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The Role of Athletic Identity in General Mental Health and Alcohol-Related Help-Seeking Intentions of College Students

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THE ROLE OF ATHLETIC IDENTITY IN GENERAL MENTAL HEALTH AND ALCOHOL-RELATED HELP-SEEKING INTENTIONS OF COLLEGE STUDENTS

by

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ABSTRACT

THE ROLE OF ATHLETIC IDENTITY IN GENERAL MENTAL HEALTH AND ALCOHOL-RELATED HELP-SEEKING INTENTIONS OF COLLEGE STUDENTS

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Young adults are vulnerable to a range of mental health concerns and tend to drink in high quantities and tend to not seek help for these concerns. Specifically, college students involved in athletics tend to have low help-seeking rates—though help-seeking research for this population is relatively limited. Athletic identity (i.e., identification with the athlete role) is a relevant construct for examining this population, however little is known about its association with help-seeking beliefs and ideas. This study examines: (1) the association between *athletic identity* and *help-seeking intentions* for both *mental health* and *alcohol use concerns*, (2) the association between *help-seeking intentions* and facets of the Theory of Planned Behavior (TPB; i.e., *behavioral beliefs*, *normative beliefs*, and *control beliefs*) for both *mental health* and *alcohol use concerns*, and (3) if *athletic identity* moderates the association between TPB facets and *help-seeking intentions* for both *mental health* and *alcohol use concerns*. Participants were 135 (49.6% male, 49.6% female) college drinkers (age: $M = 21.95$, $SD = 2.01$) who completed surveys regarding their athletic identity, drinking behaviors, and help-seeking beliefs for both mental health and alcohol use concerns. Using hierarchical multiple regressions, the associations between athletic identity, facets of TPB, and help-seeking intentions were analyzed. Findings revealed that athletic identity was associated with greater help-seeking intentions for both mental health and alcohol use concerns. Additionally, more positive normative beliefs, fewer barriers to

help-seeking, and more positive attitudes were associated with greater help-seeking intentions for mental health and alcohol use concerns (though norm normative beliefs were most strongly associated in both cases). Lastly, athletic identity did not significantly moderate any of the facets of TPB. Therefore, the current study suggests that athletic identity can be a positive factor for seeking help for mental health and alcohol use concerns and that despite the culture of drinking among athletes, athlete identity does not appear to moderate the association between beliefs about help-seeking and help-seeking intentions. Future research may benefit from alternative measurement methods, or by attempting to replicate these findings to strengthen the foundation of literature in this limited field of research.

This thesis is dedicated to unending support of my friends and family.
Words may not be able to express fully how important you were in this process, but at least you get a whole page in the paper.

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There are many people who have contributed to the completion of this thesis. I extend many, many thanks to my committee members for their exceptional patience and guidance on my research and in the editing of this paper. Providing mentorship to someone so new to research is not easy, and the continued support and encouragement of my major advisors is truly commendable.

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CHAPTER I

INTRODUCTION

Both mental health concerns and heavy alcohol use are prevalent among college student populations (Hunt & Eisenberg, 2010; Schulenberg et al., 2017). For example, there have been increases in mental health concerns among college student populations over the past two decades (Hunt & Eisenberg 2010; Weinberger et al., 2018). This aligns with the finding that 95% of campus counseling center directors report a significant increase in severe psychological problems among their students (Gallagher, 2007). In addition to mental health concerns, heavy alcohol use among college students has been consistently high with over 30% of college students reporting binge drinking in the past 2 weeks (Schulenberg et al., 2017). This prevalence of heavy drinking on top of the educational consequences associated with heavy drinking (Wechsler & Nelson, 2001) highlight alcohol use as a major problem for college students. Thus, both general mental health concerns and alcohol use are prevalent concerns among college student populations.

Despite the increasing or elevated trends observed, college students do not always seek help for their mental health problems (Hunt & Eisenberg, 2010) or alcohol use concerns (Buscemi, Murphy, McDevitt-Murphy, Dennhardt, & Skidmore, 2010). Regarding mental health help-seeking, the body of literature on this suggests that lack of available time, lack of knowledge of help-seeking services, and stigma towards mental health help-seeking all act as barriers to seeking help. As it relates to seeking help for drinking related concerns, relatively few students report independently seeking help for alcohol use at all (Buscemi et al., 2010). The low help-seeking rate for alcohol use exists despite many schools providing resources for students to reduce their drinking (Niazi, Alshagra, Ericson, Su, & Hancock Ph, 2016). This trend

is due in part to students preferring informal help-seeking (such as friends and family) over campus resources, a desire to avoid labels such as "problem drinker," and a fear of being excluded socially for not partaking in drinking (Buscemi et al., 2010). Addressing potential barriers to mental health and alcohol help-seeking among college student populations could aid in improving the psychological health of this group.

College students involved in athletics tend to differ from typical college students in meaningful ways (Moreland, Coxe, & Yang, 2017). These differences include more demanding schedules, greater levels of physical exertion, and different cultural expectations for the subculture of athletes (Armstrong, 2015). These factors may contribute to differences in their psychological health and alcohol use (Armstrong, 2015), and thereby, a greater need for services for the problems they encounter.

Despite encountering mental health and alcohol use problems, this population has been found to seek help less frequently for mental health concerns than their non-athlete peers (Maniar, Curry, Sommers-Flanagan, & Walsh, 2001; Moreland et al., 2017). Some researchers have found that these differences between athletes and non-athletes are due to student-athletes' less positive attitudes towards help-seeking (Gulliver, Griffiths, & Christensen, 2012; Watson 2005). These findings suggest that individuals that are involved in athletics may represent a unique population that needs help for many concerns but do not seek help frequently.

College students involved in athletics report stronger athletic identities (Brewer, Van Raalte, & Linder, 1993; Hagiwara & Isogai, 2014). Athletic identity is defined as one's identification with the athlete role (Brewer et al., 1993) and correlates positively with one's level of athletic involvement (Brewer et al., 1993; Hagiwara & Isogai, 2014). Although those with strong athletic identities (i.e., more heavily involved in athletics) report mental health concerns

(Armstrong, 2015), student athletes have been found to seek help less frequently for mental health concerns than their peers who are not involved in athletics (Maniar et al., 2001; Moreland et al., 2017). However, little is known about the association between athletic identity and help-seeking. Such knowledge is important because Social Identity Theory posits that social identity is associated with individual behavior (Hogg & Abrams, 1988) and has been previously applied to better understand how gender identity is associated with help-seeking (Heath, 2019). This suggests that learning more about how athletic identity and help-seeking are associated may provide greater understanding on help-seeking behavior among college students.

Consequently, the present study seeks to examine the association between athletic identity and beliefs regarding help-seeking for alcohol-related and general mental health concerns among young adults. This study will provide a more complete understanding of those who identify as an athlete (i.e., not just those involved on an official team) and how the strength of their athletic identity may be associated with their beliefs towards help-seeking. The current proposal applies the Theory of Planned Behavior (TPB; Ajzen, 1991) to explore associations between athletic identity and different types of beliefs (i.e., behavioral beliefs, normative beliefs, and control beliefs) about help-seeking.

Problems Facing the College Student Population

Mental health. Many college students struggle with mental health concerns (Hunt & Eisenberg, 2010). Over a third of undergraduate students report that their mental health concerns make it difficult for them to function (American College Health Association, 2008). In a national survey of 1,572 college students, anxiety disorders were most prevalent (11.7%), followed by mood disorders (6.0%), substance use disorders (4.5%), and behavioral disorders (2.8%; Auerbach et al., 2016). Between 4.0% (Drum, Brownson, & Denmark, 2009) and 9.8%

(American College Health Association, 2008) of college students report having suicidal ideations. Eating disorders are also relatively common among college students, with one study reporting 9.5% of students screening positively for an eating disorder (Eisenberg, Nicklett, Roeder, & Kirz, 2011). While some mental health concerns are present prior to a student's entry into college, others including mood disorders and substance abuse were most common after the student's entry into college (Auerbach et al., 2016). This suggests that the college environment may be a risk factor for such disorders. Facilitating help-seeking to address these concerns by college students is warranted.

Alcohol use. College drinkers (i.e., those who have had at least one drink in the last 30 days) represent an overwhelming majority of the population of college students in the U.S. In a national survey on drug use, 81% of college students report consuming alcohol within the last 30 days (Schulenberg et al., 2017). With regards to binge drinking, 32% of college students report binge drinking (having 5 or more drinks in a row within the past two weeks), 10.9% report high intensity drinking (10 or more drinks in a row in the past two weeks), and 3.7% report at least one instance of drinking 15 or more drinks in a row within the past two weeks (Schulenberg et al., 2017).

Heavy alcohol use is associated with an assortment of academic problems. For example, binge drinkers are over three times more likely than non-binge drinkers to miss class (30.9% vs. 8.8%) and over twice as likely to get behind in schoolwork (26.0 % vs. 9.8%; Wechsler & Nelson, 2001). More recently, another study reported similar findings that alcohol use is related to at least 41% of academic problems and 28% of dropouts (Pascarella et al, 2007). The prevalence of drinking among college students, as well as the educational consequences of binge

drinking, highlight the importance of improving help-seeking rates for reducing excessive consumption of alcohol.

Help-Seeking Behavior among College Students

Help-seeking behavior. Help-seeking refers to planned behavior focused on receiving help from another individual to solve a problem (Cornally & McCarthy, 2011). These individuals vary from friends and family to professionals (Wilson, Deane, Ciarrochi, & Rickwood, 2005). Help-seeking from professionals is referred to as "formal" help-seeking whereas help-seeking from non-professionals (such as friends or family) is referred to as "informal" help-seeking (Buscemi et al., 2010). Problems which people seek help for can include physical problems such as illness or injury, but also includes psychological concerns like depression, anxiety, or alcohol use concerns.

There are numerous benefits to promoting help-seeking behavior among those in need. One benefit is that seeking help early in one's course of mental health concerns may yield better treatment outcomes. For instance, one study found that treatment is more effective the less time depression remains untreated in an individual (Ghio et al., 2015). The importance of early interventions also applies to substance use concerns; researchers have suggested early interventions can significantly reduce alcohol and drug related harms (Stockings et al., 2016).

Mental health help-seeking barriers. Despite a vulnerability to mental health concerns, there are factors that contribute to college students' reluctance to seek help for those concerns. In review of the barriers and facilitators to mental health help-seeking in young people, college students most frequently report stigma, concerns about confidentiality and trust, lack of knowledge about help-seeking/mental illness, and lack of accessibility as major barriers to help-seeking (Gulliver et al., 2010). The researchers note that facilitators of help-seeking were under-

researched compared to barriers. However, they found that positive past experiences and social support improved help-seeking among young people.

Regarding stigma as a potential barrier to mental health help-seeking, students are concerned about others' opinions on mental health help-seeking (Gulliver et al., 2010). This also contributes to students' concerns that mental health services are not confidential and trustworthy (Rickwood, Deane, & Wilson, 2007). These concerns of the negative opinions of others include the source of help itself (Gulliver et al., 2010). A more recent review of how stigma is associated with help-seeking corroborates that stigma is one of the most significant barriers to help-seeking for mental health concerns (Clement et al., 2015).

Regarding availability of time and services, one study suggests that lack of time was the most prominent barrier preventing depressed students from seeking help for their depression (Givens & Tija, 2002). In this study, 48% of students report lack of available time as a barrier to seeking treatment, with lack of confidentiality being the next most prevalent barrier to seeking help at 37% endorsement by depressed medical students. These findings are consistent with the idea that students with demanding schedules that find it difficult for them to seek out psychological services. More recently, lack of time is less prominent but still a persistent barrier among the college population with 32% reporting lack of time as a reason for them not seeking help for mental or emotional health (Eisenberg, Golberstein, & Gollust, 2007). This discrepancy between medical students and undergraduate students in reporting of "lack of time" as the greatest barrier to seeking help is consistent with the idea that medical students have very demanding schedules. Perhaps undergraduates with similarly demanding schedules (e.g. employment obligations, club involvement, or athletic involvement) would more closely match medical students. Depressed or anxious students in the sample still reported it as the 4th most

commonly endorsed barrier to seeking help behind believing stress to be normal, not having the need, and expecting the problem to get better by itself. Notably, both Eisenberg and colleagues (2007) and Givens and Tija (2002) suggest that lack of time is a more prominent barrier than stigma.

Regarding the issue of knowledge, young people tend to poorly self-diagnose mental illnesses or do not understand what resources are available to them (Gulliver et al., 2010). Gulliver and colleagues (2010) noted that poor self-diagnosis is typically due to believing their degree of distress was "normal" and therefore not actively seeking resources to help them change. Additionally, students do not report a general practitioner as someone they believe they can go to for mental distress (Rickwood et al., 2007). Other students report being unaware of services or that services are covered by insurance (Eisenberg et al., 2007). This lack of understanding about their own mental problems and whom they can go to for help contributes to their low help-seeking rates.

Alcohol help-seeking barriers. Many college students do not seek help for alcohol use (Buscemi et al., 2010). Specifically, one study reports that only 3% of college drinkers sought help for their alcohol use from a campus source despite the availability of services (Celucci et al., 2006). Buscemi and colleagues (2010) support the idea that most students do not voluntarily seek help for alcohol use concerns without incentive. Rather, the majority of those who do utilize help-providing services did so for compensation (payment or course credit) or were mandated by the school to participate (Buscemi et al., 2010). However, unlike general mental health help-seeking, there are not specific studies that highlight the most prominent barriers to alcohol use help-seeking among the general population of college students. Instead, the research focuses on help-seeking correlates for students who do seek help. Overall, individuals who are

highly motivated to change, are female, drink less alcohol, and experience fewer alcohol-related consequences are more likely to seek help (Cellucci et al., 2006; Yu, Evans, & Perfetti, 2003). This suggests that perhaps there is a certain threshold of drinking which makes an individual less likely to seek help for their drinking.

When college students do seek help for alcohol use, it is more frequently from low-threshold services (Buscemi et al., 2010). Low threshold services are those that take less effort to participate in and tend to be anonymous. This includes peer and family help, computerized interventions, and pamphlets with educational information regarding alcohol use. Unlike the high threshold help-services (e.g., campus interventions, alcoholics anonymous, etc.), there are no studies which examine the correlates for those who are more likely to seek help. While there is some research regarding alcohol use help-seeking of the general college student population, more studies that examine factors contributing to alcohol-related help-seeking intentions (or a lack of intentions) would improve the body of literature.

College Student-athletes

College student-athletes tend to have to several major lifestyle differences from average college students (Moreland, Coxe, & Yang, 2017). These differences include more demanding schedules, greater levels of physical exertion, and differences in behavioral expectations for the subculture of athletes (Armstrong, 2015). These factors may contribute to differences in their psychological health and alcohol use (Armstrong, 2015), and thereby result in a greater need for services for the problems they encounter.

Alcohol use among athletes. More college student-athletes drink than their non-athlete peers (Turrisi, Mallett, Mastroleo, & Larimer 2006). In their literature review of heavy drinking among college students, Turrisi and colleagues (2006) note that college student-athletes are

considered across the literature to be a high-risk drinking group because they drink more frequently and in higher quantities per occasion. Student-athletes also exhibit significantly more frequent binge drinking as compared to their non-athlete peers (30.37 vs. 22.09 binge episodes per year; Yusko, Buckman, White, & Pandina, 2008). These differences in drinking patterns between athletes and non-athletes may be explained in part by athletes having different and additional motivations to drink (Martens, Labrie, Hummer, & Pederson, 2008). This suggests that athlete drinking behavior should be studied separately due to their unique drinking motivations.

Mental health of athletes. Student-athletes represent a unique subpopulation within college students. Athletes have responsibilities that their non-athlete peers do not. These include elevated behavioral standards set by their coaches (Etzel, 2006), the physical and mental demands of practice, the concerns about poor athletic performance, and time constraints that include physical training with academic workload (Armstrong, 2015). Armstrong (2015) suggests that this amount of scrutiny combined with the pressure to perform athletically and manage time between training, travel, and academics can lead to higher stress levels and can compromise the physical and mental health of student-athletes. Indeed, research supports that certain mental health concerns are prevalent among athletes, including eating disorders (Torstveit, Rosenvinge, & Sundgot-Borgen, 2008), and affective disorders (Hughes & Leavey, 2012). These findings indicate that athletes experience mental health problems and may experience unique risk factors (such as injuries or poor performance) that correlate with these problems.

Social Identity and Behavior

Social Identity Theory suggests that identity is formed when an individual self-categorizes and classifies itself based on other known social categories (Stets & Burke, 2000). By categorizing oneself into a group, there are certain expectations of behavior that is expected of the individual. These expectations form a role that guides behavior for the individual (Burke & Reitzes, 1981). In recent research, this idea has been explored to better understand drinking behavior (Pegg, O'Donnell, Lala, & Barber, 2018; Ramirez, Olin, & Lindgren, 2017) and help-seeking behavior (Heath, 2019; Klik, Williams, & Reynolds, 2019).

Social Identity Theory has been applied to understand differences in behavior for athletes. Researchers suggest that NCAA athletes who strongly identify with their team are more likely to conform to their teammates' risky drinking behaviors such as drinking and driving (Graupensperger, Benson, & Evans, 2018). When compared with another high-risk drinking group (Greek-life students), athletes scored higher on conformity as their motivation for drinking (Huchting, Lac, Hammer, & Labrie, 2011). These findings are consistent with the idea that there are role expectations involved with self-identifying an athlete and that these expectations may involve risky drinking. Help-seeking literature for the social identity of athletes is limited, but the research available suggests that there may be a social expectation of "toughness" that is limiting athlete help-seeking (Elshire-Dulle, 2019), or that the athlete role expectations overlap with masculine role expectations and indirectly inhibit help-seeking behaviors (Steinfeldt, Zakrajsek, Carter, & Steinfeldt, 2011; Steinfeldt & Steinfeldt, 2012).

Athletic Identity

A key concept for understanding the social identity of athletes is Athletic Identity. Athletic identity is defined as identification with the athlete role for an individual, and

individuals in the athlete role tends to have many goals related to sports, have many friends who are athletes, view sports as an important part of their lives, and spend a lot of time thinking about sports (Brewer et al., 1993). Research suggests that athletic identity is a key construct for understanding populations that are engaged in athletics because it is positively associated with one's level of athletic involvement (Brewer et al., 1993; Hagiwara & Isogai, 2014), and importance of sports for an individual (Brewer et al., 1993; Yao, Laurencelle, & Trudeau, 2018). Further, athletic identity correlates with other athletically relevant constructs, such as the importance of sports competence, importance of physical conditioning, importance of attractive body, and the importance of physical strength (Brewer et al., 1993). It also moves research into a broader examination than simply those who are involved in official institution-sponsored sports, to identify others for whom this concept is important. Despite being a useful construct for understanding those involved in athletics, there are few studies which examine the association between athletic identity and help-seeking intentions.

The role of athletic identity and mental health. Regarding research that examines the role of athletic identity on mental health, there is primarily a focus on athletic identity in conjunction with other life events such as athletic career termination or injury. For example, individuals with high athletic identity experience stress, anxiety, and difficulties adjusting socially and emotionally after athletic career termination (Wolanin, Gross, & Hong, 2015). Wolanin and colleagues note that the combination of a strong athletic identity and athletic career termination is a risk factor for mental health concerns among athletes. This is consistent with previous research on athletic identity and mental health. Hughes & Leavey (2012) support these findings in their review by also highlighting that athletic career termination and injury are risk factors for depression in athletes with high levels of athletic identity. Another study examines

how level of vigorous physical activity (VPA) after athletic career termination affects individual's athletic identity, mental, and physical health (Downs & Ashton, 2011). The authors find that greater VPA after career termination is linked to greater physical health, greater mental health, and stronger athletic identity. Although career termination and injury's effects on individuals with strong athletic identities is well researched, there are gaps in the literature on the association between athletic identity and mental health concerns in college students.

Athletic identity and alcohol use. Regarding athletic identity as a correlate of alcohol consumption, researchers suggest that stronger athletic identity is related to greater alcohol consumption (Zhou, Heim, & O'Brien, 2015). Additionally, sport type (individual or team) and athletic identity interact such that athletes for team sports with high levels of athletic identity tend to drink more (Zhou et al., 2015). These findings broadly suggest that athletic identity may associate with drinking behavior both generally for all athletes and specifically for different subgroups within the athlete population. Another study suggests that for men in the sample, athletic identity significantly moderates the association between weekly drinking and alcohol-related consequences such that men with lower levels of athletic identity suffered more alcohol-related consequences at high levels of baseline drinking (Grossbard et al., 2009). This same moderation was not present for females in the study. Grossbard and colleagues (2009) suggest that although those with stronger athletic identities tend to drink more, athletic identity appears to serve as a protective factor for alcohol-related consequences in men. In turn, this may contribute to those with strong athletic identities not viewing their drinking as a problem due to not suffering as many consequences. This may potentially contribute to reduced help-seeking among the male population with strong athletic identity.

Athletic identity and help-seeking. Regarding athletic identity as it pertains to help-seeking, the literature is rather limited. According to Moreland and colleagues' (2018) literature review on athlete help-seeking, only one study has examined how athletic identity is associated with beliefs about help-seeking (Barnard, 2016). Barnard's (2016) study suggests that athletic identity does not significantly predict attitudes towards help-seeking, contradicting his hypotheses. Other studies examined help-seeking's association with athletic identity through the lens of conformity to gender norms (Steinfeldt et al., 2011; Steinfeldt & Steinfeldt, 2012). These studies suggest that greater athletic identity is associated directly with greater conformity to masculine norms and indirectly with lower intentions to seek help. The limited body of research on athletic identity and its direct association with help-seeking suggests that more research is necessary to gain a comprehensive understanding of the role of athletic identity in help-seeking tendencies.

Theoretical Foundation

Theory of Planned Behavior (TPB; Ajzen, 1991) may provide a useful foundation for understanding what contributes to alcohol-related and mental health help-seeking behavior among young adults. TPB has been previously applied to model behavioral intention in studies of help-seeking comparing the intentions of multiple populations (racial and gender demographics; Barksdale & Molock, 2009; Mesidor, 2014), comparing multiple domains of help-seeking (professional, mental health, and substance use; Hess & Tracey, 2013), and within the student-athlete population (Lopez & Levy, 2013). The results of these studies, and a well-established history of use in the literature for modeling behavioral intentions overall, suggest that the TPB could be useful for understanding the help-seeking behavior of intercollegiate athletes.

Theory of Planned Behavior overview. TPB posits that an individual's behavioral beliefs, normative beliefs, and control beliefs impact an individual's intention to behave in a specific way (Figure 1; Ajzen 1991). Specifically, Ajzen (1991) outlines that stronger positive behavioral beliefs, emphasis on normative beliefs, and greater control beliefs lead to a greater intention to behave. Intentions are indications of the amount of effort people are planning to exert to perform a behavior. Consequently, greater intention to behave leads to more frequent performance of that behavior. Ajzen (1991) identifies that beliefs about a behavior and the intention to perform said behavior are related, and therefore by studying these beliefs researchers can gain further insight on behavioral trends.

Behavioral beliefs. Behavioral beliefs focus on one's attitude towards a behavior and beliefs about that behavior's outcome (Bayer & Peay, 1997). The idea is that a positive belief towards a behavior will lead to a greater intent to perform that behavior—and vice versa. In the context of psychological help-seeking, these positive beliefs include the belief that receiving professional psychological help can improve one's mental health. Therefore, positive beliefs often lead to greater intentions in individuals because they have more confidence that the behavior will be beneficial to them. Researchers have measured behavioral beliefs to better understand attitudes individuals have towards help-seeking behaviors (Hess & Tracey, 2013).

In general, this body of literature suggests that positive attitudes towards help-seeking among college students leads to a significantly greater intention to seek help (Hess & Tracey, 2013). The authors suggest that with this type of knowledge on help-seeking, campuses that wish to increase rates of help-seeking among college-student populations can focus on help-seeking attitudes. Specifically, they mention promoting these positive attitudes through outreach

campaigns that can impact the campus culture. This highlights the practical use of the information gained in TPB studies.

Normative beliefs. Normative beliefs involve perceptions of social pressures to behave (or not behave) in a particular manner. Typically, the greater the value an individual places on these expectations of others, the greater the impact on that individual's behavioral intentions (Ajzen, 1991). Normative beliefs are divided into two categories: descriptive norms and subjective norms. A descriptive norm refers to an individual's belief of the prevalence or degree of a certain behavior whereas a subjective norm refers to the belief that people should or should not behave in a certain way (Cialdini, Kallgren, & Reno, 1991). In TPB, Ajzen (1991) focuses on subjective norms as the primary normative beliefs associated with the intention to behave.

Subjective norms towards help-seeking have been measured by asking a participant how much "important individuals" (i.e., a participant's friends, family members, etc.) approve of the person performing a certain behavior as well as how likely that person would be to comply with those important individual's recommendations (Cabassa & Zayas, 2007). One common form of negative subjective norms is the belief that there is a stigma associated with mental health. Within the context of help-seeking, it has been shown that these negative subjective norms (such as stigma) inhibit help-seeking behavioral intention (Barksdale & Molock, 2009). Conversely, positive norms have been linked to greater help-seeking intentions (Vogel, Wade, Wester, Larson, & Hackler, 2007). This suggests that norms could be an important contributor to how help-seeking may be associated with athletic identity.

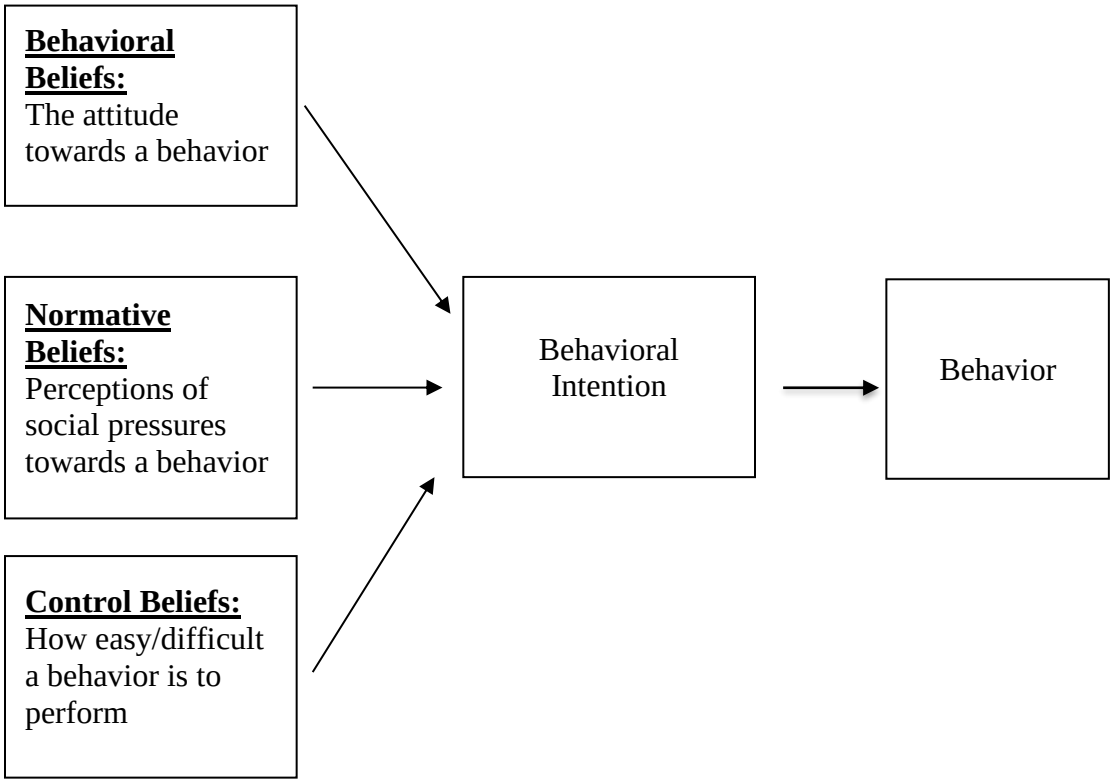
Control beliefs. Control beliefs are a person's beliefs on how easy or difficult a behavior may be or the degree to which an individual believes they can successfully perform the behavior (self-efficacy; Ajzen 2002). Control beliefs are dictated by the perceived ease of the behavior in

question and the likelihood of successfully accomplishing it and therefore are frequently evaluated directly or indirectly. Control beliefs can be indirectly examined through perceived external barriers to that behavior (Ajzen, 1991). Ajzen (1991) specifically outlines that control beliefs are aligned with the presence/absence of resources/opportunities to perform the behavior. External barriers include factors not related to an individual's *behavioral/normative beliefs* which prevent that individual from performing that behavior such as lack of available time and/or means (i.e. resources/opportunities) to receive help-providing services.

Research examining control beliefs and help-seeking suggests that negative control beliefs—or believing that it would be difficult to perform a behavior—also negatively impacts behavioral intention (Watson, 2006). Although barriers to help-seeking have been explored in college student populations for mental health (Clement et al., 2015; Eisenberg et al., 2007; Givens & Tija, 2002; Gulliver et al., 2010; Rickwood et al., 2007), the role athletic identity plays in this association has not been explored. Moreover, barriers to help-seeking for alcohol use is an area of research that remains to be explored.

Figure 1

Conceptual Diagram for the Theory of Planned Behavior



Gaps in the athletic identity research on help-seeking. Research on the association between athletic identity and help-seeking beliefs is relatively scarce, and none of existing research applies the full TPB framework. The little that is known suggests that greater athletic identity is associated directly with greater conformity to masculine norms and indirectly to lower intentions to seek help through the pathway of gender norm conformity (Steinfeldt et al., 2011; Steinfeldt & Steinfeldt, 2012). Additionally, one study suggests that athletic identity is not associated with attitudes towards seeking help (Barnard, 2016). However, there are knowledge gaps regarding the extent to which one's athletic identity is associated with control beliefs,

normative beliefs, and intentions to seek help for general mental health and alcohol use concerns. This gap in the literature is particularly important because those with strong athletic identities represent a risky group for heavier drinking (Grossbard et al., 2009; Zhou et al., 2015). Examining how facets of TPB for help-seeking (for both general mental health concerns and alcohol use concerns) vary according to athletic identity would be helpful in gaining a more complete understanding of help-seeking beliefs for those involved in athletics.

Current Study

The current study examined the association between athletic identity and help-seeking intentions. Specifically, it examined help-seeking related to general mental health and alcohol use. Additionally, the study applied the TPB framework to better understand variations in help-seeking intentions as they pertain to athletic identity. Specifically, I sought to determine the extent that behavioral beliefs, normative beliefs, and control beliefs may be associated with help-seeking intentions for both general mental health assistance and alcohol-related assistance. Further, I examined the extent to which athletic identity may impact these associations.

The current study adds to the larger body of research on athletic identity and general help-seeking in two major ways. First, the study helps determine if there is a significant association between athletic identity and help-seeking intentions for both general mental health concerns and alcohol-specific problems. Currently, the limited research on help-seeking either targets exclusively current athletes or neglects general mental health and alcohol use help-seeking. The current study helps inform a broader understanding of help-seeking beliefs and help-seeking intentions for those who identify as athletes (but may not be currently involved on a team). Second, little is known about the extent to which athletic identity moderates the association between beliefs towards help-seeking and help-seeking intentions. The present study

expands upon the limited literature on athletic identity and help-seeking by gaining insight into these areas within the TPB framework.

The specific aims and hypotheses of the current study were:

Aim 1. To examine the association between level of *athletic identity* and *general mental health help-seeking intentions* when controlling for mental health status.

Hypothesis 1. Due to lower rates of *general mental health help-seeking intentions* among athletes (Maniar et al., 2001; Moore 2017), it was predicted that greater *athletic identity* would be associated with lower *general mental health help-seeking intentions*.

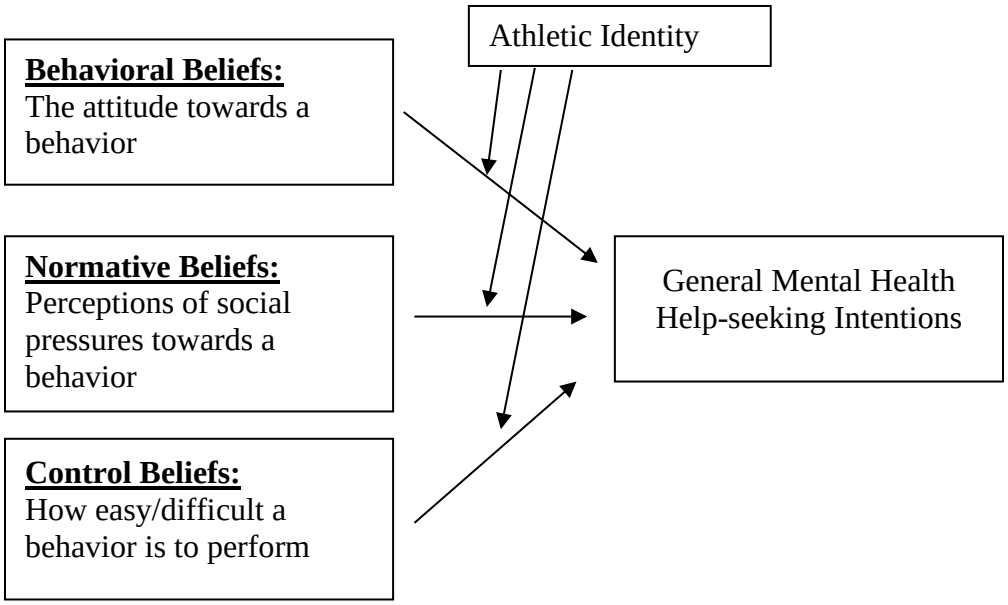
Aim 2. To examine the association between level of *athletic identity* and *alcohol-related help-seeking* intentions when controlling typical weekly drinking quantity.

Hypothesis 2. While there is limited prior research on the *alcohol-related help-seeking* rates of college student-athletes, due to lower rates of *general help-seeking among* athletes (Maniar et al., 2001; Moore 2017), it was predicted that greater *athletic identity* would be associated with lower *alcohol-related* help-seeking intentions.

Aim 3. To examine associations between general mental health help-seeking and facets of the TPB (i.e. *behavioral beliefs*, *normative beliefs*, and *control beliefs*) as seen in Figure 2.

Figure 2

Conceptual Diagram for the Proposed Regression for Mental Health Help-Seeking Intentions



Hypothesis 3a. It was predicted that *behavioral beliefs* would be positively associated with *behavioral intention to seek help for general mental health*. Ajzen's (1991) TPB suggests positive *behavioral beliefs* of a behavior lead to a greater intention to perform the behavior; thus, it was expected that there would be a positive association between *help-seeking intentions for general mental health concerns* and *behavioral beliefs*.

Hypothesis 3b. It was predicted that *normative beliefs* would be positively associated with *behavioral intention to seek help for general mental health*. Ajzen's (1991) TPB suggests positive *normative beliefs* of a behavior lead to a greater intention to perform the behavior; thus, it was expected that there would be a positive association between *help-seeking intentions for general mental health concerns* and *normative beliefs*.

Hypothesis 3c. It was predicted that *control beliefs* to help-seeking would be positively associated with *behavioral intention to seek help for general mental health concerns*. Ajzen's (1991) TPB suggests positive *control beliefs* of a behavior lead to a greater intention to perform the behavior; thus, it was expected that there would a positive association between *help-seeking intentions for general mental health concerns* and *control beliefs*.

Aim 4. To examine if the association between TPB facets (i.e., *behavioral beliefs, normative beliefs*, and *control beliefs*) and *help-seeking intentions for general mental health concerns* is moderated by *athletic identity* (see Figure 2).

Hypothesis 4a. Student-athletes tend to report less positive attitudes towards help-seeking behavior than their non-athlete peers in general (Watson, 2005). Further, student-athletes report higher athletic identity (Brewer et al., 1993; Hagiwara & Isogai, 2014). The research on help-seeking for mental health and athletic identity is limited, but the studies do not indicate strong empirical evidence that not seeking help is a key component of the athletic identity (Barnard 2016) outside of its indirect effects through gender role conformity (Steinfeldt et al., 2011; Steinfeldt & Steinfeldt, 2012). For these reasons, it was hypothesized that *athletic identity* would not moderate the effect of *behavioral beliefs* on general mental health help-seeking intentions, such that the association between *behavioral beliefs* and *help-seeking intentions for general mental health concerns* would be the same for individuals with regardless of *athletic identity*.

Hypothesis 4b. Previous literature has suggested that athletes have a stronger personal stigma towards psychological help-seeking (Etzel, Ferrante, & Pinkney, 1991; Lopez & Levy, 2013). The research on help-seeking for mental health and athletic identity is limited, but the studies do not indicate strong empirical evidence that not seeking help is a key component of the

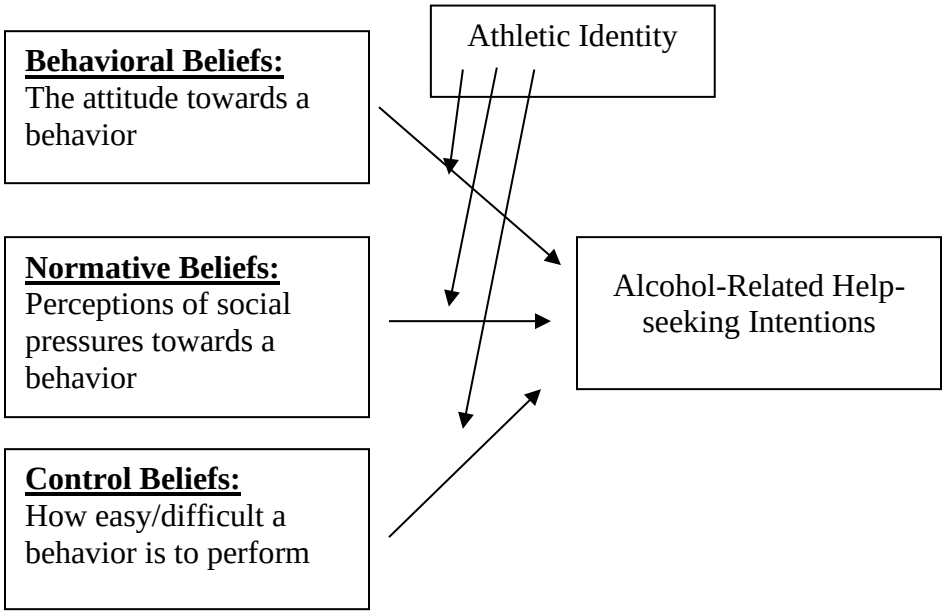
athletic identity (Barnard 2016) outside of its indirect effects through gender role conformity (Steinfeldt et al., 2011; Steinfeldt & Steinfeldt, 2012). Therefore, it was hypothesized that *athletic identity* would not moderate the effect of *normative beliefs* on general mental health help-seeking intentions such that the association between *normative beliefs* and *help-seeking intentions for general mental health concerns* would be the same individuals with regardless of *athletic identity*.

Hypothesis 4c. College student-athletes encounter more and stronger barriers to utilizing help-seeking services than their non-athlete peers (Lopez & Levy, 2013). The research on help-seeking for mental health and athletic identity is limited, but the studies do not indicate strong empirical evidence that not seeking help is a key component of the athletic identity (Barnard 2016) outside of its indirect effects through gender role conformity (Steinfeldt et al., 2011; Steinfeldt & Steinfeldt, 2012). For this reason, it was hypothesized that *athletic identity* would not moderate the effect of *control beliefs* to help-seeking on general mental health help-seeking intentions such that the association between *control beliefs* and *help-seeking intentions for general mental health concerns* would be the same for individuals regardless of *athletic identity*.

Aim 5. To examine associations between alcohol help-seeking and facets of the TPB (i.e., *behavioral beliefs*, *normative beliefs*, and *control beliefs*) as seen in Figure 3.

Figure 3

Conceptual Diagram for the Proposed Regression for Alcohol-Related Help-Seeking Intentions



Hypothesis 5a. It was predicted that *behavioral beliefs* would be positively associated with *behavioral intention to seek help for alcohol use concerns*. Ajzen's (1991) TPB suggests positive *behavioral beliefs* of a behavior lead to a greater intention to perform the behavior; thus, it was expected that there would be a positive association between *help-seeking intentions for alcohol use concerns* and *behavioral beliefs*.

Hypothesis 5b. It was predicted that *normative beliefs* would be positively associated with *behavioral intention to seek help for alcohol use concerns*. Ajzen's (1991) TPB suggests positive *normative beliefs* of a behavior lead to a greater intention to perform the behavior; thus, it was expected that there would be a positive association between *help-seeking intentions for alcohol use concerns* and *normative beliefs*.

Hypothesis 5c. It was predicted that *control beliefs* of help-seeking would be positively associated with *behavioral intention to seek help for alcohol use concerns*. Ajzen's (1991) TPB suggests positive *control beliefs* of a behavior lead to a greater intention to perform the behavior; thus, it was expected that there would be a positive association between *help-seeking intentions for alcohol use concerns* and *control beliefs*.

Aim 6. To examine if correlates of alcohol help-seeking using constructs related to the facets of TPB (i.e., *behavioral beliefs*, *normative beliefs*, and *control beliefs*) are moderated by *athletic identity* as seen in Figure 3.

Hypothesis 6a. While there is not much literature comparing student-athlete substance use help-seeking to general mental health help-seeking, there are known differences between drinking and mental health. Specifically, young people (ages 16-24) sometimes believe that the positive aspects of drinking outweigh the negatives and even view excessive drinking as a necessary milestone for entering adulthood (Reavley, Cvetkovski, Jorm, & Lubman, 2010). Because mental health concerns do not share these positive aspects, there are likely differences in *help-seeking for alcohol use* and *help-seeking for mental health concerns*.

Regarding athlete differences, student-athletes tend to report less positive attitudes towards help-seeking behavior than their non-athlete peers in general (Watson, 2005) and tend to drink in greater quantities than their non-athlete peers (Leichliter, Meilman, Presley, & Cashin, 1998). This suggests that athletes may have more negative behavioral beliefs towards help-seeking for alcohol use than their non-athlete peers. Additionally, research suggests that the social identity of athletes involves drinking (Graupensperger et al., 2018; Huchting et al., 2011) which may make those with strong athletic identities less inclined to seek alcohol help services. For these reasons, it was hypothesized that *athletic identity* would moderate the effect of *behavioral beliefs*

on *help-seeking intentions for alcohol use concerns* such that the association between *behavioral beliefs* and *help-seeking intentions for alcohol use concerns* would be weaker for individuals with greater levels of *athletic identity*.

Hypothesis 6b. There is not much literature comparing student-athlete substance use help-seeking behaviors to their general mental health help-seeking behaviors. However, previous literature has suggested that athletes have a stronger personal stigma towards psychological help-seeking (Etzel et al., 1991; Lopez & Levy, 2013). Due to the culture of heavy drinking in college athletics (Turrisi et al., 2006), it is likely that heavy drinking is widely accepted and therefore not something that requires help-seeking. Additionally, research suggests that the social identity of athletes involves drinking (Graupensperger et al., 2018; Huchting et al., 2011) which may make those with strong athletic identities less inclined to seek alcohol help services. Therefore, it was hypothesized that it would significantly moderate the effect of *normative beliefs* on *help-seeking intentions for alcohol use concerns* such that the association between *normative beliefs* and *help-seeking intentions for alcohol use concerns* would be weaker for individuals with greater levels of *athletic identity*.

Hypothesis 6c. College student-athletes encounter more and stronger barriers to utilizing help-seeking services than their non-athlete peers (Lopez & Levy, 2013). Additionally, research suggests that the social identity of athletes involves drinking (Graupensperger et al., 2018; Huchting et al., 2011) which may make those with strong athletic identities less inclined to seek alcohol help services. For these reasons, it was hypothesized that *athletic identity* would moderate the effect of *control beliefs* on alcohol-related help-seeking such that the association between *control beliefs* and *help-seeking intentions for alcohol use concerns* would be weaker for individuals with greater levels of *athletic identity*.

CHAPTER II

METHOD

Participants and Recruitment

Participants for the current study were English-speaking college students in the United States between the ages of 18 and 25 who have had at least one alcoholic beverage in the past 30 days. The sample was limited to those in the United States to obtain data that was representative of the U.S. college student population, as there are documented international differences in drinking behavior for college students (Chaiyasong et al., 2018).

Participants for the study were recruited through Amazon's Mechanical Turk (MTurk). MTurk is an online survey panel service whereby researchers can crowdsource participants in exchange for money. MTurk has become popular among psychologists as a source of both survey and experimental data (Paolacci & Chandler, 2014). Researchers have found that this method of data collection is an inexpensive means to collect high quality data (Buhrmester, Kwang, & Gosling, 2011). Specifically, Buhrmester and colleagues (2011) found that even at low levels of compensation, alphas for psychological measures were within the good to excellent range (α = .73–.93; mean α = .87) and that the alphas obtained using MTurk samples were mostly within two hundredths of a point from the alphas obtained using traditional samples. Additionally, the test-retest reliability for MTurk samples were strong (r = .80-.94; mean r = .88) which compared well with traditional sampling methods (Buhrmester et al., 2011). In addition to the psychometric quality of Mturk, Buhrmester and colleagues (2011) highlight that data can reach a broader population because individuals participate all 50 states in the U.S. This allows the findings of the data to be more easily generalizable to broader populations than more traditional methods that may not have as much geographical reach.

Procedure

After receiving exempt status from the Institutional Review Board, the data for the study were collected online. To improve data quality, participants were screened for eligibility before completion of the main survey (Dennis, Goodson, & Pearson, 2018). For the screening survey in this study, potential participants were asked their employment status, student status, drinking status, and age via MTurk (Appendix B). Participants were only able to complete the screening survey once. Only those who indicated that they were college students, lived in the U.S., who had at least one alcoholic beverage in the past 30 days, between the ages of 18 and 25 were given a password and link for the main survey. Participants were compensated $0.10 for completing the screener survey with an additional $0.10 bonus if they qualified for the main survey. This screening process has been noted to significantly reduce the number of participants who fail attention checks and increase the number of usable participants in Mturk studies at minimal cost (Hunt & Scheetz, 2018).

The main study was posted on MTurk where participants were given a link to the Qualtrics survey. Participants could only access the survey with the password given after meeting the eligibility requirements in the screening survey. It was described as a study about beliefs towards help-seeking for alcohol use and general mental health concerns. In the survey, all the questions pertaining to mental health were grouped together in one block of questions, and the questions pertaining to alcohol use were grouped into another block. The order that the two blocks of questions are presented was randomized to prevent ordering effects. Before completing the survey, participants were informed of the study procedure via a notification statement to preserve anonymity (Appendix A), which follows IRB guidelines. The entire

survey was projected to take approximately 24 minutes to complete. The actual average completion time was 16.65 minutes (M = 16.65, SD = 9.38). To improve the quality of the data, participants who completed the survey faster than half of the median completion (Median = 13.7 minutes) time were excluded from the data. This is consistent with Leiner's (2013) recommendation for excluding data for respondents that complete the survey at twice the speed of a "typical" respondent. Participants were compensated $2.40 for completion of the survey (10 cents per minute based on the projected duration). In addition to screening, participants were asked to complete four attention checks throughout the survey. Participants were excluded from the final sample if they failed more than one of these checks. Examples of these checks can be found at the end of the Measures section (Appendix N).

Measures

***Demographics*.** Demographic information such as age, sex, year in school, college GPA, athletic status (non-athlete, intramural athlete, club athlete, or varsity athlete), and race were collected (Appendix C).

***Athletic identity*.** The 7-item Athletic Identity Measurement Scale (AIMS; Brewer & Cornelius, 2001), a revised version of the original 10-item AIMS (Brewer et al., 1993) measured individual athletic identity (Appendix D). Brewer & Cornelius (2001) modified the original scale so that it measured three factors of athletic identity (Social Identity, Exclusivity, and Negative Affectivity). The AIMS is rated on a 7-point Likert scale that ranges from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). Example items include "I consider myself an athlete" and "I have many goals related to sport." A composite score of the sum of all items reflects Athletic Identity and a higher score indicates a stronger identification with the athletic role. Regarding reliability, the 7-item AIMS as a 3-factor measure has strong internal consistency (α = .81) and

strong test-retest reliability (r = .89; Brewer & Cornelius, 2001), though researchers have assessed the 7-item AIMS as a one-factor measure of athletic identity with a strong internal consistency (α =.85-.91; Chang, Wu, Kuo, & Chen, 2018). The 7-item AIMs was used as a one factor measure because the present study is not using the three factors in the analysis. The present study has found that the 7-item version has a very high level of internal consistency (α = .94). Regarding validity, the original AIMS has strong convergent validity, as it correlates significantly with other relevant constructs such as the importance of sports competence: (r = .83, p < .001), importance of physical conditioning: (r = .56, p < .001), importance of attractive body: (r = .35, p < .001), and the importance of physical strength: (r = .53, p < .001; Brewer et al., 1993). To further support the validity of the AIMS, Brewer et al. (1993) found significant main effects for the AIMS measure of athletic identity and level of athletic involvement. The 7-item version of the questionnaire has a strong correlation with the validated 10-item scale (Brewer & Cornelius, 2001), suggesting that the 7-item version may also have good validity.

Behavioral beliefs for general mental health help-seeking. According to Ajzen (1991), behavioral beliefs are measured by attitudes. The Inventory of Attitudes toward Seeking Mental Health Services (IASMHS; Mackenzie, Knox, Gekoski, & Macaulay, 2004) measured attitudes towards general mental health help-seeking (Appendix E). The IASMHS is a 24-item self-report inventory, rated on a five-point Likert scale, from 0 (*Strongly disagree*) to 4 (*Strongly agree*). The IASMHS measures attitudes in three main facets: psychological openness (e.g., “People should work out their own psychological problems”), help-seeking propensity (e.g., “I would want to get professional help if I were worried or upset for a long period of time”), and indifference to stigma (e.g., “Having been mentally ill carries with it a burden of shame”). Items are summed to obtain a total score for an individual’s behavioral beliefs towards mental health

help-seeking, with higher scores reflecting more positive attitudes towards help-seeking. The test-retest reliability for original total IASMHS score was $r = .85$. The present study has found that this measure has a high level of internal consistency ($\alpha = .87$). Additionally, Mackenzie et al. (2004) noted that the measure has a high convergent validity because it has a significant positive correlation with intentions to use mental health services ($r = .38$), past use of professional help ($r = .33$), and a significant negative correlation with individuals' intentions to take care of their own problems ($r = -.30$).

Behavioral beliefs for alcohol help-seeking. The IASMHS was slightly modified to measure attitudes towards alcohol-related help-seeking specifically (Appendix F). The modifications included clarification within the instructions that the section is about alcohol use problems rather than mental health problems, and the items were modified in order to refer to problems with alcohol use. Specifically, the modified versions of the previously mentioned items were "People should work out their own problems with alcohol use," "I would want to get professional help if I were experiencing problems with alcohol use for a long period of time," and "Having problems with alcohol use carries with it a burden of shame." The other items were modified in a similar fashion. The modified IASMHS is also a 24-item self-report inventory, rated on a five-point Likert scale, from 0 (*Strongly disagree*) to 4 (*Strongly agree*). Items were still be summed to obtain a total score for an individual's behavioral beliefs towards alcohol-related help-seeking, with higher scores reflecting more positive attitudes towards help-seeking. This modified version of the IASMHS was found to have good internal consistency ($\alpha = .86$) in the present study.

Normative beliefs for general mental health help-seeking. Subjective norms were assessed with two components (Appendix G). The first component asks how much an important

individual (i.e., family, friends, peers, romantic partner, and non-familial authority figures) approves of help-seeking behavior for general mental health concerns. If any of the important individuals did not apply for the participant, there is an option "N/A." The instructions for this section ask "How likely is it that each of the following people would think that you should seek professional help if you were experiencing general mental health concerns?" with a corresponding item for each of the aforementioned important individuals. The response scale ranges from 1 (*Extremely unlikely)* to 7 (*Extremely likely)*. The second component assesses the participant's motivation to comply with each important individual's recommendation (e.g., "Generally, you do what your family thinks you should do") with an item for each type of important individual. A composite score for subjective norms of each type of important individuals was created by multiplying the normative belief scores (component one) with the motivation to comply scores (component two). Then, the average of these product scores were calculated to obtain the mean composite score for subjective norms of the participant. Higher scores indicate that important individuals in the participants life more strongly endorse mental health help-seeking and that the participant is more likely to comply with those individuals' wishes (i.e., greater subjective norms). This method for measuring suggested norms matches Ajzen's (2006) suggestions on how to construct a TPB questionnaire and in the present study was found to have a good internal consistency ($\alpha = .82$). However, there is no available information on the validity of this measure. For simplicity, this measure is referred to as the "Normative Belief Score" for General Mental Health Help-Seeking.

Normative beliefs for alcohol help-seeking. There was a separate set of questions for the subjective norms regarding alcohol-related help-seeking behavior (Appendix G). The first component, asking how much an important individual approves of help-seeking behavior, was

changed to ask how much an important individual (e.g., family, friends, peers, romantic partner, and non-familial authority figures) approves of help-seeking behavior for alcohol use concerns. If any of the important individuals do not apply to the participant, there is an option "N/A." As with mental health help-seeing, the response scale for alcohol use help-seeking ranges from 1 (*Extremely unlikely*) to 7 (*Extremely likely*). The second component is the same item determining the participant's motivation to comply with the important individual's recommendation (e.g., "Generally, you do what your family thinks you should do"). To be clear, this component does not appear a second time. It appears only once because motivation to comply is not specific to mental health or alcohol use concerns. A composite score for subjective norms for alcohol problems of each type of important individuals is created by multiplying the normative belief scores for alcohol problems (component one) with the motivation to comply scores (component two). Then, the average of these product scores is calculated to obtain the mean composite score for subjective norms of the participant. Higher scores indicate that important individuals in the participant's life more strongly endorse alcohol-use help-seeking and that the participant is more likely to comply with those individuals' wishes (i.e., greater subjective norms for alcohol use help-seeking). This measure was found to have good internal consistency in the present study ($\alpha = .84$). For simplicity, this measure is referred to as the "Normative Belief Score" for Alcohol Help-Seeking.

Control beliefs for general mental health help-seeking. According to Ajzen (1991), perceived behavioral control can be measured by asking direct questions about the ease/difficulty to perform a behavior, or indirectly by asking about the facilitating or inhibiting factors to perform the behavior. For the purposes of this study, control beliefs were measured indirectly via the Individual Barriers to Help-seeking Checklist (Appendix H; Givens & Tija, 2002). This

checklist was administered to assess the indirect control beliefs of an individual through perceived external barriers and gain more insight on what is inhibiting young adult help-seeking. This 13-item checklist prompted participants to indicate whether they consider items such as "Lack of availability of services," "Stigma of mental health care," or "Lack of time" as barriers to help-seeking for **mental health concerns**. Participants indicated "Yes" if they believe the item to be a barrier, and "No" if they do not. It is important to note that these are *perceived* barriers and are therefore reported based on whether the participant believes that the item is a barrier (regardless of whether it is a realistic barrier). For example, there may be 10 different mental health clinics in the area but if the participant believes that there is a "Lack of available services" then it is still considered a barrier that affects the ease of seeking help. There is also a free response item which allows the participant to list barriers to help-seeking which may not be included in the checklist. Consistent with Givens and Tija (2002), these responses were not included in the total score, but provide insight on prominent barriers not included in the checklist. The number of items which a participant indicates as a barrier to help-seeking were summed to represent the participant's external barriers to help-seeking for general mental health. The present study has found that this measure had a good internal consistency ($\alpha = .82$). However, there is no available information on the validity of this measure.

Control beliefs for alcohol help-seeking. The Individual Barriers to Help-seeking Checklist was modified to assess control beliefs for alcohol-related help-seeking (Appendix I). For this version, the checklist asks participants if they consider items such as "Lack of availability of services," "Stigma of professional help for problems with alcohol use," or "Lack of time" barriers to help-seeking for **problems with alcohol use.** Participants indicated "Yes" if they believe the item to be a barrier, and "No" if they do not. There is also a free response item

which allows the participant to list barriers to help-seeking which may not be included in the checklist. These responses were not included in the total score. The present study has found that this measure has good internal consistency ($\alpha = .81$).

General mental health help-seeking intentions. The General Help-Seeking Questionnaire was administered to assess help-seeking intentions (GHSQ; Appendix J; Wilson et al., 2005). This is a 10-item questionnaire and it uses a seven-point response scale ranging from 1 (*Extremely unlikely*) to 7 (*Extremely likely*). The GHSQ instructions originally stated: "Below is a list of people who you might seek help or advice from if you were experiencing an ***emotional or personal problem***. Please select the number that shows how likely is it that you would seek help from each of these people for a personal or emotional problem during the next 4 weeks," and lists people such as parents, friends, classmates, and professionals. Wilson and colleagues state that the scale can be modified to measure other types of help-seeking, and therefore the scale was modified to fit general mental health help-seeking. Specifically, the modified questionnaire opens with "Below is a list of people who you might seek help or advice from if you were experiencing ***general mental health concerns***. Please select the number that shows how likely is it that you would seek help from each of these people for general mental health concerns during the next 4 weeks." The list consisted of 10 categories of individuals, including parents, friends, classmates, professionals, and "would not seek help." Response options consisted of a 7-point scale, ranging from 1 (*Extremely unlikely*) to 7 (*Extremely likely*). The item "Would not seek help" was reverse coded. The most common ways to create a composite score for the GHSQ are to either average all items to get an overall measure of help-seeking intentions, use each item individually to examine differences in help-seeking intentions for help-seeking sources, or to average the items for professional sources (i.e., general

practitioner, mental healthcare provider, and help line) and informal sources (i.e., partner, friends, family, youth worker, pastor/priest). Due to the IASMHS, Normative Belief Score, and Individual Barriers to Help-Seeking Checklist all pertaining to seeking professional help, help-seeking intentions were measured using the average of the participant's score for the professional sources, with higher scores indicating greater intentions to seek professional help. The GHSQ was found to have good internal consistency in the present study (α = .83). Past studies suggest that this scale has high convergent validity due to a significant positive correlation between the subscale of professional help-seeking intentions and past positive experiences with help-seeking for personal/emotional problems (r = .51; Wilson et al., 2005) and for suicidal thoughts (r = .57; Wilson et al., 2005). The overall scale has a significant negative correlation with barriers to seeking help (r = -.22; Wilson et al., 2005).

Alcohol use help-seeking intentions. The GHSQ was modified to assess alcohol use help-seeking intentions (Appendix K). In the modified version, the instructions read: "Below is a list of people who you might seek help or advice from if you were experiencing ***alcohol use concerns***. Please select the number that shows how likely is it that you would seek help from each of these people for general mental health concerns during the next 4 weeks." The list consisted of the same 10 categories of individuals, including parents, friends, classmates, and professionals. Response options consist of a 7-point scale, ranging from 1 (*Extremely unlikely*) to 7 (*Extremely likely*). For the same reasons as the GHSQ for mental health help-seeking, help-seeking intentions were measured using the average of the participant's score for the professional sources, with higher scores indicating greater intentions to seek professional help. The present study has found that this measure has good internal consistency (α = .85).

General mental health. General mental health of participants was measured using the Brief Symptom Inventory (BSI; Appendix L; Derogatis & Spencer, 1993). The BSI is a 54-item self-report inventory of psychological symptoms across 9 dimensions of psychological health, including somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. Each item of the BSI is rated on a 5-point scale of distress, ranging from 0 (*Not at all*) to 4 (*Extremely*). Sample items include "Feeling easily annoyed or irritated" and "Thoughts of ending your life." A composite score was created by summing all items. A higher score reflects greater mental health concerns. The present study has found that this measure has very strong internal consistency ($\alpha = .99$). The BSI also has convergent validity due to strong correlations with other established measures of mental illness (Derogatis & Spencer, 1993) such as the Minnesota Multiphasic Personality Inventory clinical (Derogatis et al., 1976), Wiggins Content Scales (Wiggins, 1966), and Tryon Cluster Scores (Tryon, 1966).

Alcohol use. Typical alcohol use by participants was measured using the Daily Drinking Questionnaire (DDQ; Appendix M; Collins, Parks, & Marlatt, 1985). The DDQ asks the number of standard drinks a student consumes each day of a typical week for the past 3 months. A standard drink is defined as one beer (12 ounces), one Wine cooler (12 ounces), one Glass of wine (5 ounces), ones shot of liquor (1-1.5 ounces), one mixed drink (1-1.5 ounces of liquor), or one Malt Liquor (e.g., Mike's Hard Lemonade, Skyy Blue, Zima, Smirnoff Ice, etc.; 12 ounces). The DDQ is highly correlated with other self-reported drinking measures such as the Drinking Habits Questionnaire ($r = .65$; Kivlahan, Marlatt, Fromme, Coppel, & Williams, 1990) and has been frequently used in more recent literature to measure typical drinking behavior (e.g., Berman, Gajecki, Fredriksson, Sinadinovic, & Andersson, 2015; Carey et al., 2018; Doumas,

Esp, Flay, & Bond, 2017). The main variable calculated from the DDQ is drinking quantity. Quantity refers to the total number of drinks consumed in a typical week.

Attention Checks. In addition to the survey questions in each section, four attention checks were placed throughout the survey (Appendix N). These questions required straightforward responses such as "Please select the response 'extremely unlikely'" among a 7-point scale, ranging from 1 (*Extremely unlikely*) to 7 (*Extremely likely*) or "Please select the number '55'" among the choices of 13, 64, 55, 22.

Analysis Approach

Hierarchical multiple regressions were conducted for Aims 1 and 2 to determine the association between athletic identity and help-seeking intentions for both general mental health and alcohol use concerns when controlling for level of mental health according to the BSI and typical weekly drinking quantity for their respective analyses. Though it was initially proposed to do simultaneous multiple regressions, hierarchical regressions were implemented in order to discuss the combined predictive power of all the variables after controlling for covariates. Drinking quantity was chosen over other measures of drinking behavior (peak drinks, drinking frequency, alcohol-related consequences, etc.) because it gives a more complete and objective picture than the other measures. For example, a student with high frequency but low quantity may not be a problematic drinker. Or someone who does not experience a wide range of alcohol-related consequences may not have a score reflective of their drinking behavior. Additionally, unlike consequences, quantity does not leave as much room for interpretation. Hierarchical multiple regressions were also used for Aims 4-6 to determine how the facets of TPB were associated with general mental health and alcohol use help-seeking. Drinking level

(for Aim 2), general mental health (for Aim 1), and gender (for Aims 1 and 2) were included as covariates. A summary of the regression models can be found in Table 1.

Table 1

Regression Components Summary

Aim	Predictors	Outcome	Covariates
1	Athletic Identity	Mental Health Help-Seeking Intentions	General Mental Health Sex
2	Athletic Identity	Alcohol-Related Help-Seeking Intentions	Drinking Quantity Sex
3	Behavioral Beliefs, Normative Beliefs, and Control Beliefs	Mental Health Help-Seeking Intentions	General Mental Health Sex
4	Behavioral Beliefs*, Normative Beliefs*, and Control Beliefs*	Alcohol-Related Help-Seeking Intentions	Drinking Quantity Sex
5	Behavioral Beliefs, Normative Beliefs, Control Beliefs, Athletic Identity Behavioral Beliefs x Athletic Identity, Normative Beliefs x Athletic Identity, and Control Beliefs x Athletic Identity	Mental Health Help-Seeking Intentions	General Mental Health Sex
6	Behavioral Beliefs*, Normative Beliefs*, Control Beliefs*, Athletic Identity Behavioral Beliefs* x Athletic Identity, Normative Beliefs* x Athletic Identity, and Control Beliefs* x Athletic Identity	Alcohol-Related Help-Seeking Intentions	Drinking Quantity Sex

**Indicates alcohol-related adaptation of the measure*

CHAPTER III

RESULTS

Power Analysis

Using G*power (Faul, Erdfelder, Lang, & Buchner, 2007), a power analysis of a linear multiple regression, powering a single regression coefficient with 15 predictors was used to determine sample size *a priori*. Fifteen predictors were used to be more inclusive of potential demographic variables that may be included as controls. An analysis with a power of .80, α = .05 (two-tailed), and an effect size of f^2 = .06 for a linear multiple regression with a fixed model and a single regression coefficient would require 133 participants. The effect size of f^2 = .06 was chosen because this is slightly more conservative than a typical effect size for athlete research involving help-seeking (e.g., f^2 = .098 for Barnard, 2016).

Data Cleaning Results

Prior to conducting analyses, missing data and outliers were addressed. There were 182 participants who completed the survey (N = 182). First, 11 cases were removed for not completing a sufficient amount of the survey (at least half of the survey was considered sufficient). One case was removed who appeared to click through the survey without answering any questions. Eight cases were removed who were not within the specified age range (18-25). Twenty cases were removed who completed the survey faster than half of the median time (median = 752 seconds) for completion. Two cases were removed who failed more than one attention check. Six cases were removed who had a typical drinking quantity of 0 AND a maximum drinks amount of 0. One case was removed who had impossibly high DDQ data (average of 48 drinks per day). After removing these ineligible cases, the final sample for the study was N = 135.

There were 4 cases of notable outliers. All 4 of these outliers were for the variable of drinking quantity. These cases were winsorized such that one case reporting 44 drinks was winsorized to 39, two cases reporting 55 drinks were winsorized to 40, and one case reporting 200 drinks was winsorized to 41. These values were chosen by adding one unit to the highest non-outlier case (which in this instance, was 38 typical drinks per week), and then continuing sequentially by one unit to maintain rank. There were 3 cases of multivariate outliers with high Mahalanobis distances, but these cases were left untouched as they happened seemingly at random. There were no issues of normality, skewness, or independence of residuals for the dataset. Any missing values were resolved using SPSS's multiple imputation feature which creates plausible imputed values for the missing data across multiple imputations, in this case 20. All analysis results were pooled across all of the imputed datasets. This method for addressing missing data is widely used because it is less wasteful, runs into fewer computational issues, and leads to less biased covariances, *p* values, and confidence intervals (Van Ginkel, Linting, Rippe, & van der Voort, 2020).

Statistical Assumptions

Before any analyses were conducted, the assumptions for multiple regressions were addressed. Normality can be assumed due to the histograms and Q-Q plots of the data appearing sufficiently normal. Skew was assessed using SPSS's descriptive statistics function and values above an absolute value of three was considered too skewed. There were however no values with a skewness above an absolute value of three. The six regression assumptions that were addressed are correct linear form, all relevant predictors included, no errors of measurement in variables, equality of variance, independence of residuals, and normal distribution of residuals. All relevant predictors included and no errors in variable measurement are assumed based on

prior research. Regarding the assumption of correct linear form, scatterplots of unstandardized residuals supported that the independent variables were linearly related to the dependent variables. Equality of variance was confirmed through an *F*-test which supported that the standard deviations of the samples were statistically equivalent. Independence of residuals was confirmed through checking the scatterplots for excessive clustering.

Descriptive Statistics

Regarding the general demographic information for the sample, 49.6% (*n* = 67) of the sample reported that they were male, and 49.6% (*n* = 67) of the sample reported that they were female, with 0.7% (*n* = 1) of the sample not reporting their sex. When reporting race, 8.9% (*n* = 12) of participants reported that they were African American/Black, 58.5% (*n* = 79) reported that they were Caucasian/White, 17.8% (*n* = 24) reported that they were Asian, 10.4% (*n* = 14) reported that they were Hispanic, 3% (*n* = 4) reported that they were Native American/Alaskan Native, and 1.5% (*n* = 2) reported their race as "Other". Those who reported "Other" listed North African and Multi-racial as their race. The mean reported age of the sample was 21.95 years (*SD* = 2.01), of which 4.4% (*n* = 6) reported that they were Freshmen, 15.6% (*n* = 21) reported that they were Sophomores, 17.8% (*n* = 24) reported that they were Juniors, 31.9% (*n* = 43) reported that that they were Seniors, and 30.4% (*n* = 41) reported that they were Graduate Students. Of the graduate students, 68.3% participated in athletics. Of the undergraduates, 56.4% participated in athletics. Specifically, 18.5% (*n* = 25) of the sample reported that they participated in athletics at the Varsity level, 25.1% (*n* = 34) reported that they participated at the Club level, 20% (*n* = 27) reported that they participated at the Intramural level, and 40% (*n* = 54) reported that they did not participate in athletics at all. There was slight overlap between those who participated in Club and Intramural sports, with 5 participants who reported that the participated in both. The

mean reported Athlete Identity for the sample was 25.67 (*SD* = 12.51) out of a possible score of 49. For descriptive statistics of key study variables, please refer to Table 2.

Table 2

Means and Standard Deviations for Key Study Variables

Variable	*M*	*SD*
Alcohol		
Help-Seeking Intentions	3.98	1.67
Drinking Quantity (Typical Drinks per week)	9.65	10.00
Normative beliefs	22.77	9.53
Barriers	6.15	3.66
Attitudes	54.65	13.83
Attitudes x Athletic Identity	1330.77	637.039
Barriers x Athletic Identity	141.14	101.51
Normative Beliefs x Athletic Identity	621.21	467.39
Mental Health		
Help-Seeking Intentions	4.00	1.67
Brief Symptom Inventory Total	82.52	51.58
Normative beliefs	23.60	9.04
Barriers	6.33	3.53
Attitudes	54.83	13.86
Attitudes x Athletic Identity	1320.10	620.42
Barriers x Athletic Identity	145.99	106.32
Normative Beliefs x Athletic Identity	640.77	471.62

Regarding the correlations between key study variables, all of the key study variables were significantly correlated with Athlete Identity ($p < .01$). BSI score was significantly and correlated with attitudes and barriers to help-seeking for both mental health and alcohol use concerns. Normative belief score towards help-seeking for mental health concerns was significantly correlated with normative belief score for alcohol use concerns ($p < .01$). Attitudes towards mental health help-seeking was significantly correlated with attitudes towards alcohol-related help-seeking, perceived barriers to alcohol-related help-seeking, and perceived barriers towards mental health help-seeking. Attitudes towards seeking alcohol-related help-seeking was significantly and positively correlated with perceived barriers to alcohol-related help-seeking and perceived barriers to mental health help-seeking. Lastly, perceived barriers to mental health help-seeking was significantly correlated with perceived barriers to alcohol-related help-seeking. More details regarding the significance levels and direction of the correlation scan be found in Table 3.

Table 3

Pearson's Correlation Coefficients for Key Study Variables

	Athlete Identity	Drinking Quantity	Age	Sex	BSI	MH Attitudes	Alcohol Attitudes	Alcohol Barriers	MH Barriers	Alcohol Norms	MH Norms
Athlete Identity	--	**.22****	**.31****	**.26****	**.33****	**-.49****	**-.42****	**-.38****	**-.37****	**.30****	**.30****
Drinking Quantity		--	.02	**.19***	**.27****	**-.29****	**-.25****	-.13	-.16	-.13	-.11
Age			--	-.05	.10	-.14	-.16	-.08	-.07	.00	.01
Sex				--	.04	**-.32****	**-.32****	-.04	-.07	**.16***	**.20***
BSI					--	**-.39****	**-.30****	**-.35****	**-.44****	.08	.06
MH Attitudes						--	**.83****	**.38****	**.44****	-.06	-.06
Alcohol Attitudes							--	**.36****	**.43****	-.03	-.05
Alcohol Barriers								--	**.85****	-.08	-.08
MH Barriers									--	-.09	-.05
Alcohol Norms										--	**.79****
MH Norms											--

Note. MH = Mental Health. BSI = Brief Symptom Inventory. Norms = Normative Beliefs. Drinking quantity is measured in typical drinks per week.

*$p < .05$. ** $p < .01$.

Aims

Aim 1. To examine the association between level of *athletic identity* and *general mental health help-seeking intentions* when controlling for mental health status.

To test Aim 1, a two-step hierarchical multiple regression analysis was conducted to determine if level of athletic identity via the AIMS (predictor) was associated with *general mental health* help-seeking via the GHSQ (outcome), controlling for mental health status based on the BSI and sex (covariates).

Step 1 of the regression includes the covariates of total BSI score and sex, and accounts for 13% of the variance in the outcome (adjusted R^2 = .13, range = .13-14). Step 2 of the regression adds the AIMS total to the model, and increases the variance accounted for to 35% of the variance in the outcome (adjusted R^2 = .35 , range =.34-.35). Thus, adding the AIMS total to in step 2 significantly improved the outcome, with its addition accounting for 21% more variance than step one while controlling for BSI score and sex (R^2 change = .21, $p < .001$).

Higher athlete identity as measured by the AIMS was associated with higher scores on the GHSQ for help-seeking intentions regarding general mental health concerns ($B = 0.07$, $p < .001$) when controlling for sex and general mental health as measured by the BSI. More specific details regarding this regression analysis can be found in Table 4.

Table 4

Hierarchical Regression Examining the Association Between Level of Athletic Identity and General Mental Health Help-Seeking Intentions

Step	Predictor	*B*	*SE*	β	*t*	*p*	Partial η^2
1	(Constant)	2.86	0.28		10.14	.000	
	BSI Total	0.01	0.003	0.36	4.42	.000	0.360
	Sex	0.42	0.27	0.13	1.57	.116	0.136
2	(Constant)	1.76	0.30		5.97	.000	
	BSI Total	0.01	0.002	0.20	2.63	.009	0.225
	Sex	0.01	0.24	0.002	0.03	.976	0.003
	Athlete Identity	0.07	0.01	0.51	6.6	.000	0.501

Note. BSI = Brief Symptom Inventory.

Aim 2. To examine the association between level of *athletic identity* and *alcohol-related help-seeking* intentions when controlling typical weekly drinking quantity.

To test Aim 2, a two-step hierarchical multiple regression analysis was conducted to determine if level of athletic identity via the AIMS (predictor) was associated with *alcohol-related* help-seeking via the GHSQ (outcome), controlling for weekly drinking quantity based on the DDQ and sex (covariates).

Step 1 of the regression includes the covariates of drinking quantity and sex, and accounts for 2% of the variance in the outcome (adjusted $R^2 = .02$). Step 2 of the regression adds the AIMS total to the model and increases the variance accounted for to 18% of the variance in the outcome (adjusted $R^2 = .18$, range = .17-.18). Thus, adding the AIMS total in step 2 significantly improved the outcome, with its addition accounting for 16% more variance than step one while controlling for drinking quantity and sex (R^2 change = .16, $p < .001$).

Regarding the significant effects, higher athlete identity according to the AIMS was associated with higher scores on the GHSQ for help-seeking intentions regarding alcohol use concerns ($B = 0.06$, $p < .001$) when controlling for sex and alcohol consumption according to the typical weekly drinking quantity. Specific details regarding this regression analysis can be found in Table 5.

Table 5

Hierarchical Regression Examining the Association Between Level of Athletic Identity and Alcohol Use Help-Seeking Intentions

Step	Predictor	*B*	*SE*	β	*t*	*p*	Partial η^2
1	(Constant)	3.71	0.23		15.87	.000	
	Sex	0.60	0.29	0.18	2.03	.042	0.175
	Drinking Quantity	0.002	0.02	0.01	0.12	.905	0.010
2	(Constant)	2.52	0.32		7.95	.000	
	Sex	0.28	0.28	0.08	1.00	.317	0.087
	Drinking Quantity	-0.01	0.01	-0.07	-0.81	.418	-0.071
	Athlete Identity	0.06	0.01	0.42	5.11	.000	0.410

Aim 3. To examine associations between general mental health help-seeking and facets of the TPB (i.e. *behavioral beliefs*, *normative beliefs*, and *control beliefs*).

To test Aim 3, a two-step hierarchical multiple regression was conducted to determine how behavioral beliefs via the IASMHS, normative beliefs via Normative Belief Score and control beliefs via the Barriers to Help-seeking Checklist (predictors) may be associated with general mental health help-seeking-intentions via the GHSQ (outcome) controlling for sex and general mental health via the BSI (covariates).

Step 1 of the regression includes the covariates of total BSI score and sex, and accounts for 13% of the variance in the outcome (adjusted R^2 = .13, range =.13-14). Step 2 of the regression adds each of the facets of TPB (i.e., norms, attitudes, and barriers) regarding to mental health help-seeking, and increases the variance accounted for to 27% of the variance in the outcome (adjusted R^2 = .27 , range = .26-.27). Thus, adding these predictors in step 2 significantly improved the outcome, with their addition accounting for 15% more variance than step one while controlling for BSI score and sex (R^2 change = .15, $p < .001$).

Regarding the significant effects, more positive normative beliefs according to the Normative Beliefs Score were associated with higher scores on the GHSQ for help-seeking intentions for general mental health concerns (B = 0.07, $p < .001$) when controlling for sex, general mental health according to the BSI, and the other facets of TPB (i.e., attitudes and barriers). With regards to the most notable non-significant effects, more barriers towards help seeking were not associated with lower intentions to seek help for general mental health concerns (B = -0.06, p = .138) and more positive attitudes towards help-seeking were not associated with greater intention to seek help for mental health concerns (B = 0.01, p = .420). More specific details regarding this regression analysis can be found in Table 6.

Table 6

Hierarchical Regression Examining Associations Between General Mental Health Help-Seeking and Facets of the TPB

Step	Predictor	*B*	*SE*	β	*t*	*p*	Partial η^2
1	(Constant)	2.86	0.28		10.14	.000	
	Sex	0.42	0.27	0.13	1.57	.116	0.136
	BSI Total	0.01	0.003	0.36	4.42	.000	0.360
2	(Constant)	1.34	0.80		1.69	.092	
	Sex	0.23	0.26	0.07	0.86	.388	0.076
	BSI Total	0.01	0.003	0.31	3.63	.000	0.305
	MH Norms	0.07	0.01	0.37	4.89	.000	0.397
	MH Barriers	-0.06	0.04	-0.13	-1.48	.138	-0.130
	MH Attitudes	0.01	0.01	0.07	0.81	.420	0.071

Note. BSI = Brief Symptom Inventory. MH = Mental Health. Norms = Normative Beliefs

Aim 4. To examine if the associations between TPB facets (i.e., *behavioral beliefs*, *normative beliefs*, and *control beliefs*) and *help-seeking intentions for general mental health concerns* are moderated by *athletic identity*.

To test Aim 4, interaction terms for each of the factors and athletic identity were added to the regression model from Aim 3 to determine if athletic identity has a moderating effect on these factors' contributions to the model while controlling for sex and mental health status based on the BSI (covariates). However, there were no significant interaction terms in the model. These non-significant moderation effects were athlete identity not interacting with attitudes (B = 0.02, p = .226), norms (B = 0.001, p = .325), and barriers (B = -0.13, p = .137) to predict general mental health help seeking intensions. Specific details regarding this regression analysis can be found in Table 7.

Table 7

Hierarchical Regression Examining if Associations Between General Mental Health Help-Seeking and Facets of the TPB Are Moderated by Athletic Identity

Step	Variable	*B*	*SE*	β	*t*	*p.*	Partial η^2
1	(Constant)	2.86	0.28		10.14	.000	
	Sex	0.42	0.27	0.13	1.57	.116	0.136
	BSI Total	0.01	0.003	0.36	4.42	.000	0.360
2	(Constant)	0.56	1.3		0.44	.664	
	Sex	0.10	0.24	0.030	0.41	.685	0.036
	BSI Total	0.01	0.002	0.26	3.38	.001	0.291
	AttxAIMSMent	0.000	0.001	0.12	0.43	.670	0.038
	BarrxAIMSMent	0.004	0.003	0.27	1.37	.172	0.122
	NormxAIMSMent	0.001	0.001	0.29	0.98	.325	0.088
	Norms Mental Health	0.02	0.03	0.13	0.75	.451	0.068
	Attitudes Mental Health	0.02	0.02	0.20	1.21	.226	0.109
	Barriers Mental Health	-0.13	0.09	-0.29	-1.4	.137	-0.133
	Athlete Identity	-0.00	0.05	-0.02	-0.033	.973	-0.003

Note: AttxAIMSMent, BarrxAIMSMent, and NormsxAIMSMent all stand for the interaction terms for Attitudes, Barriers, and Norms regarding mental health help-seeking and Athlete Identity. BSI = Brief Symptom Inventory.

Aim 5. To examine associations between alcohol help-seeking and facets of the TPB (i.e., *behavioral beliefs, normative beliefs,* and *control beliefs*)

To test Aim 5, a two-step hierarchical multiple regression was conducted to determine how the independent variables of behavioral beliefs via the IASMHS, normative beliefs via Normative Belief Score and control beliefs via the Barriers to Help-seeking Checklist (predictors) may be associated with the dependent variable of alcohol-related help-seeking intentions via the GHSQ (outcome) when controlling for sex and weekly drinking quantity (Covariates).

Step 1 of the regression includes the covariates of drinking quantity and sex, and accounts for 2% of the variance in the outcome (adjusted $R^2 = .02$). Step 2 of the regression adds the predictors of each of the facets of TPB (i.e., norms, attitudes, and barriers) pertaining to alcohol-related help-seeking and increase the variance accounted for to 18% of the variance in the outcome (adjusted $R^2 = .18$, range = .18-.19). Thus, adding these predictors in step 2 significantly improved the outcome, with their addition accounting for 18% more variance than step one while controlling for drinking quantity and sex (R^2 change = .18, $p < .001$).

More positive normative beliefs according to the Normative Belief Score were associated with greater help seeking intentions according to the GHSQ regarding alcohol use concerns ($B = 0.07$, $p < .001$). Greater Barriers to alcohol-related help seeking according to the Barriers to Help-seeking checklist were associated with lesser help-seeking intentions according to the GHSQ regarding alcohol use concerns ($B = -0.08$, $p = .030$). With regards to the most notable non-significant effects, more positive attitudes towards help seeking were not associated with greater intentions to seek help for alcohol use concerns ($B = 0.02$, $p = .095$). Specific details regarding this regression analysis can be found in Table 8.

Table 8

Hierarchical Regression Examining Associations Between Alcohol Use Help-Seeking and Facets of the TPB

Step	Predictor	*B*	*SE*	β	*t*	*p*	Partial η^2
1	(Constant)	3.71	.23		15.87	.000	
	Sex	0.60	.29	0.18	2.03	.042	0.175
	Drinking Quantity	0.002	.02	0.01	.12	.905	0.010
2	(Constant)	1.65	.74		2.22	.026	
	Sex	0.44	.29	0.13	1.52	.128	0.133
	Drinking Quantity	0.01	.01	0.08	.99	.323	0.087
	Alcohol Norms	0.07	.02	0.38	4.63	.000	0.379
	Alcohol Barriers	-0.08	.04	-0.18	-2.17	.030	-0.188
	Alcohol Attitudes	0.02	.01	0.15	1.67	.095	0.146

Aim 6. To examine if correlates of alcohol help-seeking using constructs related to the facets of TPB (i.e., *behavioral beliefs*, *normative beliefs*, and *control beliefs*) are moderated by *athletic identity*.

To test Aim 6, interaction terms for each of the factors and athletic identity were included in the regression model from Aim 5 to determine if athletic identity has a moderating effect on these factors' contributions to the model while controlling for sex and typical weekly drinking quantity (covariates). However, there were no significant interaction terms in the model. These non-significant moderation effects were athlete identity not interacting with attitudes ($B = 0.000$, $p = .709$), norms ($B = 0.001$, $p = .378$), and barriers ($B = 0.001$, $p = .876$) to predict intentions to seek help for alcohol use concerns. With regards to the most notable non-significant main-effects, more positive attitudes towards help seeking were not associated with greater intentions to seek help for alcohol use concerns ($B = 0.04$, $p = .058$). Specific details regarding this regression analysis can be found in Table 9.

Table 9

Hierarchical Regression Examining if Associations Between Alcohol Use Help-Seeking and Facets of the TPB Are Moderated by Athletic Identity

Step	Predictor	*B*	*SE*	β	*t*	*p*	Partial η^2
1	(Constant)	3.71	0.23		15.87	.000	
	Sex	0.60	0.29	0.18	2.03	.042	0.175
	Drinking Quantity	0.002	0.02	0.01	0.12	.905	0.010
2	(Constant)	0.11	1.41		0.08	.940	
	Sex	0.32	0.28	0.10	1.16	.245	0.104
	Drinking Quantity	0.01	0.01	0.03	0.41	.683	0.037
	Alcohol Norms	0.02	0.03	0.12	0.66	.507	0.060
	Alcohol Barriers	-0.05	0.09	-0.11	-0.56	.577	-0.050
	Alcohol Attitudes	0.04	0.02	0.32	1.89	.058	0.168
	AttxAIMSAlc	0.000	0.001	-0.11	-0.37	.709	-0.033
	BarrxAIMSAlc	0.001	0.003	0.03	0.16	.876	0.014
	NormxAIMSAlc	0.001	0.001	0.28	0.88	.378	0.079
	Athlete Identity	0.04	0.05	0.31	0.78	.437	0.070

Note: AttxAIMSAlc, BarrxAIMSAlc, and NormsxAIMSAlc all stand for the interaction terms for Attitudes, Barriers, and Norms regarding help-seeking for alcohol concerns and Athlete Identity.

CHAPTER IV

DISCUSSION

The current study examined the association between athletic identity and help-seeking intentions, how facets of the TPB are associated with help-seeking intentions, and whether athletic identity acts as a moderator for the associations between these facets and help-seeking intentions. Mental health help-seeking and alcohol-related help-seeking were examined separately, such that there were six separate aims for the study. It was predicted that greater athlete identity would be associated with lower help-seeking intentions for both mental health (Aim 1) and alcohol-related concerns (Aim 2), which was not supported for either outcome. It was also hypothesized that more positive normative beliefs and attitudes, as well as fewer perceived barriers to help-seeking would be positively associated with help-seeking intentions for both mental health (Aim 3) and alcohol-related concerns (Aim 5), which was partially supported.

For mental health, our findings regarding normative beliefs supported our hypothesis, but neither the associations for barriers nor attitudes had significant effects. For alcohol use, normative beliefs and barriers both supported our hypotheses, but attitudes did not have any significant effects. Lastly, it was predicted that athletic identity *would no*t moderate the association between the facets of TPB and help-seeking intentions for mental health help-seeking (Aim 4), but *would* moderate this association for alcohol-related help-seeking (Aim 6) such that the effects of those facets would be *weaker* for those with high levels of athletic identity. Athletic identity did not moderate any associations, so this contradicts our hypotheses for both cases.

Aims 1 and 2

The literature supports the idea that athletes have lower intentions to seek help for mental health concerns (Maniar et al., 2001; Moore, 2017). They also tend to drink more than their non-athlete peers, suggesting that they might be in greater need of help as well (Turrisi et al., 2006; Yusko et al., 2008). However, there is very limited prior research on the alcohol-related help-seeking intentions of college athletes. It was our goal to examine both types of help-seeking in tandem to better understand the role of athletic identity in different areas of help-seeking. Contrary to our hypotheses, greater levels of athletic identity were associated with greater intentions to seek help for both mental health concerns and alcohol use concerns. One potential reason for this finding may be that although athletic identity is correlated with level of athletic participation (Brewer et al., 1993), its items pertaining to the importance of sports and sports performance more accurately predict athletes' willingness to take care of their physical and mental wellbeing. The desire to perform well and the emphasis on the importance of sports may drive individuals with higher athletic identities to seek help more willingly, and could explain the discrepancy between this and previous literature which examined athlete status rather than athlete identity.

While these findings are surprising in the broad context of research on athletics, they are consistent with the limited past research regarding athletic identity and help-seeking (Barnard, 2016). Barnard had also hypothesized that athletic identity would correlate with lower help-seeking intentions, but his data also reflected the contrary. This suggests that perhaps athletic identity and athlete status predict help-seeking intentions differently despite being similar constructs due to one being tied to identity while the other only measures involvement.

Aims 3 and 5

These aims were focused on assessing how facets of the TPB were associated with help-seeking intentions for mental health (Aim 3) and alcohol-related (Aim 5) concerns. The literature supports the idea that more positive behavioral beliefs lead to greater behavioral intent (Ajzen, 1991). Regarding mental health help-seeking, our analyses partially supported these hypotheses. More positive normative beliefs were significantly associated with greater help seeking intentions. The other two facets had no significant effects. While these data are not exactly as predicted, the non-significant associations of barriers and attitudes suggest that for this sample normative beliefs could be a primary driving force behind the intention to seek help for mental health concerns.

The data regarding alcohol-related help-seeking were largely similar the data regarding mental health help-seeking except that greater perceived barriers to seeking help were also significantly associated with lower intentions to seek help. Although these data are similar to the results of the mental health help-seeking, the larger effect sizes and greater significance of barriers and attitudes suggests that alcohol-related help-seeking may be differently associated with facets of TPB such that both barriers and attitudes play a more important role in predicting the intention to seek help. It may be that alcohol-related help-seeking services are less widely known among young people, and therefore, seeking help for drinking is a barrier due to lack of knowledge that these services exist. Alternatively, the Barriers to Help-Seeking Checklist mentions items like “Fear of unwanted intervention,” which could mean that young people do not intend to seek help because they do not want it for their alcohol-related concerns. Lastly,

although TPB constructs are related to behavioral intent *broadly*, perceived barriers are more of a salient factor in the context of alcohol-related help-seeking than mental health help-seeking.

Aims 4 and 6

Study aims 4 and 6 focused on whether the associations between TPB facets and help-seeking intentions for general mental health (Aim 4) and alcohol-related concerns (Aim 6) are moderated by athletic identity. For mental health it was predicted that athletic identity would *not* moderate the associations whereas for alcohol it *would* moderate the associations.

Regarding mental health help-seeking, findings supported our hypothesis that athletic identity would not be a moderator of the TPB facets' associations with help-seeking intentions. Consistent with findings from Barnard (2016) and Steinfeldt and colleagues (2011; 2012), our findings do not support that seeking help is a key component of the athletic identity.

Regarding alcohol-related help-seeking, findings did not support our hypothesis that athletic identity would act as a moderator of the TPB facets' associations with help-seeking intentions. Much like the results for mental health help-seeking, none of the interaction terms had a significant association with help-seeking intentions. These findings directly contradict the previous identity research on athletes regarding drinking as a part of the athlete identity (Graupensperger et al., 2018; Huchting et al., 2011). It is possible that despite the literature that supports the heavy drinking of college athletes (Turrisi et al., 2006; Yusko et al., 2008; Martens et al., 2008), those with stronger athletic identities but who are not necessarily involved in college athletics do not consider alcohol use to be a core part of their identity. Another possible reason for this discrepancy between the results and the literature is that a culture of heavy drinking may not impact one's beliefs about help-seeking for alcohol use. This is supported by the results of the regressions in Aims 2, 5, and 6 because drinking quantity does not act as a

significant predictor of help-seeking intentions in any of the models. Therefore, even though athletes may have a culture and identity involving heavy drinking, it does not appear to influence their beliefs about help-seeking.

Implications

Overall, the results of the study expand upon the literature for athletic identity in two major ways. It highlights that athletic identity can be a positive factor for seeking help for mental health and alcohol use concerns. Additionally, it suggests that despite the culture of drinking among athletes, athlete identity does not appear to moderate the association between beliefs about help-seeking and help-seeking intentions.

There are several important implications that can be derived from these results. First, one way that universities might be able to improve help-seeking intentions is to find ways to cultivate athletic identity within students without necessarily getting them involved with an athletic team. This could be in the form of promoting athletic ideals through incentivized physical education classes, guest lectures, or even simply brochures on the benefits of staying fit and healthy. These types of programs could help promote the protective factors of athletic identity without the possible risk factors of being involved on an athletic team. Though there does not appear to be any research that examines increasing athletic identity in isolation of athletic participation, it may be worthwhile to examine the effectiveness of these strategies in future research due to athletic identity's strong correlations with constructs such as the importance of physical conditioning, the importance of attractive body, and the importance of physical strength (Brewer et al., 1993).

Additionally, because the facet of normative beliefs seems to be the most strongly associated with help-seeking intentions, universities could push for more norms-oriented programs to improve the normative beliefs of the student body regarding help-seeking intentions.

These programs could mimic norms focused programs for reducing alcohol use by educating students on actual help-seeking rates, how many people see improvement after help-seeking services, or other methods which will improve young people's perception of help-seeking. These normative persuasive methods have been historically using descriptive norms to guide people's behaviors to be closer to the mean (Cialdini, Kallgren, & Reno, 1991; Goldstein, Cialdini, & Griskevicius, 2008; Rimal & Lapinski, 2015). This suggests that these strategies could be used to promote more positive normative beliefs towards help-seeking. Narrowing down the scope of how to best improve help-seeking rates may help provide focus to universities to improve those rates more efficiently.

Lastly, athletic identity not acting as a moderator for the association between the TPB facets and help-seeking intentions suggests universities should approach help-seeking broadly for all students. Historically, populations known to have strong athletic identities (e.g., elite athletes) differ in many ways from their peers with lower athletic identities (Moreland et al., 2017). However, because the present study suggests that no moderating effect of athletic identity on the facets of TPB and help-seeking intentions, this information could potentially help inform universities that athletic identity need not be accounted for when strategizing for improving help-seeking behaviors among students. While more research is needed to replicate and expand on the current study findings regarding athletic identity and help-seeking, the findings of the present investigation provide preliminary support to further examine this area of research.

Limitations

There are three primary limitations with the current study. First, because all of the data were self-reported rather than observed and reflected on hypothetical situations rather than current or past behaviors, there may be some discrepancies between how participants *say* they

would act versus how they actually would act. Future research may benefit from using more direct measures to determine help-seeking rates and athletic involvement given greater access to resources like time and money. Second, the nature of using athletic identity instead of athletic status leads to difficulty in generalizing to collegiate athletes, specifically. However, the use of athletic identity allows for generalizations to college students more broadly because measuring athletic identity rather than athletic involvement is more inclusive. The limited past research on athlete identity and help-seeking also makes it difficult to compare our findings with other researchers, though it helps build a base for future research to expand upon. Lastly, while our sample only included undergraduate and graduate students, the sample had a relatively high average age (approximately 22 years old) and only approximately 20% of students surveyed were freshmen or sophomores, so these findings may not be as generalizable to younger undergraduate students. With graduate students representing 30.4% of the sample, we examined how they may differ in terms of athletic participation and found that the 68.3% of graduate participated in athletics compared to 56.3% of undergraduate students. This may have influenced the data to be more applicable to more athletic populations, but we found that it still likely suited the needs of the study in examining university life as a whole (i.e., not just undergraduates). While overall the racial demographics of the sample were similar to what the 2018 U.S. census reported on undergraduate/graduate student enrollment, African American/Black students were somewhat underrepresented (8.9% in the sample vs. 12.3-15.1% reported in the census). Hispanic students were also somewhat underrepresented (10.4 % in the sample vs. 13.6-20.9% reported in the census). Asian students were a larger portion of our sample (17.8% in the sample vs. 7.6-11.2% reported in the census). This suggests that our

findings may be more generalizable to Asian students than African American/Black and/or Hispanic students.

Recommendations

Further research is necessary to build a more complete understanding of how athletic identity is associated with help-seeking for both mental health and alcohol use concerns. We recommend that future researchers try to replicate findings regarding athletic identity's positive association with help-seeking intentions to further solidify Barnard's (2016) findings. Future studies should consider alternative measures of help-seeking intentions or include help-seeking history to more directly measure help-seeking propensity. Additionally, future researchers could implement analysis techniques that account for both athletic identity and athlete status to allow for more specified findings regarding athletes as a population. Another direction could be to examine the culture of athletes to determine whether there is indeed a culture focused on drinking or not. Lastly, we recommend future researchers take measures to examine how a culture of drinking interacts with beliefs about help-seeking for alcohol use.

CHAPTER V

CONCLUSIONS

The present study examined athletic identity and help-seeking intentions for both alcohol use and mental health concerns within the context of the TPB. Regarding both types of help-seeking, findings suggest that athletic identity is a protective factor for mental health help-seeking intentions. For mental health help-seeking, normative beliefs were the only TPB facet that was significantly associated with help-seeking intentions, and athletic identity did not moderate these facets' associations with help-seeking intentions. For alcohol-related help-seeking, both normative beliefs and control beliefs were significantly associated with help-seeking intentions, and also athletic identity did not moderate these facets' associations with help-seeking intentions. These findings are important because it can help provide future direction for universities to improve help-seeking rates for their students either by promoting stronger athletic identities through university programs, or by improving the normative beliefs of the student body. Future research would benefit from improving our measurement methods of help-seeking propensity, using methodologies that combine athlete status and athlete identity, and examining cultures of drinking among athletes (and non-athletes) in order to establish a stronger base of literature on athlete help-seeking for both alcohol use and general mental health concerns.

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APPENDIX A

INTRODUCTION TO STUDY

The research you are about to participate is designed to understand your beliefs and attitudes towards help-seeking behavior for alcohol use and general mental health concerns. This study will be anonymous, and no identifiable information will be shared with the public. The survey should take approximately 14 minutes. However, you have the right to decline to participate and to withdraw from the research once participation has begun. You will be compensated $1.40 for the survey, but should you decline to participate or withdraw from the study, you will not be compensated for your time. Additionally, to ensure the quality of our data there are items in the survey used to measure a participant's attentiveness to the survey. Should you fail on two or more of these measures, you will also not be compensated for your time.

This research will potentially help improve the overall understanding of help-seeking beliefs and behaviors and hopefully provide insight on ways to improve help-seeking. To contact the researchers involved in this study or the International Review Board, please refer to the consent form for the contact information.

To learn more about the study and to understand your rights as a research participant, please proceed to the next page.

APPENDIX B

SCREENING SURVEY

What is your employment status?

a) Unemployed
b) Full Time
c) Part-time
d) Self-employed

Are you currently enrolled as a student at a college or university?

a) Yes
b) No

Do you currently live in the United States?

a) Yes
b) No

How old are you?

a) Under 18
b) 18-25
c) 26-30
d) 31-40
e) 41-50
f) 50+

Have you had at least one alcoholic beverage in the past 30 days?

a) Yes
b) No

APPENDIX C

DEMOGRAPHIC QUESTIONNAIRE

1) How old are you?

_____

2) What is your student class (select one)?
a. Freshman
b. Sophomore
c. Junior
d. Senior
e. Graduate student
f. Other (please specify): _____

3) What is your sex?
a. Female
b. Male

4) What is your race?
a. African American/Black
b. Caucasian/White
c. Asian
d. Hispanic
e. Native Hawaiian or Other Pacific Islander
f. Native American or Alaskan Native
g. Other (please specify): _____

5) Are you currently a member of a fraternity or sorority on campus?
a. Yes
b. No

6) Have you ever competed on a university sports team?
a. Yes, at the varsity level
b. Yes, at the club level
c. Yes, at the intramural level
d. No, I have not.

If so, what NCAA division are you in?
a. Division I
b. Division II
c. Division III

7) How many years have you competed on a university sports team?

_____

8) Are you employed now?
a. Yes, part-time only
b. Yes, full and part-time
c. Yes, full time only
d. No

9) What is your current overall GPA?
_____

APPENDIX D

ATHLETIC IDENTITY MEASUREMENT SCALE

Indicate the degree to which you agree or disagree with the following statements

	Strongly Disagree						Strongly Agree
I consider myself an athlete							
I have many goals related to sport							
Most of my friends are athletes							
Sport is the most important part of my life							
I spend more time thinking about sport than anything else							
I feel bad about myself when I do poorly in sport							
Sport is the only important thing in my life							

APPENDIX E

INVENTORY OF ATTITUDES TOWARD SEEKING MENTAL HEALTH SERVICES

(IASMHS)

The following questions and checklists will ask you about your beliefs and attitudes towards seeking help for **general mental health concerns/psychological problems.** If any/neither of these apply to you, please answer the questions as if you did experience these problems.

Indicate the degree to which you agree or disagree with the following statements regarding help-seeking for **PSYCHOLOGICAL PROBLEMS**. *Note: even if the item does not specifically mention psychological problems, respond according to your beliefs in the context of* ***psychological problems***.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Psychological problems, like many things, tend to work out by themselves					
There are certain problems which should not be discussed outside of one's immediate family					
People with strong characters can get over psychological problems by themselves and would have little need for professional help.					
People should work out their own problems; getting professional help should be a last resort					
Keeping one's mind on a job is a good solution for avoiding personal worries and concerns.					
There is something admirable in the attitudes of people who are willing to cope with their conflicts and fears without resorting to professional help.					
There are experiences in my life I would not discuss with anyone					
It is probably best not to know everything about oneself					
If I believed I were having a mental breakdown, my first inclination					

would be to get professional attention					
I would want to get professional help if I were worried or upset for a long period of time.					
If I were experiencing a serious psychological problem at this point in my life, I would be confident that I could find relief in psychotherapy					
It would be relatively easy for me to find the time to see a professional for psychological problems					
I would have a very good idea of what to do and who to talk to if I decided to seek professional help for psychological problems					
If I were to experience psychological problems, I could get professional help if I wanted to					
If good friends asked my advice about a psychological problem, I might recommend that they see a professional					
I would willingly confide intimate matters to an appropriate person if I thought it might help me or a member of my family					
Having been mentally ill carries with it a burden of shame					
I would be embarrassed if my neighbor saw me going into the office of a professional who deals with psychological problems					
Important people in my life would think less of me if they were to find out that I was experiencing psychological problems					
Having been diagnosed with a mental disorder is a blot on a person's life.					
I would be uncomfortable seeking professional help for psychological problems because people in my social or business circles might find out about it					

I would feel uneasy going to a professional because of what some people would think					
I would not want my significant other (spouse, partner, etc.) to know if I were suffering from psychological problems.					
Had I received treatment for psychological problems I would not feel that it ought to be covered up					

APPENDIX F

IASMHS MODIFIED FOR ALCOHOL USE CONCERNS

The following questions and checklists will ask you about your beliefs and attitudes towards seeking help for **alcohol use concerns/problems with alcohol**. If any/neither of these apply to you, please answer the questions as if you did experience these problems

Indicate the degree to which you agree or disagree with the following statements regarding help-seeking for **ALCOHOL USE PROBLEMS**. *Note: even if the item does not specifically mention alcohol use, respond according to your beliefs in the context of **alcohol use problems**.*

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Problems with alcohol use, like many things, tend to work out by themselves					
There are certain problems which should not be discussed outside of one's immediate family					
People with strong characters can get over their problems with alcohol use by themselves and would have little need for professional help.					
People should work out their own problems with alcohol use; getting professional help should be a last resort					
Keeping one's mind on a job is a good solution for avoiding personal worries and concerns about problems with alcohol use.					
There is something admirable in the attitudes of people who are willing to cope with their problems with alcohol use without resorting to professional help.					
There are experiences in my life I would not discuss with anyone					
It is probably best not to know everything about oneself					

If I believed I were having problems with alcohol use, my first inclination would be to get professional attention					
I would want to get professional help if I were experiencing problems with alcohol use for a long period of time.					
If I were experiencing serious problems with alcohol use at this point in my life, I would be confident that I could find relief from a professional					
It would be relatively easy for me to find the time to see a professional for problems with alcohol use					
I would have a very good idea of what to do and who to talk to if I decided to seek professional help for problems with alcohol use					
If I were to experience problems with alcohol use, I could get professional help if I wanted to					
If good friends asked my advice about their problems with alcohol use, I might recommend that they see a professional					
I would willingly confide intimate matters to an appropriate person if I thought it might help me or a member of my family with problems with alcohol use					
Having problems with alcohol use carries with it a burden of shame					
I would be embarrassed if my neighbor saw me going into the office of a professional who deals with those who have problems with alcohol use					
Important people in my life would think less of me if they were to find out that I was experiencing problems with alcohol use					

Having been diagnosed with an alcohol use disorder is a blot on a person's life.					
I would be uncomfortable seeking professional help for problems with alcohol use because people in my social or business circles might find out about it					
I would feel uneasy going to an alcohol use professional because of what some people would think					
I would not want my significant other (spouse, partner, etc.) to know if I were suffering from problems with alcohol use.					
Had I received treatment for problems with alcohol use I would not feel that it ought to be covered up					

APPENDIX G

NORMATIVE BELIEF SCORE

How likely is it that each of the following people would think that you should seek professional help if you were experiencing general **mental health concerns**?

	Extremely unlikely						Extremely Likely	N/A
Family								
Friends								
Peers (Coworkers, classmates, teammates, etc.)								
Partner (girlfriend, boyfriend, spouse, etc.)								
Non-familial authority figures (bosses, coaches, advisors, teachers, etc.)								

How likely is it that each of the following people would think that you should seek professional help if you were experiencing **problems with alcohol use**?

	Extremely unlikely						Extremely Likely	N/A
Family								
Friends								
Peers (Coworkers, classmates, teammates, etc.)								
Partner (girlfriend, boyfriend, spouse, etc.)								
Non-familial authority figures (bosses, coaches, advisors, teachers, etc.)								

Indicate the extent to which you agree with the following statements:

Generally, you do what your family thinks you should do.

[ ] Strongly Disagree
[ ] Disagree
[ ] Somewhat Disagree
[ ] Neither Agree nor Disagree
[ ] Somewhat Agree
[ ] Likely
[ ] Strongly Agree

Generally, you do what your friends think you should do.

[ ] Strongly Disagree
[ ] Disagree
[ ] Somewhat Disagree
[ ] Neither Agree nor Disagree
[ ] Somewhat Agree
[ ] Likely
[ ] Strongly Agree

Generally, you do what your peers (classmates, teammates, coworkers, etc.) think you should do.

[ ] Strongly Disagree
[ ] Disagree
[ ] Somewhat Disagree
[ ] Neither Agree nor Disagree
[ ] Somewhat Agree
[ ] Likely
[ ] Strongly Agree

Generally, you do what your partner (girlfriend, boyfriend, spouse, etc.) think you should do.

[ ] Strongly Disagree
[ ] Disagree
[ ] Somewhat Disagree
[ ] Neither Agree nor Disagree
[ ] Somewhat Agree
[ ] Likely
[ ] Strongly Agree

Generally, you do what relevant authority figures (teachers, bosses, coaches, etc.) think you should do.

[ ] Strongly Disagree
[ ] Disagree
[ ] Somewhat Disagree
[ ] Neither Agree nor Disagree
[ ] Somewhat Agree
[ ] Likely
[ ] Strongly Agree

APPENDIX H

INDIVIDUAL BARRIERS TO HELP-SEEKING CHECKLIST: MENTAL HEALTH

The following items ask you about things which may potentially prevent you from receiving care for problems with **general mental health**. Indicate whether or not you consider the following items to be barriers to seeking professional help for **MENTAL HEALTH CONCERNS.**

	Yes	No
Lack of time		
Lack of confidentiality		
Concern that "No one will be able to understand my problems"		
Stigma of mental health care		
Feeling that my problems are not important		
Cost		
Fear of unwanted intervention		
Feeling that "Using services will mean I am weak"		
Fear of documentation on academic record		
Difficulty with access to care		
Lack of availability of services		
Concern about lack of sensitivity to cultural issues		
Concern about lack of sensitivity to sexual identity issues		
Other		

APPENDIX I

INDIVIDUAL BARRIERS TO HELP-SEEKING CHECKLIST: ALCOHOL USE

The following items ask you about things which may potentially prevent you from receiving care for problems with **alcohol use**. Indicate whether or not you consider the following items to be barriers to seeking professional help for **PROBLEMS WITH ALCOHOL USE.**

	Yes	No
Lack of time		
Lack of confidentiality		
Concern that "No one will be able to understand my problems"		
Stigma of professional help for problems with alcohol use		
Feeling that my problems are not important		
Cost		
Fear of unwanted intervention		
Feeling that "Using services will mean I am weak"		
Fear of documentation on academic record		
Difficulty with access to care		
Lack of availability of services		
Concern about lack of sensitivity to cultural issues		
Concern about lack of sensitivity to sexual identity issues		
Other		

APPENDIX J

GENERAL HELP-SEEKING QUESTIONNAIRE: MENTAL HEALTH

Below is a list of people who you might seek help or advice from if you were experiencing ***general mental health concerns***.

Please select the number that shows how likely is it that you would seek help from each of these people for a personal or emotional problem during the next 4 weeks?

	Extremely unlikely						Extremely Likely
Partner (boy/girlfriend)							
Friend							
Parent							
Family (non-parent)							
Mental Health Professional							
Help Line							
Doctor/General Practitioner							
Pastor/Priest							
Youth Worker							
Would Not Seek help							

APPENDIX K

GENERAL HELP-SEEKING QUESTIONNAIRE: ALCOHOL USE

Below is a list of people who you might seek help or advice from if you were experiencing ***alcohol use concerns***.

Please select the number that shows how likely is it that you would seek help from each of these people for an alcohol use issue during the next 4 weeks?

	Extremely unlikely						Extremely Likely
Partner (boy/girlfriend)							
Friend							
Parent							
Family (non-parent)							
Alcohol Use Professional							
Help Line							
Doctor/General Practitioner							
Pastor/Priest							
Youth Worker							
Would Not Seek help							

APPENDIX L

BRIEF SYMPTOM INVENTORY (BSI)

Indicate the degree to which each of the following symptoms cause you distress.

	Not at all				Extremely
Nervousness or shakiness inside					
Faintness or dizziness					
The idea that someone else can control your thoughts					
Feeling others are to blame for most of your troubles					
Trouble remembering things					
Feeling easily annoyed or irritated					
Pains in the heart or chest					
Feeling afraid in open spaces					
Thoughts of ending your life					
Feeling that most people cannot be trusted					
Poor appetite					
Suddenly scared for no reason					
Temper outbursts that you could not control					
Feeling lonely even when you are with people					
Feeling blocked in getting things done					
Feeling lonely					
Feeling blue					
Feeling no interest in things					
Feeling fearful					
Your feelings being easily hurt					
Feeling that people are unfriendly or dislike you					
Feeling inferior to others					
Nausea or upset stomach					
Feeling that you are watched or talked about by others					
Trouble falling asleep					
Having to check and double check what you do					
Difficulty making decisions					

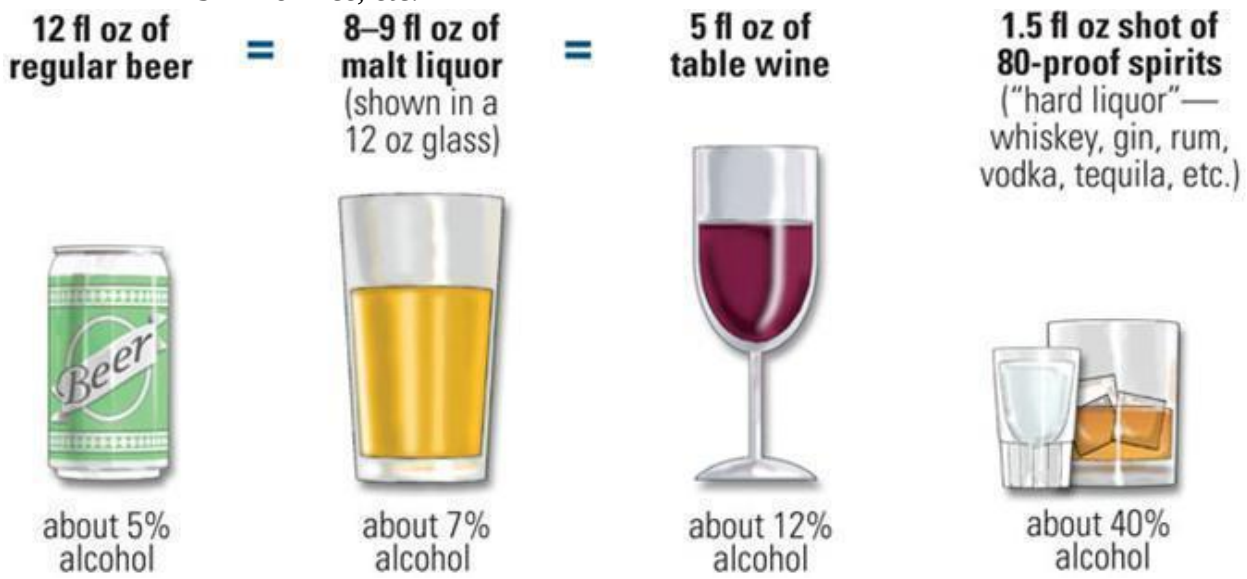
Feeling afraid to travel on buses, subways, or trains					
Trouble getting your breath					
Hot or cold spells					
Having to avoid certain things, places, or activities because they frighten you					
Your mind going blank					
Numbness or tingling in parts of your body					
The idea that you should be punished for your sins					
Feeling hopeless about the future					
Trouble concentrating					
Feeling weak in parts of your body					
Feeling tense or keyed up					
Thoughts of death or dying					
Having urges to beat, injure, or harm someone					
Having urges to break or smash things					
Feeling very self-conscious with others					
Feeling uneasy in crowds					
Never feeling close to another person					
Spells of terror or panic					
Getting into frequent arguments					
Feeling nervous when you are left alone					
Others not giving you proper credit for your achievements					
Feeling so restless you couldn’t sit still					
Feelings of worthlessness					
Feeling that people will take advantage of you if you let them					
Feeling of guilt					
The idea that something is wrong with your mind					

APPENDIX M

DAILY DRINKING QUESTIONNAIRE

The following questions have to do with alcohol use. For these questions, please choose the answer that best describes your drinking in the **past 3 months**.
One drink is equivalent to…

- 1 Beer ((12 ounces)
- 1 Wine cooler (12 ounces)
- 1 Glass of wine (5 ounces)
- 1 Shot of liquor (1-1.5 ounces)
- 1 Mixed Drink (1-1.5 ounces of liquor)
- 1 Malt Liquor (12 ounces) –e.g., Mike's Hard Lemonade, Skyy Blue, Zima, Smirnoff Ice, etc.



1. Please think about your typical drinking over the **PAST 3 MONTHS**. On a typical day, how many drinks would you have, and over how many hours would you have them? That is, how many drinks would you typically have on each day in the past three months? How long (in hours) would a typical drinking occasion last on that day?

Over the PAST 3 MONTHS, on a….

	TYPICAL MONDAY	TYPICAL TUESDAY	TYPICAL WEDNESDAY	TYPICAL THURSDAY	TYPICAL FRIDAY	TYPICAL SATURDAY	TYPICAL SUNDAY
# OF DRINKS							
# OF HOURS							

1. In the **PAST 3 MONTHS**, how many times have you had five or more drinks at a single sitting, either of beer, wine, wine coolers, liquor, or some combination of these?

1. Didn't drink 5 or more drinks in a single sitting in the past year
2. Once in the last year
3. 2-3 times in the last year
4. About once or twice a month
5. Once or twice a week
6. 3-4 times a week
7. Nearly every day
8. Every day

2. In the **PAST 3 MONTHS**, how many times have you had five or more drinks within a 2-hour period, either of beer, wine, wine coolers, liquor, or some combination of these?

1. Didn't drink 5 or more drinks in a 2-hour period in the past year
2. Once in the last year
3. 2-3 times in the last year
4. About once or twice a
5. Once or twice a week
6. 3-4 times a week
7. Nearly every day
8. Every day

3. Think of the one occasion during the past 3 months when you drank the most:
a. How many standard drinks did you consumed? ____ drinks
b. Over how many hours did you consume those drinks (i.e., how long did it take for you to consume those drinks? ____ hours

APPENDIX N

ATTENTION CHECKS

The following questions are attention checks. They will be placed throughout the survey to ensure that participants are fully reading the questions. They will consist of questions with straightforward and simple answers.

Attention Checks

1) **Please select the option "Extremely Unlikely"**

	Extremely unlikely						Extremely Likely
Please select extremely unlikely							

2) **Please select the number "55"**
   A) 13
   B) 64
   C) 55
   D) 22

3) **Please select the option "Extremely Likely"**

	Extremely unlikely						Extremely Likely
Please select extremely unlikely							

4) **Please select the number "32"**
   A) 20
   B) 32
   C) 75
   D) 8

VITA

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EDUCATION

Master of Science student in Psychology at Old Dominion University, 250 Mills Godwin Life Sciences Building, Norfolk, VA 23529. August 2017-Present. Thesis Title: "The Role of Athletic Identity in General Mental Health and Alcohol-Related Help-Seeking Intentions of College Students."

Bachelor of Arts (May 2015) in Psychology, Georgetown University, Washington, D.C.

ACADEMIC EMPLOYMENT

Graduate Teaching Assistant, Department of Psychology, Old Dominion University, January 2020-May 2021.

RESEARCH

Young, M., Braitman, A. L., Colangelo, M., & Heron, K. (2018, March). *Booster efficacy for extending alcohol reductions post-intervention*. Poster presented at the Collaborative Perspectives on Addiction annual convention, Tampa, Florida.

Young, M., Braitman A. L., Lau-Barraco, C. (April 2021). *The Role of Athletic Identity in General Mental Health And Alcohol-Related Help-Seeking Intentions of College Students*. Thesis in preparation.

Ehlke, S. J., Young, M., Colangelo, M., Stamates, A. L., & Braitman, A. L. (2021). Event-specific drinking and protective behavioral strategy use among college students. *Addiction Research & Theory*, *29*(1), 47-54.

Colangelo, M., Braitman, A. L., Young, M, & Heron, K. (2018, March). *Protective behavioral strategies: Exploring prediction strength by scale*. Poster presented at the Collaborative Perspectives on Addiction annual convention, Tampa, Florida.