, (5) stigma of mental health, (6) stigma of mental health in athletes, (7) barriers to seeking mental health help, (8) barriers to seeking mental health help in athletes, (9) facilitators to seeking mental health help, (10) facilitators to seeking mental health help in athletes, and (11) athletic trainers' role in mental health referral.

Mental Health

Mental health is a state of mind characterized by emotional well-being, good behavioral adjustment, relative freedom from anxiety and disabling symptoms, and a capacity to establish constructive relationships and cope with the ordinary demands and stresses of life (American Psychological Association, 2022). In 2019, 19.2% of adults received mental health treatment, 15.8% took prescription medicine, and 9.5% received therapy from a mental health professional (Terlizzi & Zablotsky, 2020). One in four women seek mental health treatment, and women are more likely to receive mental health treatment than men (Terlizzi & Zablotsky, 2020). Non-Hispanic white adults (23%) were more likely than non-Hispanic black (13.6%) and Hispanic (12.9%) adults to receive mental health treatment (Terlizzi & Zablotsky, 2020). Treatment is defined as "having taken medication for their mental health, received counseling or therapy from a mental health profession, or both" (Terlizzi & Zablotsky, 2020). One study found that Americans reported higher depressive symptoms in the 2000s and 2010s than in the 1980s and 1990s (Rothert et al., 2020).

Mental health has been associated with stress levels, education, income, and age (Rothert et al., 2020). People born before World War II have been shown to have fewer days with poor mental health than people born after World War II, although both seem to be trending down (Rothert et al., 2020). When looking at each state within the United States, the northern Midwest states reported having good mental health alongside Alaska, Hawaii, and Northeast. In contrast, Kentucky is shown to have the poorest mental health status (Rothert et al., 2020).

Mental health literacy is the knowledge and understanding that help individuals identify, prevent, and cope with mental disorders (Cheng et al., 2021). Researchers have found that there is an inverse relationship between mental health literacy scores and mental health prevalence (Cheng et al., 2021). Poor mental health literacy may be associated with the high prevalence of mental health issues in college students. While most colleges offer free counseling services, many college students do not access the counseling center (Seehuus & Peisch, 2021). The decrease in access could be because of the busy schedules of collegiate student-athletes between classes and sports activities. College students' three major mental illnesses are depression, anxiety, and eating disorders (Ryan et al., 2018). Depression is characterized by negatively affecting one's feelings, thoughts, and actions, whereas anxiety is classified as fear or worry so intense it affects a person's ability to function (Ryan et al., 2018). Students with anxiety are more likely to seek mental health help than those with depressive symptoms (Seehuus & Peisch, 2021). People with depressive symptoms tend to have more stigma towards seeking mental health help than people anxiety because of the fear of others' perceptions. College students are a vulnerable population at risk of developing unhealthy habits, which can be harmful to them in the long run (El-Monshed et al., 2021). Psychological problems can be divided into contextual factors, such as adjustment, peer interaction, academic issues, and individual factors, including personality, trauma, and stress (El-Monshed et al., 2021). Mental health distress can come in all

shapes and sizes and should never be taken lightly. One study found that mental disorders have 12.2% to 48.6% chance of occurring in an adult's lifespan, with college-age years having a higher likelihood (El-Monshed et al., 2021).

Mental Health in Athletes

The NCAA issued a survey to more than 37,000 student-athletes in 2020; a quarter of respondents reported feeling sadness and a sense of loss, and 1 in 10 reported feeling so depressed it has been difficult to function (NCAA, 2020). College student-athletes who are seniors reported feeling a sense of loss at 1.5 times the rate of underclassmen (NCAA, 2020). College students have a great deal of pressure placed upon them, and college athletes are a subgroup with even more stressors; stressors including academics, social life, in-season sports, pressure from coaches and commercialization of college athletics (Ryan et al., 2018). This added stress can interfere with the student-athletes mental health. Studies have shown that college sports can facilitate positive attitudes and boost self-esteem, increasing mental health (Ryan et al., 2018). Individuals who have high self-esteem and confidence are more socialized and have an increased likelihood of seeking help for ways to cope with depression and anxiety (Ryan et al. 2018). However, if the sport is not a positive experience it can hinder the athlete.

With the high demand student-athletes go through daily, they may be more susceptible to mental health issues. One study found that anywhere from 10% to 21% of student-athletes suffer from depression, while the undergraduate population results in approximately 40% experiencing depressive symptoms (Ryan et al., 2018). It has been suggested student-athletes underreport mental health issues. In one study, the five sports with the highest prevalence of mental health conditions are wrestling (45.8%), women's rowing (23.1%), women's swimming (22.7%), women's basketball (18.7%), and men's track and field (17.4%) (Sarac et al., 2018).

Collegiate student-athletes experience many mental health issues like their non-athlete peers. In the general undergraduate college student population, 65.7% reported experiencing overwhelming anxiety during the academic year, including the student-athlete population (Association, A. C. H. 2019). Eating disorders are an umbrella term for specific eating disorders, including bulimia, anorexia nervosa, and binge eating (Ryan et al., 2018). Athletes have an increased risk of developing an eating disorder due to the pressure to maintain peak performance and specific body weight for certain sports (Ryan et al., 2018). Wrestling, swimming, track and field, among other sports have tight clothing and can be weight enforced, leading to body image concerns (Sarac et al., 2018), and women have been shown to be more conscientious over their weight and appearance (Sarac et al., 2018). The study examined 183 incoming division I athletes who completed a health and wellness survey in the summer prior to joining the athletic program. The results demonstrated that aggressive behaviors, alcohol use, and fatigue were significantly associated with decreased mental health symptoms in both males and females (Sarac et al., 2018). This survey shows the unhealthy eating habits and the negative behaviors associated.

Attitudes Toward Seeking Mental Health Help

Attitudes towards seeking mental health help have been shown to be on a spectrum between positive and negative attitudes. When asked about their thoughts on seeking mental health, 2,303 individuals answered 'Seeing a psychiatrist for the problem described would be...' with the following adjectives useless-wise, harmful-beneficial, good-bad (Schomerus et al., 2009). Of the 2,303 individuals, 136 had depression, and people's willingness to seek help was associated mainly with positive attitudes on mental health (Schomerus et al., 2009). In 2000, Americans with negative attitudes towards mental health treatment were five times less likely to seek mental health services than people with positive attitudes (Conner et al., 2009). One study

found that people in Canada were more willing to seek mental health treatment if they had mental health training than those with no training (Carleton et al., 2020). The study also found that individuals with minor mental health literacy were more likely to consult with a spouse (72.5%) or a friend (52.7%) as an early resource compared to individuals with increased education in mental health who were more likely to seek professional help (Carleton et al., 2020).

Seven et al. (2020) examined the mental health of people of migration status in Germany. These individuals were put into focus groups and asked to discuss specific topics on mental health. They brought up the attitudes of those around them, including parents who could have a negative outlook on mental illness, stating "they are fine on the outside, so they are fine inside" and become defensive about their children and well-being (Seven et al., 2020). Some participants indicated that if mental health is not discussed in schools and the community, nothing will happen, and everyone will be fine. However, many of these migrants believe mental health should be dealt with in schools and life courses; that way, people have the resources to best process their thoughts and feelings (Seven et al., 2020). Conner et al. (2009) found negative attitudes about treatment due to stigma related to mental health help. This is true for African Americans as they are more likely to have negative attitudes towards mental health treatment. There is a relationship between race and attitudes towards mental health help and is partially mediated by self-stigma (Conner et al., 2009). A study in Switzerland found an association between attitudes toward seeking mental health help as a significant predictor of psychotherapy, inferring that positive attitudes of mental health therapy encourage seeking mental health help (Bonabi et al., 2016).

Attitudes Towards Seeking Mental Health Help in Athletes

Student-athletes are a small population defined by their performance and tend to show more masculine attributes than the non-athlete population (Hilliard, Redmond, & Watson Ii, 2019). The attitude of needing to be more “manly” within their sport discourages athletes from seeking mental health help as it is a negative attitude insinuating weakness. In many sports athletes are under the assumption that they cannot be seen as needing help. Athletes are taught to not show pain, sadness, or discomfort when playing their sport.

Studies measuring stigma correlate with student-athletes’ attitudes toward seeking mental health help (Hilliard, Redmond, & Watson Ii, 2019). Student-athletes do not want to be associated with negative self-stigma while seeking mental health help, as they believe that it will affect their status, career, and life (Hilliard, Redmond, & Watson Ii, 2019). One study found no differences in attitudes when in student-athletes compared with their non-athlete counterparts (Hilliard, Redmond, & Watson, 2019). Although the student-athletes’ attitudes towards seeking mental health help are in line with their non-athlete counterparts, they still may have some differences in the barriers to seeking mental health help.

One study had 626 collegiate student-athletes who first completed a pre-survey conveying their attitudes towards seeking mental health help (Kern et al., 2017). They watched two videos of student-athletes going through personal battles dealing with their mental health, and they were instructed to complete the post-survey. Athletes were more comfortable discussing their mental health with their teammates post-survey compared to pre-survey. They were more confident in recognizing the signs and symptoms of mental health issues in their teammates post-survey compared to pre-survey (Kern et al., 2017). The same study also found that athletes were more willing to seek help post-survey compared with pre-survey (Kern et al., 2017). These

results suggest that brief education for student-athletes on mental health can help reduce stigma of seeking mental health help and encourage positive attitude.

The National Collegiate Athletic Association has put forth significant effort to upgrade its athletes' mental health education and resources, including dissemination of a mental health best practices manual and granting funds for studies on student-athlete mental health. Therefore, the willingness to discuss mental health and reduce stigma has increased over the years (Hilliard, Redmond, & Watson, 2019). Reducing stigma in athletics is imperative as it has been linked to attitudes towards seeking mental health help (Hilliard, Redmond & Watson, 2019).

The Stigma of Mental Health

Stigmatization of mental health is a significant influence on individuals not receiving mental health treatment (Elbulok-Charcape et al., 2021). There are two types of stigmas: public stigma, consisting of external sources like the public holding negative influence, attitudes, and beliefs of people with mental health issues, and self-stigma, consisting of internalization that one has of themselves seeking mental health treatment (Sheehan, 2021). Self-stigmatization manifests in four different ways: alienation, stereotype endorsement, discrimination experience, and social withdrawal (Sheehan, 2021). People who self-stigmatize can alienate themselves from others and become withdrawn from social gatherings in fear of validation of their own judgments. People tend to stereotype themselves and others; throughout history, individuals with negative mental health have been typed casted as “weak” or “crazy”. Public stigma can become a large barrier to seeking mental health help. They found that people were more likely to reject others with mental health issues to watch their children, marry into the family, and even be friends with them in Canada compared with other countries (Yin et al., 2020).

Mental health stigma can fluctuate over culture, race, and other identities; for example, Collado et al. (2019) found that Latinos usually do not discuss mental health with anyone and feel it is their problem to fix. They conducted a randomized control trial examining Latinos and put them into two groups, Behavioral Activation Treatment for Depression (BATD) and Supportive Counseling (SC) (Collado et al., 2019). They found stigmatization decreased in both groups; the SC group had significantly more decreasing numbers than the BATD group (Collado et al., 2019). The decrease could be that patients have the chance to vent their feelings in the SC group, unlike the BATD group (Collado et al., 2019). By venting one's feelings, the participants can express their thoughts or feelings while having the ability to hear from someone who is unbiased trying to help them with different solutions. The SC group is more of a group effort while the BATD group relies heavily on the participants if they want help with their mental health. Stigma can also be associated with specific genders. For example, Elbulok-Charcape et al. (2021) found that male college students tend to have a higher mental health stigma as they see it as a "weakness". The study looked at 1,200 demographically diverse students and asked them how we can "end mental health stigma"; in the study roughly 60% of all responses reported education, awareness, a positive atmosphere, and open discussion as potential solutions (Elbulok-Charcape et al., 2021). Non-white students were more likely to suggest that mental health should not be viewed negatively, However, non-White students were also more likely to believe mental health stigma will never be eliminated (Elbulok-Charcape et al., 2021). These racial/ethnic groups including Black/African American, Asian American or Hispanic/Latino have been shown to have higher levels of stigma towards seeking mental health help and decreased percentages in receiving mental health help.

Furthermore, mental health literacy likely plays a substantial role in stigma. A study conducted in China found that mental health literacy is negatively associated with public stigma,

meaning that as mental health literacy increases, public stigma decreases and vice versa (Yin et al., 2020). The same findings were found in Canada by Sullivan et al. (2021). Having a positive mental health literacy foundation may help facilitate an opportunity for individuals to seek mental health help.

The Stigma of Mental Health in Athletes

Athletes have the challenges of any college student and the high demand for athletics (Bird et al., 2018). Student-athletes have been found to be more likely to experience public stigma than their counterparts; this could be due to the masculinity associated with sports, the demand, and fanoms people have on specific programs (Bird et al., 2018). Throughout history, the idea of playing sports has been in connotation with men due to the rough play, getting dirty, and the competitiveness. The public puts an immense amount of pressure on athletes to win games, championships and be the ideal person. This pressure is on top of their own pressures to do well in school and get an education to have a successful career. However, research has found no difference in help-seeking attitudes between athletes and their non-athletic counterparts because of public stigmatism (Bird et al., 2018). However, despite having the resources to acquire help for their mental health, they may underutilize resources in fear of stigma (Ryan et al., 2018). Public stigma plays a major role in student-athletes as they are in the public eye competing at a high level. Bird et al., 2018 confirmed that public stigma is positively related to self-stigma, while self-stigma is negatively related to help-seeking attitudes in student-athletes. If an athlete is influenced by public stigma, they may be more likely to self-stigmatize, which in return may lead to negative attitudes towards mental health help-seeking.

Chow et al. (2021) created a program to use stigmatization interventions to reduce the stigma of mental illness, promote mental health literacy, and improve help-seeking attitudes and

intentions among college athletes (Chow et al., 2021). Mental health literacy programs must be structured and tailored to the specific population for best results; self-stigma is normalized and reduced through these programs with other mental health literacy and enhances the population (Chow et al., 2021). If institutions were to implement a mental health literacy program that is specialized for student-athletes, they would understand stigma and the normality of mental health in society.

Barriers to Seeking Mental Health Help

A barrier is an obstacle that obstructs people from seeking mental health help (Vidourek et al., 2014). People can experience barriers of all kinds including family, accessibility, or stigma; people can have barriers due to past experiences, cultural differences, or education. Gulliver et al., (2010) found that stigma and embarrassment were the most prominent barriers in young people to seeking help. The study found that past experiences with seeking mental health help come into play when help-seeking for another time, which was not looked at in the first study done by Gulliver in 2010 (Gulliver et al., 2012). A common barrier is a negative association and the feeling that they should "fix themselves on their own" (Leijdesdorff et al., 2021). Leijdesdorff et al. (2021) also found that people ages 12-25 felt unentitled to have mental health problems compared to people living in poverty and third-world countries (Leijdesdorff et al., 2021).

Barriers to Seeking Mental Health Help in Athletes

Athletes experience the same barriers as college students, including gender roles and the association that sports express masculinity; Athletes fear that if they were to seek mental health help and their peers found out they would be seen as weak (Moreland et al., 2018; Ryan et al., 2018). Athletes have been shown to have barriers with specific sport types, including contact

sports and individual sports (Moreland et al., 2018). Student-athletes are somewhat willing to seek mental health help but face many barriers (Moreland et al., 2018). One study found that 44% of student-athletes cited stigma, mainly embarrassment, as the primary barrier to seeking mental health help (Gulliver et al., 2012). Student-athletes feel as though seeking help is an embarrassment if someone were to find out. The top three barriers found were decreased mental health literacy, not knowing when to seek help, and stigma (Gulliver et al., 2012). All three of these barriers coincide and could cause more barriers for the student athlete. A decrease in mental health literacy could mean the student-athlete does not know where to access help and this could enhance stigmatization as the student-athlete may not know the normality of mental health distress. It has been shown that student-athletes have decreased time to seek mental health help as they have academics, studying, practice, workouts, lifting, and sleep (Gulliver et al., 2012; Ryan et al., 2018).

Facilitators to Seeking Mental Health Help

Facilitators to seeking mental health help constitute a person or thing that makes it easier to seek help. A systematic review was done by Gulliver et al. (2010) of all relevant literature about seeking mental health help facilitators identified seven themes: positive past experiences, social support, confidentiality, education, awareness, perceiving the problem as severe, ease of expressing emotion and openness, and positive attitudes towards seeking help (Gulliver et al., 2010). By having a positive experience seeking mental health help one is more likely to seek help again; the same follows for having a social support that is open and encouraging to seeking help. Being open with oneself and acknowledging that one is having mental health issues and willingness to seek help is another major facilitator (Gulliver et al., 2010).

Facilitators to Seeking Mental Health Help in Athletes

Athletes experience the same facilitators as non-athletes, including increased mental health literacy, confidentiality, and positive past experiences, among others stated above (Moreland et al., 2018). Athletes involved in team sports tend to have a more extensive support system, which can help when needing to speak out (Moreland et al., 2018). Athletes that are involved in team sports are also usually close with their teammates and rely on each other in times of need. Gulliver et al.'s (2012) study is one of the only studies examining both barriers and facilitators to seeking mental health help in student-athletes. They found that the top three facilitators for elite athletes are: they already know a health professional, are aware of one's feelings, and find it easy to express their feelings.

Gulliver et al.'s (2012) study was a qualitative analysis of with 15 elite athletes aged 16-23 placed in one of three focus groups. The athletes were presented with a vignette for a young female athlete meeting the criteria for ICD-10 depression. The athletes later were given written activities to generate open-ended ideas and views. The athletes' responses were thematically coded, and rankings were generated with reverse coding. Athletes reported that it was very important for others such as their coaches and teammates to have a positive attitude towards seeking mental health help as they are large part of their lives (Gulliver et al., 2012). Athletes also reported they would be more likely to seek mental health help if they had free service, a practitioner who understands athletes, and online appointment scheduling (Gulliver et al., 2012). Athletes have busy and complex schedules; therefore, by implementing online appointment scheduling they might be more inclined to participate in counseling. Additionally, therapy is expensive even with insurance and many athletes and their families may not be able to afford it. If there were free services available, more athletes might seek help. Athletes are a specific subgroup of people and go through different situations compared to their non-athlete

counterparts; by having someone with the ability to understand what the athletes are going through; this may facilitate athletes towards seeking help. Despite these findings, there were limitations in Gulliver et al.'s (2021) study, including a small sample size that which cannot be generalized to the entire student-athlete population. The structured nature of the small focus groups also may have influenced the answers the athletes gave, and the thematic coding was conducted by only one researcher with potential for bias.

Athletic Trainers' Role in Mental Health Screening and Referral

Athletic trainers must first understand mental health literacy to advocate for student-athletes and their mental health. Mental health literacy is defined as the knowledge and beliefs about mental disorders which aid in their recognition, management, or prevention (Creswell & Clark, 2018). One study was examined the mental health literacy among the athletic staff in intercollegiate sports; the study found that athletic trainers have an average mental health literacy score of 131.00, coaches (131.21), females (135.36), Males (129.48), and overall (131.48) (Sullivan et al., 2019). The maximum score one could reach is 160, showing females on average have a higher mental health literacy score than men and coaches, and athletic trainers are relatively the same with a score of 131. Athletic trainers increasing their mental health literacy may decrease the barriers athletes face when seeking mental health help (Sullivan et al., 2019). Athletic trainers see athletes daily and can pick up on signs and symptoms while in the athletic training facility or out at practice. Athletic trainers with high mental health literacy may also know how to identify mental health signs and symptoms in athletes who may internalize their issues (Sullivan et al., 2019).

Introduction

College student-athletes are a subset of the college-student population that already experience immense pressure (Gulliver et al., 2012). Mental health illness has risen in the last 30 years, with higher reported depressive symptoms in the 2000s and 2010s compared to the 1980s and 1990s (Rothert et al., 2020). Mental health is a state of mind characterized by emotional well-being, good behavioral adjustment, relative freedom from anxiety and disabling symptoms, and a capacity to establish constructive relationships and cope with the ordinary demands and stresses of life (American Psychological Association, 2022). Mental health is associated with stress levels, education, income, and age (Rothert et al., 2020). For college student-athletes, their focus is not solely on academics but on the athletics and responsibilities they face when performing at a high level of competition. Athletes have practice, weightlifting, study hall, classes, and sometimes jobs to worry about on top of performing in competitions and games each week. The stress society puts on young college student-athletes can be daunting and affect their mental health (Drew & Matthews, 2019). Most colleges offer free counseling services to their students; however, many college student-athletes do not access the counseling center for various reasons such as practice schedules, social lives, class conflicts and stigma to seeking help (Seehuus & Peisch, 2021).

Barriers to mental health help are defined as obstacles faced when seeking mental health help (Gulliver et al., 2012). Student-athletes and their counterparts have the same barriers to behaviors and attitudes toward mental health that obstruct them from seeking mental health (Moreland et al., 2018; Ryan et al., 2018). However, there is a lack of research on athletes' experiences with mental health; the research shows that student-athletes are somewhat willing to seek mental health help but face many barriers (Moreland et al., 2018). One study found that 44% of athletes cited stigma, mainly embarrassment, as the primary barrier to seeking mental

health help (Gulliver et al., 2012). The top three barriers were decreased mental health literacy, not knowing when to seek help, and stigma (Gulliver et al., 2012). Conversely, facilitators to seeking mental health help constitute a person or thing that makes it easier to seek help. Having a positive experience with seeking mental health help has been shown to be a facilitator to seeking help (Wilson & Deane, 2001). Now that mental health literacy is slowly increasing, more people are open to mental health issues and destigmatizing treatment (Kelly et al., 2007).

There is limited research on seeking mental health help in student-athletes; however, Gulliver et al., (2010) and Moreland et al., (2018) both found that stigma is one of the main barriers in this population. However, both studies were systematic reviews; Gulliver et al., (2010) used studies with qualitative focus groups and interviews as well as quantitative studies with surveys not developed for student-athletes in mind. Moreland et al., (2018) was a systematic review with student-athletes as the participants however, the surveys the studies used were not intended for student-athletes. The qualitative studies that Moreland et al., (2018) reviewed had limited participants which included collegiate student-athletes and key stakeholders such as coaches, athletic trainers, and athletic directors. There has been no quantitative survey developed and validated for the student-athlete population to examine barriers and facilitators to seeking mental health help (Gulliver et al., 2010; Moreland et al., 2018). Therefore, the purpose of this study was to develop and examine the validity and reliability of the PBaS-MH and PFaS-MH in college student-athletes. We aimed to answer six primary questions:

1. What is the factorial validity of the PBaS-MH (barriers) and the PFaS-MH surveys in collegiate student-athletes?
3. Are the PBaS-MH and PFaS-MH surveys reliable measures of perceptions of barriers and facilitators to seeking mental health help in collegiate student-athletes?

5. What are the most common barriers and facilitators to seeking mental health help reported by collegiate student-athletes?
6. What is the student-athlete's knowledge and beliefs on mental health literacy?

Methods

Participants

A total of 550 collegiate student-athletes from one NCAA Division-II institution in the Northeastern United States were invited to participate in this study; 433 (78.7%) athletes consented to both surveys, and 13 (2.36%) did not consent. Of the 433 student-athletes, 359 (82.9%) started the PBAS-MH, and 313 (72.3%) completed the survey. The 46 who did not complete the survey were excluded from the data analysis. For the PFAS-MH, 296 (68.4%) started the survey, and 246 (89.2%) completed the survey. The 50 participants who did not complete the survey were excluded from the final analysis.

Instrumentation

Demographics

After completing the consent form, athletes completed the demographics section, which included questions about sport, gender, race, age, mental health history, and past therapy use.

PBAS-MH and PFAS-MH Surveys

The researchers developed The Perceptions of Barriers, and Facilitators to Seeking Mental Health Help in Student-Athletes (PBaS-MH and PFaS-MH) surveys to assess the barriers and facilitators towards seeking mental health help student-athletes perceive to encounter. The purpose of developing the surveys were to answer the following questions: (1) What are the student-athletes knowledge and beliefs on mental health literacy? (2) What are the most common barriers and facilitators to seeking MH help in collegiate student-athletes? The surveys were

developed first by conducting a thorough literature search and evaluation of several previously developed mental health help-seeking surveys in various disciplines (Gulliver et al., 2010; Gulliver et al., 2012; Kuhl et al., 1997; Leijdesdorff et al., 2021; Moreland et al., 2018; Radez et al., 2021; Ryan et al., 2018; Wilkerson et al., 2020). Eight articles were identified as being associated with barriers and facilitators of college students and college student-athletes (Gulliver et al., 2010; Gulliver et al., 2012; Kuhl et al., 1997; Leijdesdorff et al., 2021; Moreland et al., 2018; Radez et al., 2021; Ryan et al., 2018; Wilkerson et al., 2020). One survey used in the development of the PBAS-MH as a key foundation survey was the Barriers to Adolescents Seeking-Help (BASH) survey. The BASH was created to identify barriers and yield a total score of barriers (Kuhl et al., 1997). Kuhl's survey has been validated and utilized across the literature but included a wide variety of items on barriers to seeking mental health help. The BASH includes fourteen themes and items fall within each theme to examine the barriers adolescents faced to seeking help.

We identified and collected similar themes based on previous literature examining barriers and facilitators to seeking mental health help in the student-athlete population (Gulliver et al., 2010; Gulliver et al., 2012; Kuhl et al., 1997; Leijdesdorff et al., 2021; Moreland et al., 2018; Radez et al., 2021; Ryan et al., 2018; Wilkerson et al., 2020). A list of ten themes was ultimately identified for the development of the PBAS-MH (Table 1). We developed three barrier perception and attitude items for each theme using previous literature and surveys, including 18 items from the BASH (Kuhl et al., 1997), one item from Kuhl et al. (1997) and Radez et al. (2021), and one item from Kuhl et al. (1997) and Gulliver et al. (2010). The seven remaining questions were based on the results from seven different studies: three items from Gulliver et al., (2010) a systematic review, one item from Gulliver et al. (2012) a qualitative study, one item Wilkerson et al. (2020) a qualitative study of Black collegiate male football

players, one item from Leijdesdorff et al. (2021), and one from Moreland et al. (2018) a systematic review and Ryan et al. (2018) a literature review. Three new items were developed by the research team that were specific to student-athletes, including questions regarding a sport psychologist, coach, and teammate. Example items can be found in Table 2. The survey begins with the following prompt:

“For the next set of questions, imagine you were recently offered a referral by your athletic trainer to see a mental health provider because you were struggling with your mental health.

Read through the following statements as they appear. Please indicate the degree to which you agree or disagree with the statements, followed by whether you believe the statement would be a barrier to you seeking help for your mental health.”

We utilized a 5-point Likert scale including Strongly Agree (5), Agree (4), Neutral, (3) Disagree (2), and Strongly Disagree (1). Once the PBAS-MH was developed, a reverse-item was developed for each barrier item on the PBAS-MH to develop the PFAS-MH. For example: for the item “I’m sure if I saw a therapist my coach would think I am weak”, we developed the facilitator item “My coach is supportive when it comes to mental health.” Each survey had a final total of three items for each theme, with a total of 30 items. As these items were perceptions and attitudes towards mental health, we added a follow-up question for each item the participants responded to. If a participant responded, “Strongly Agree, Agree, or Neutral” for the item, they were prompted to answer a follow-up question inquiring whether they believed this item would discourage (barriers) or encourage (facilitators) them to seek counseling; they were provided the response options of “Yes, No, or Maybe”. If participants selected Disagree or Strongly Disagree with the initial item, they were taken to the next barrier or facilitator item and were not given the

follow-up question. Therefore, there were a total of 60 potential items (30 items and 30 follow-up questions) on each PBAS-MH and PFAS-MH survey.

We developed three supplemental qualitative questions to gain a complete understanding of the athletes' perceived barriers and facilitators towards seeking mental health help (Barnett et al., 2021; Cheng et al., 2021; Gulliver et al., 2010; Gulliver et al., 2012; Spiker & Hammer, 2019). These items included: The research team conducted a convergence design used to triangulate results to obtain different but complementary data on the same topic (Creswell & Clark, 2018). The researchers used the qualitative data to speak to the validity and of the PBaS-MH and PFaS-MH. The final surveys and qualitative questions were then reviewed for face and content validity by experts in the field, including three certified athletic trainers and one licensed sport psychologist. These experts examined survey items for content accuracy and appropriate fit.

Table 1

Themes used to develop the PBaS-MH and PFaS-MH

Themes
Accessibility
Trust
Family
Education
Loss of Control
Peers/Community
Perception of Therapist/Discomfort
Self-Perception
Self-Sufficient
Stigma

Table 2

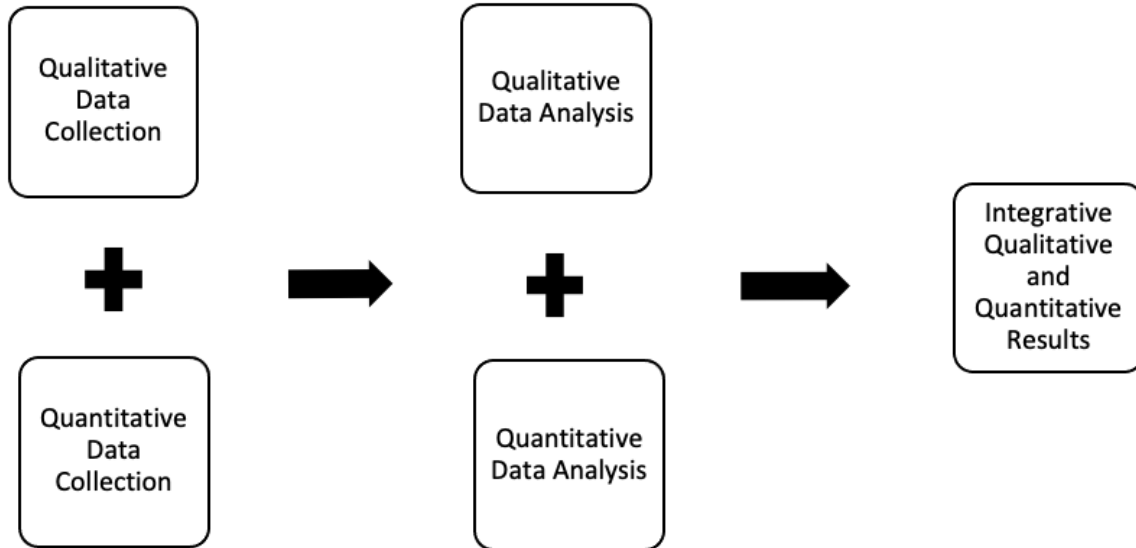
Example Quantitative Questions

I'm sure if I saw a therapist and told my coach, they would think I am weak.	Likert Scale
Because I believe I'm sure if I saw a therapist and told my coach, they would think I am weak, this would discourage me from seeking counseling.	Likert Scale

Procedures

The Perceptions of Barriers in Student-Athletes to Seeking Mental Health Help (PBAS-MH) and the Perceptions of Facilitators in Student-Athletes to Seeking Mental Health Help (PFAS-MH) surveys were developed for this study. The study received approval from the Institutional Review Board (IRB) prior to participant recruitment. The researchers met with each team to discuss the study and invite the student-athletes to participate during pre-participation exams, team meetings, or practices during the Fall academic semester. The participants had the option to enter to win one of three \$10 gift cards to a local business for incentive. The survey was anonymous and was administered on Qualtrics via a QR code that was scanned for access; this included the consent form, a demographic section, two open-ended qualitative questions, and the PBAS-MH and PFAS-MH surveys. Figure 1 illustrates the procedures of this mixed-method design with a convergent (QUAL→QUAN) research study.

Figure 1
Study Procedures Diagram



Data Analysis

For this study, qualitative and quantitative data were collected simultaneously. Quantitative analysis was conducted with IBM SPSS Statistics 28.0. Demographics were summarized using frequencies and percentages. Age was represented in the mean. To examine validity, we conducted an exploratory factor analysis of both surveys. Cronbach's alphas were used to assess reliability. Qualitatively, we utilized a convergence design to combine quantitative and qualitative data to capture a complete understanding of the data being given (Creswell, 2018). Using thematic coding, qualitative and quantitative data were used to triangulate

perceived barriers, facilitators, and mental health literacy. The qualitative data analysis inductively creates themes that help the researchers incorporate the research participants' lived experiences. The data was coded with a constant comparative methodology with first and second-cycle coding to reach saturation. Triangulation is achieved when the quantitative and qualitative data are analyzed simultaneously, completing the convergence design. The first coding cycle purposely developed themes captured from the participants' words. The second coding cycle produced subthemes to further answer the qualitative research questions: What is the student-athletes knowledge and beliefs on mental health literacy? What are the most common barriers and facilitators to seeking MH help in collegiate student-athletes? We organized the data into codes until saturation was reached.

Results

Demographics

A total of 550 student-athletes were invited to participate in this study; 419 (76.2%) consented to participate; of those, 312 completed the survey, a 56.7% response rate. Demographics included sport, age, and whether the athlete previously experienced or was currently in therapy. Over one-third were male (35.9%, $n = 112$), and 64.1% ($n = 200$) were female student-athletes. Participants by sport can be found in Table 3. The mean age of student-athletes was 19.66 ± 1.4 years old. Race was broken up with the majority ($n = 280$, 89.7%) of the student-athletes identified as white, followed by Black or African American ($n=19$, 6.1%), two or more/mixed race ($n = 9$, 3.8%), Asian ($n = 3$, 1%), and Native Hawaiian or Other Pacific Islander ($n = 1$, 0.3%). A total of 130 (41.7%) participants stated they have previously or are currently in therapy.

Table 3*Participants by Sport (n = 312)*

Sport	Frequency	Precent
Women's Lacrosse	30	9.6
Baseball	27	8.7
Women's Soccer	27	8.7
Football	26	8.3
Softball	25	8
Women's Rugby	24	7.7
Field Hockey	23	7.4
Men's Soccer	18	5.8
Men's Swimming and Diving	18	5.8
Women's Swimming and Diving	18	5.8
Volleyball	18	5.8
Cheerleading	11	3.5
Men's Golf	9	2.9
Women's Cross Country	7	2.2
Women's Tennis	7	2.2
Women's Golf	6	1.9
Men's Cross Country	5	1.6
Men's Tennis	5	1.6
Gymnastics	4	1.3
Men's Track and Field	2	0.6
Women's track and Field	2	0.6
Total	312	100

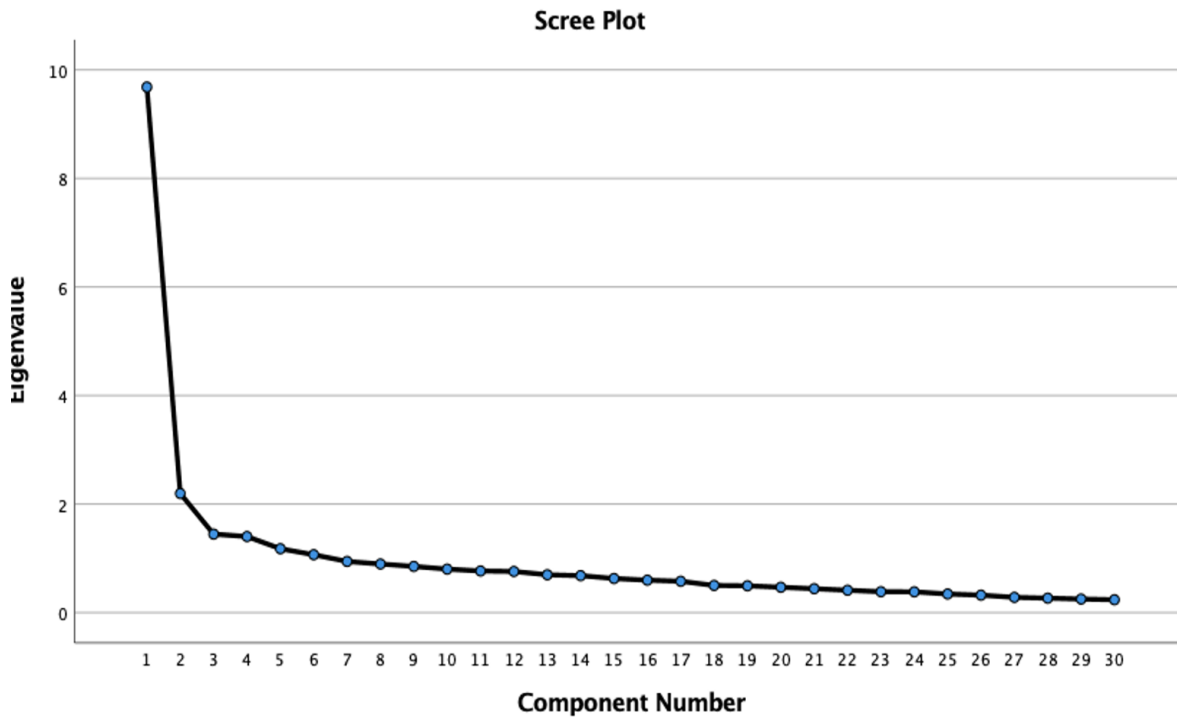
Quantitative Results

Items were examined using SPSS (version 28.0.1.1) to examine internal consistency and factorial structure. The PFaS-MH question 32. *Because I believe a professional mental health provider will be able to help me more than talking to my friends/teammates, this would encourage me to seek counseling.* was removed from analyses due to a technical issue where the question was skipped. Validity was conducted using exploratory factor analyses; the main 30 perception questions from the PBaS-MH and BFaS-MH were included in the factor analyses.

Quantitative analyses revealed that the PBaS-MH and PFaS-MH demonstrated excellent reliability, $\alpha=0.924$ and $\alpha=0.960$, respectively. One factor (eigenvalue = 9.685) explained 32% of the variance, and one factor (eigenvalue = 14.429) explained 48% of the variance for the PBaS-MH and PFaS-MH, respectively. The scree plot to determine the number of factors can be found in Figure 2. Internal consistency for this set of items was evaluated through Cronbach's alpha, and a high level was noted ($\alpha=0.924$).

Figure 2

Scree Plot for Exploratory Factorial Analysis of PBAS-MH



Qualitative Results

The thematic analysis results are presented below in three sections based on the open-ended questions. The questions are as follows:

1. *Mental health literacy includes knowledge and beliefs about mental disorders, which aid in their recognition, management, and prevention. Based on this, please describe your knowledge and beliefs about mental health.*
2. *Please describe the most influential barrier that would discourage you from going to counseling if you felt you were struggling with your mental health.*
3. *Please describe the most influential facilitator that would encourage you to go to counseling if you felt you were struggling with your mental health.*

Each is organized into themes and subthemes. Participants are identified by number to protect their privacy.

Q1

The following question was asked at the beginning of the PBAS-MH; (1) Mental health literacy includes knowledge and beliefs about mental disorders, which aid in their recognition, management, and prevention. Based on this, please describe your knowledge and beliefs about mental health. Displayed in Figure 3 are the themes emerging from Q1. The central theme emerging from Q1 was awareness. A total of 302 wrote about mental health awareness; subthemes emerged, including daily life, importance, magnitude, and perspective. Daily life was ascertained if the participants described mental health throughout their lives. Importance was simply if mental health was stated to be necessary. The magnitude was described as relevant with multiple people, and perspective was determined if the participants described differences in people's mental health.

Importance was the major subtheme that emerged from awareness. Participant 63 responded, "*Mental health is just as important if not more than physical health.*" The magnitude was also a subtheme that emerged from awareness; *magnitude* was defined as the quantity or

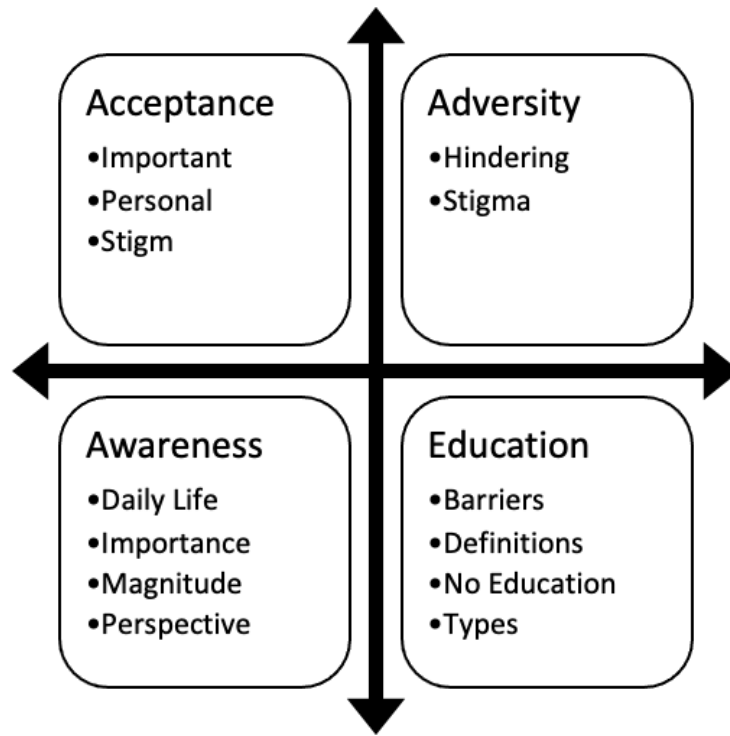
scale that mental health affects; 48 participants responded along the subtheme of the magnitude of mental health. Participant 59 responded, "*Mental health issues can affect everybody regardless of status, gender, etc.*" Participant 317 said, "*Mental health is a growing crisis in the US.*"

The minor themes emerging from awareness were daily life, with 12 entries, and acceptance, with nine entries. Daily life consisted of participants expressing how mental health issues affect activities of daily living. *Acceptance* was defined as people acknowledging that they have mental health issues (Dell et al., 2021). Other themes included acceptance, adversity, and education. Of these, education had the highest number of entries, with 48, followed by acceptance (16) and adversity (12). Subthemes derived from education were barriers, definitions, no education, and types. Many individuals cited not having a formal education on mental health or defining what they believe mental health to be. Others listed several illnesses associated with mental health (Participants 5, 121, 193, 231, 233, 273, 277, 282).

The minor parent codes in Q1 were acceptance and adversity. Acceptance had subthemes of importance, personality, and stigma. Athletes discussed mental health's importance to athletics and themselves while mentioning some barriers they might face. The theme of adversity had subthemes of hindering, keeping them from seeking mental health help, and stigma towards seeking help.

Figure 3

Parent and Child Code to Q1 on Knowledge and Beliefs of Mental Health Literacy



Q2

During the PBaS-MH, the second question stated: *“Please describe the most influential barrier that would discourage you from going to counseling if you felt you were struggling with your mental health.”* Figure 4 displays the barriers student-athletes perceive to be most influential. Many themes were discussed within the barriers from most predominant to least predominant: Self, Accessibility, None, Stigma, Peers, Therapist, Family, Loss of Control, and Education.

Major Themes

The major themes included self, accessibility, none, stigma, and peers. The theme of self had the most with 106 participants. Many participants said they were a barrier to themselves, as they felt they did not need help yet. Subthemes within the theme were independence, trust, perception of self, believing therapy does not help, and self-perception of others. Almost all 18 participants the subgroup, perception of self, reported a variation of “I do not need anyone’s

help, and I can handle my problems.” Many participants stated that seeking help would make them appear weak or that they were not mentally unstable enough to warrant help. Many participants described opening up as hard for them when it comes to emotions or personal struggles. Seventeen participants described trust as a significant subtheme regarding self in the connotation of a barrier. Participant 338 stated: “Not being comfortable speaking about your mental health to someone you may not know.” The participants may not have the trust of a trained individual to help them through this time and may have high skepticism. The final major subtheme regarding self is “perception of self.” Multiple student-athletes believed that if they were to talk to someone, they would perceive themselves as “weak,” “embarrassed,” or too “prideful” to speak out. The minor subthemes of self-belief that therapy does not help had 5 participant responses and self-perception of others had 5 participant responses. Self-perception of others infers what they believe others might think of them for seeking counseling.

Accessibility is defined by the availability and money associated with seeking mental health help (Leijdesdorff et al., 2021). Seventy-one participants described accessibility as a barrier for them seeking mental health help. Most participants stated availability as their prime barrier; availability is defined by the time commitment to seeking a mental health care provider and finding one that works well with the student-athlete. Many participants, 40 out of the 46, who were categorized as availability discussed “time, time management, busy schedules, and time commitments.” The remaining six discussed readily available resources and finding resources that work well with the student-athlete. Twelve individuals discussed money; one stated, “Even with my insurance, each therapy session costs \$115. I had been doing bi-weekly sessions, but the cost got too high. I had to discontinue sessions” (Participant 386).

The third predominant most influential barrier to seeking mental health help reported qualitatively was no barriers. Of the 348 participants who responded to the question, 53 responded that they had no barriers to seeking mental health help. Stigma was the next barrier that included 45 excerpts. Participants used the words “awkwardness, embarrassment, weak, stigma, uncomfortable, and judgment.” Finally, peers were another major theme. Peers were divided into two sub-themes: people’s perception of mental health and teammates/coaches. Of the 34 participants who mentioned their peers, four stated that their teammates and coaches would look negatively at them due to their mental health. Participant 178 stated they “needed help and potentially have people treat me differently because of it.”

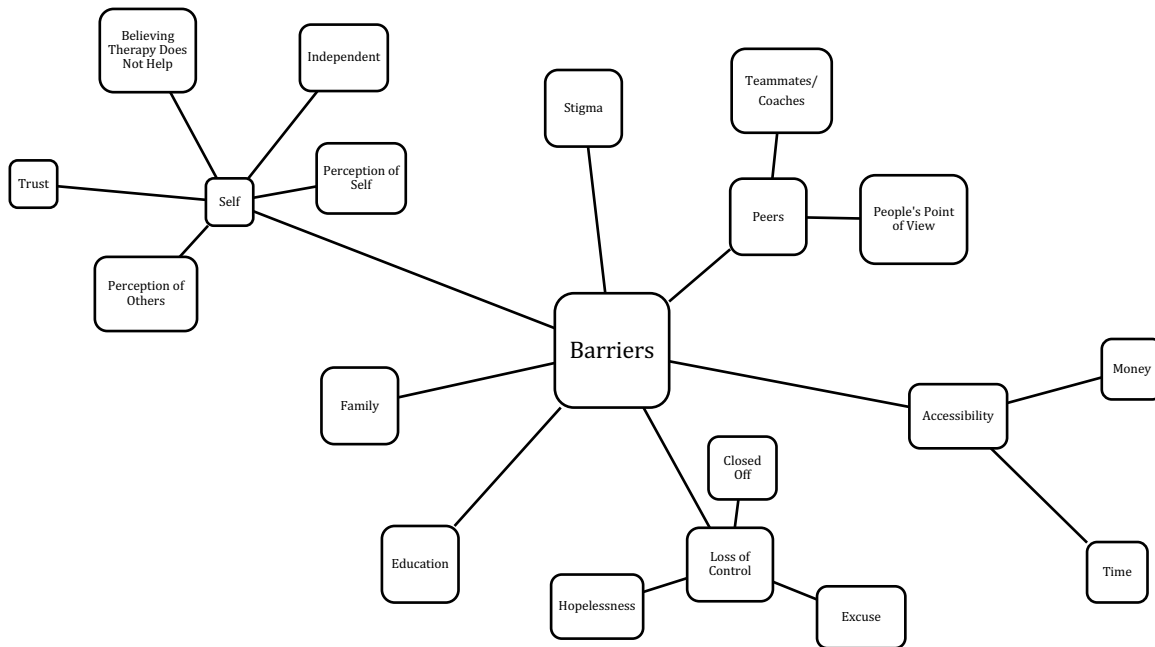
The least predominant barriers included perceptions of a therapist, family, loss of control, and education. There are many different perceptions of therapists by the student-athletes. Some do not wish to talk to a stranger or “someone I barely know” (Participant 406). Student-athletes are under the impression of “being judged and not getting the answers I need or the help I need and feeling worse than before I even tried to get help” (Participant 359). Many feel that by asking for help, they will not get the answers they need; a similar response was found in the sub-theme about family. The participants stated they do not want their parents to know about their mental health, or they feel it would let their parents down. Twenty participants felt their family is a barrier to seeking mental health help.

Another barrier student-athletes spoke about was a loss of control; loss of control is defined as being closed off, hopeless, or making excuses. Four participants did not believe therapy would help them; eight reported they do not want to open up or depend on therapy. Finally, the last reported influential barrier was education; of the 348 responses, only 12

responded with education. Student-athletes believe “it is not that important” (Participant 376) or unsure how to find “what and whom to go to talk about my mental health” (Participant 18).

Figure 4

Parent and Child Code to Q2 on Most Influential Barriers to Seeking Mental Health Help



Q3

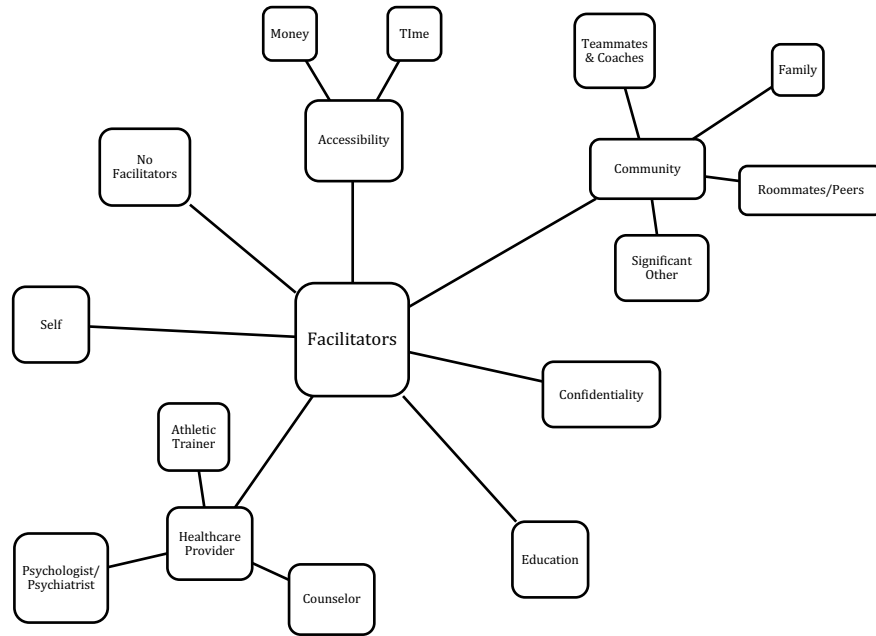
Question three dealt with facilitators and stated: “Please describe the most influential facilitator that would encourage you to go to counseling if you felt you were struggling with your mental health.” The parent and child codes can be found in Figure 5. A total of 277 participants responded to the question, and the researchers used a constant comparative methodology to code the data into seven themes: Accessibility, community, confidentiality, education, healthcare provider, self, and none. The two predominant themes that came out of the responses were community (161) and self (61). The community was divided into four subthemes: family (92),

roommates/peers (55), teammates/coaches (25), and significant others (5). Many individuals responded with the self-theme that they would seek help if their mental health got worse than it currently is. Participant 211 stated, “If it started to get so bad where I could not complete normal tasks, or I felt like I was not myself,” and Participant 188 stated, “My ADHD getting in the way of my responsibilities and the things that bring me joy.”

The least predominant facilitator themes were healthcare provider, accessibility, none, education, and confidentiality. Healthcare providers were coded as athletic trainers (5), counselors (3), or psychologists/psychiatrists (2). Accessibility had the subthemes of money (5) and time (6) that would encourage them, while 13 responded within the theme that nothing would encourage them to seek counseling. *Education* was defined as awareness or information on counseling or its stigmatization. Two participants described being more encouraged to seek counseling if the counselor was trustworthy and confidential.

Figure 5

Parent and Child Code to Q3 on Most Influential Facilitators to Seeking Mental Health Help



Discussion

Quantitative

The results of the PBaS-MH and PFaS-MH showed good reliability and factorial validity in measuring perceptions of barriers and facilitators to seeking mental health help in student-athletes. The surveys demonstrated excellent reliability, with Cronbach's alphas of 0.92 for the PBaS-MH and 0.96 for PFaS-MH. Kuhl et al. (1997) developed a survey for barriers to seeking mental health help in adolescents, we built off their survey to develop one for student-athletes which showed similar results but not the same. We found that a support system encouraging others to seek help is beneficial for the student-athlete. The exploratory factor analysis identified one factor in the PBaS-MH and one factor in the PFaS-MH. All questions in in the PBaS-MH loaded on the one factor with the exception of two items: Question 1. *I do not think I can afford*

therapy, and Question 3. There is not a sport psychologist or mental health provider in the Athletic Department that is easily accessible.

One reason these items may not have loaded on the PBaS-MH's one factor is likely because these questions are situational statements in nature, unlike the other items within the survey which are perception-oriented questions. Both of those items are related to accessibility and likely were definitive situations for the participants versus a perception they could rank their level of agreement on. For example, Question 5. *I cannot get an appointment at a time that is convenient for me and/or there is too long of a wait time to see a therapist.*

The PFaS-MH also produced one factor with three questions that did not loading the factor analysis; Question 1: *I can find a therapist that is affordable to me;* Question 17: *My coach is supportive when it comes to mental health,* and Question 41: *I have been to therapy before, and it was unhelpful and/or a negative experience.* These items are also situational statements that only produce specific answers due to their connotation. Accessibility is dependent on the student-athlete's situation. Do they have the money or resources to access counseling services? In our qualitative analyses, many student-athletes stated they do not have time to seek mental health help. It is clear this is a barrier that should be included in a quantitative measure of barriers to seeking help in this population; Question 41 is also situational as 62% of the participants have not seen or are currently not seeking mental health help, so they could not answer the question appropriately. Although these specific items related to accessibility are valuable in understanding the athlete and the barriers they might face, perhaps rewording these two questions in the PBaS-MH and PFaS-MH would improve the validity. Future researchers may address these questions in the survey to ask about financial and time constraints, and sport psychologist accessibility in either the demographics or reword each item to become less situational.

The qualitative results support the validity of the PBaS-MH and PFaS-MH because the most predominant themes from the qualitative results are represented in the survey. The second leading barrier to seeking mental health help was accessibility; many student-athletes discussed how they do not have enough time to seek counseling. The major themes in the barriers were also represented in the themes and items used in the development of our quantitative measure. All themes were represented in the qualitative measure showing that they all are barriers to student-athletes.

Qualitative

The predominant theme regarding student-athletes' mental health literacy was awareness. Athletes discussed that over the years, they have been informed about mental health through education, community, and social media. Many athletes know the concept of mental health and understand that mental health is a status that can change daily. Our results are consistent with previous research indicating a need to invest in awareness among our youth (Kelly et al., 2007).

Collegiate student-athletes have tremendous stress put upon them; this may take a toll on their mental health at a young age. Limited research on mental health literacy and student-athletes' perspective of mental health literacy (MHL) exists. The qualitative data we collected suggests student-athletes are aware of mental health issues; however, only a few mentioned formal education or specific attributes about mental health (Moreland et al., 2018). Our results demonstrate that student-athletes are aware of mental health but do not fully understand the multiple proponents of mental health literacy. Athletes understand that mental health can be a problem but may not realize that mental health falls on a spectrum between positive and negative mental health (Sullivan et al., 2021). Although the student-athletes understand the significance of mental health and having a good foundation, they did not discuss identifying, preventing, or

coping with mental health concerns. The participants in this study may have a pre-deluded idea of mental health literacy. Further research should be conducted to explore this concept and better understand gaps in student-athlete MHL.

The athletes in this study described that the most significant barrier for them seeking mental health help was themselves. Earlier research supports this finding, as Gulliver et al. (2010) found that young adults tend to rely on themselves rather than seek external help. Many participants discussed that their problems did not warrant help yet. Previous research (Gulliver et al., 2012) has identified self-stigmatizing as a critical component in athletes not seeking mental health help, and this was consistent with our results; the athletes fear embarrassing themselves over seeking help.

Accessibility was the second leading barrier reported in our study, consistent with previous literature Egan's (2019) results supporting mental health providers visiting athletic events to provide more visibility to the student-athletes for the purpose of reducing barriers. Student-athletes are highly visible on many campuses and due to time constraints from their highly scheduled lives, they may perceive they do not have enough time for counseling or to address their mental health. Athletes may have these skills to face adversity and manage their mental health and may not perceive any barriers (Egan, 2019). They also may feel they have enough facilitators to mitigate any perceived barriers. Either way, reporting no barriers contrasts with those who reported self as their major barrier. Perhaps the athletes who reported no barriers do not experience self-stigmatization.

Community and self were the leading facilitators to seeking mental health help identified in this study. Many athletes voiced that if their family, peers, teammates, and coaches were more understanding or positive about mental health and seeking help, they would be more open to seeking it. Communication is vital for mental health and the people around you. Allowing open

conversations about difficult things, such as mental health within your inner circle, may open situations to discuss personal issues (Perkins et al., 2021). When it comes to self, student-athletes discussed how they would seek help if their mental health got worse than it already is.

Leijdesdorff et al. showed that talking about their problems to family and friends appears less harmful than expected. The participants upon discussing their mental health found that when talking with their family or friends it was not as difficult as they perceived it to be initially.

Education plays a significant role in the perception of mental health help-seeking attitudes, as people often perceive their mental health must be at a breaking point to seek help. Educational programs can be put in place to showcase the importance of seeking mental health help at any stage and its benefits.

Limitations

There were several limitations to this present study that need to be considered. First, both surveys are lengthy, with 30 initial questions in each survey and 30 potential follow-up questions, depending on how the athletes respond to the initial questions. These surveys would ideally be administered separately to reduce time, depending on whether the researchers are explicitly examining barriers or facilitators in future studies. As this was a pilot study including initial survey development, the surveys were only administered to student-athletes at one NCAA Division-II university and results may not be generalizable to the sport culture and experiences of student-athletes outside this one institution.

Future Research

Further research should be conducted to evaluate the reliability and validity of the PFaS-MH and PBaS-MH in a larger population of student-athletes, ideally from different divisions of

competition. In future research, survey items should be re-examined for appropriate fit and perhaps reworded or removed. To increase the strength of these measures, future researchers should seek to assess the PFaS-MH and PBaS-MH for concurrent validity against other measures of barriers and facilitators.

Furthermore, future research should also investigate athletes' perceptions of themselves as well as the various aspects of accessibility as both barriers and facilitators to seeking mental health help in the student-athlete population. Further qualitative research may include interviews and focus groups to better understand these themes and student-athletes' education on seeking mental health help.

Conclusions

Despite previous research indicating student-athletes experience unique stressors and stigma related to mental health, prior to our pilot study, no instrument has been developed to examine mental health help-seeking barriers or facilitators in a student-athlete population. This study sought to develop novel measures of barriers and facilitators to seeking mental health help in the student-athlete population. We found the PBaS-MH and PFaS-MH surveys are reliable measurements that show promise in their validity and future use through this pilot study. The development of these surveys is a step forward in better examining mental health barriers and facilitators in student-athletes, but further research needs to be conducted to assess this phenomenon in a larger sample. Qualitatively, we can conclude from this study that student-athletes rely heavily on themselves regarding mental health, and if they had a strong community foundation, they might be more willing to seek mental health help. Items developed for the PBaS-MH and PFaS-MH surveys converge with and support these findings. Upon further

validation, researchers, clinicians, and athletics personnel may be able to utilize these surveys to better examine and understand the barriers and facilitators faced by student-athletes.

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Appendices



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Jul 13, 2022 5:45:25 PM EDT

To: Margaret Hunt
Sports Medicine Department

Re: Expedited Review - Initial - IRB-FY2022-390 Perceptions, Barriers, and Facilitators of Student-Athletes Towards Seeking Mental-Health Help: A Mixed-Method Study

Dear Margaret Hunt:

Thank you for your submitted application to the WCUPA Institutional Review Board. Since it was deemed expedited, it was required that two reviewers evaluated the submission. We have had the opportunity to review your application and have rendered the decision below for Perceptions, Barriers, and Facilitators of Student-Athletes Towards Seeking Mental-Health Help: A Mixed-Method Study.

Decision: Approved

Selected Category: 7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Findings: Please be sure to update your informed consent in Qualtrics to use the approved informed consent included in the application.

Sincerely,
WCUPA Institutional Review Board

IORG#: IORG0004242
IRB#: IRB00005030
FWA#: FWA00014155