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Men, Athletic Identity, Masculinity, and Alcohol: an Examination of Health Risk Patterns in Male Collegiate Athletes

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MEN, ATHLETIC IDENTITY, MASCULINITY, AND ALCOHOL: AN EXAMINATION OF HEALTH RISK PATTERNS IN MALE COLLEGIATE ATHLETES

by

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ABSTRACT

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by

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The aim of study was to examine the health risk behaviors (alcohol use /abuse) of male student athletes and the relationship these behaviors have to their athletic identity and conformity to masculine norms. Alcohol usage has been identified as a significant health risk behavior exhibited by male collegiate athletes and the study sought to examine the correlations with and athletic identity and conformity to masculine norms using the Athletic Identity Measurement Scale (AIMS), Conformity to Masculine Norms Inventory (CMNI-46), and the AUDIT-C. Correlation analyses and multiple regression analyses were utilized to statistically explore the relationship between the three variables. Results are carefully discussed taking into consideration potential limitations to the study. Recommendations for further research were also provided.

TABLE OF CONTENTS

LIST OF FIGURES.....vi

LIST OF TABLES AND GRAPHS.....vii

ACKNOWLEDGMENTS.....viii

CHAPTER I: Introduction.....1

Theoretical Context.....5

Purpose of the Study.....10

Significance of the Study.....11

Summary.....11

CHAPTER II: Review of Scholarly Literature.....13

Population.....13

Theoretical Framework.....15

Identity.....15

Social Identity Theory.....17

Identity Foreclosure.....18

Athletic Identity.....19

Adherence to Athletic Identity.....21

Conformity to Masculine Norms.....22

Athletic Identity and Alcohol Consumption.....23

Conformity to Masculine Norms and Alcohol Consumption.....26

Potential Construct Connections.....30

Conformity to Masculine Identity and Athletic Identity.....31

Summary.....35

CHAPTER III: Methods..... 36
Introduction..... 36
Participants..... 38
Measures..... 40
Demographic Questionnaire..... 41
Athletic Identity Measurement Scale..... 41
Conformity to Masculine Norms..... 43
Alcohol Use Disorders Identification Test..... 44
Procedures..... 45
CHAPTER IV: Results..... 47
Introduction..... 47
Conceptual Diagram..... 49
Results of Correlation Analysis..... 50
Test of Assumptions..... 50
Hypothesis 1..... 51
Hypothesis 2..... 52
Hypothesis 3..... 52
Hypothesis 4..... 53
Hypothesis 5..... 53
Hypothesis 6..... 54
Hypothesis 7..... 54
Hypothesis 8..... 54
Hypothesis 9..... 55

Hypothesis 10.....55
Results of Regression Analysis.....56
Test of Assumptions.....56
Hypothesis 11.....58
CHAPTER V: Discussion.....60
Summary of Results.....60
Interpretation of Results.....61
Limitations.....63
Further Research Recommendations.....65
CHAPTER VI: Graphs.....67
CHAPTER VII: References.....73
APPENDICES.....86
I. Demographic Questionnaire 86
II. Conformity to Masculine Norms Inventory-46 (CMNI) 87
III. Athletic Identity Measurement Scale (AIMS) 90
IV. Alcohol Use Disorder Identification Test (ADUIT) 91
V. Informed Consent 92

LIST OF FIGURES

Figure #	Figure title	Page #
Figure 1	Diagram 1	50

LIST OF TABLES

Table #	Table title	Page #
Table 1	Table 1	40
Table 2	Table 2	40
Table 3	Table 3	51
Table 4	Table 4	59

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"Nope" - *Travis S. Love*

Chapter One INTRODUCTION

Problem Statement

According to a recent study by the American College Health Association (ACHA) with more than 190,000 respondents, 30 percent college students reported feeling depressed during a 12-month period (Kearns-Davoren & Hwang, 2014). 50 percent also reported feelings of overwhelming anxiety during that same period (Kearns Davoren & Hwang, 2014). Depression and anxiety have been linked negative symptomology such as, low grade point average, and decreased athletic performance, in college students. Depression and anxiety has also been linked to increased health risk behaviors such as, binge drinking, drug use, and suicide, in college students. The Substance Abuse and Mental Health Services Administration (SAMHSA) (2018) reported that, 53.6 percent of full-time college students were current drinkers, 34.8 percent were reportedly binge drinkers, and 9.7 percent reported being heavy drinkers (SAMHSA, 2018). Males are more likely than females to be "heavy drinkers," which were defined as, "binge drinking five or more days out of a month (SAMHSA, 2018)." Overall, in 2017, approximately 13.5 percent of full-time college students could be classified with a substance-use disorder (SAMHSA, 2018).

The ACHA also reported that suicide is the second leading cause of death among college aged students (ages 15-24) (Rosiek et al., 2016). The CDC reports (2017) that suicide rates in males are approximately 4 times higher than their female counter parts (NIMH, 2019). Collegiate student athletes experience periods of anxiety and depression but are less likely than non-student athletes to report these experiences (Kearns Davoren & Hwang, 2014). With the clinical issues that male collegiate student athletes have reported facing, it is important that they have effective supports in place. There has been a divide in institutional faculties (coaches, advisors,

administration) ability to identify, and address unhealthy behaviors and moods within its student's athletes; Comprehension is an important place to start.

The world of entertainment is dominated by a variety of professional athletes with hearty salaries. According to Forbes annual list of "World's Highest-Paid Athletes 2019," Lionel Messi (Soccer Player) topped the list at an astounding $127 million annual income with about $35 million coming from his sponsors which include the likes of, Adidas and Mastercard (Badenhausen, 2019). The widespread notoriety of sports sparked a surge in overall participation in organized sport. In 2018, there was a sizable increase in the total of both high school and collegiate athletes with high school athletes reaching an approximate 7,980,886 athletes (NFHS, 2018), and collegiate sports reaching an approximate 494,992 athletes (Schwarb, 2018). With increased participation in sport, athletes are given increased opportunities to understand the costs and benefits of what it means to be an elite athlete.

From primary school through college, student athletes are seen as the "face" of an institution, leading the charge in the fight for superiority against other schools in organized sport. On the field, on the court, and on the mat, they compete to protect the sanctity of their school and its denizens. Student athletes are afforded certain amenities that can make their commitment to their sport and institution, appear worth it. Athletic equipment, study table programs, scholarship offers, and a surge in popularity, can make the average athlete invest deeply into their sport, in hopes gaining and maintaining elite status. The high school social ladder is clear, the "jocks" are always at the top and from the outside looking in. Everyone wants to be the "captain of the team" headed into college.

The collegiate ranks provide a proving grounds for many of today's next professional athletes. These athletes attend over 1300, junior college (JUCO) and undergraduate institutions,

division sanctioned by the NCAA, with the hopes of attaining a degree and fostering skills that will help them cross over into the professional ranks. According the NCAA, nearly half a million student athletes participate in 24 sports, each year (Schwarb, 2018). Males make up the vast majority of NCAA athletes, at nearly 300,000, nation-wide (Schwarb, 2018). With the status of student athlete can be accompanied with challenges, both in and outside of sport.

Participation in collegiate sports can cause significant challenges for many student athletes. Collegiate student athletes can experience pressures that they must overcome in order to maintain success in their competitive domain(s). Physically, they face enduring workouts, difficult time commitments, academic challenges, increased potential for burnout, and, considerable competition, which can be critical to those who are not equipped or effectively supported. Emotionally, challenges can include, but are not limited to, difficulty in emotional insecurity in adjusting to the rigors of collegiate level competition in sport, feelings of doubt or distrust for physical prowess in sport, and psychological dysfunction related to performance in sport. Socially, athlete specific challenges can add to it the pressures imposed by peers and faculty due to the constant comparison to other athletes, managing the perceived weight of striving for a successful season for the entire institution and, difficulty in maintaining an adaptive rapport with coaches and teammates. Those challenges can also be comorbid with more "expected stressors" of traditional college students that can include, difficulty maintaining adaptive peer groups, imposture syndrome, and, academic / financial hardship associated with attendance (Anderson, 2004; Thomas, 2008). These stressors can lead to physiological challenges, such as, decreased restful sleep, lethargy, disordered eating, and or, substance use (Armstrong & Oomen-Early, 2009; Hammond et al., 2013).

Harper and Harris (2010) found that men attending college are exposed to an increased potential of health risk behaviors including but not limited to, risky sexual behaviors, drug use (prescription mismanagement or otherwise), and binge drinking behaviors. Binge drinking games such as, "beer pong" and collegiate social gatherings where alcohol use is strictly promoted, such as, "kegger(s)," are stereotypical of normative practices of college students. Dams-O'Connor et al. (2006) found that an estimated 61 percent of male collegiate student athletes engage in binge drinking. There is also empirically supported data citing that alcohol use is perceived is an accepted practice within the context of sport (Ford, 2007). These aspects are believed to be related to the alcohol use of student athletes (Ford, 2007). The ease of accessibility to alcoholic beverages at sporting events and alcohol marketing campaigns in the United States, highlight the potential association between masculinity and alcohol use and abuse (Iwamoto et al. 2011).

There is insufficient research into the area of athletic identity and the coping skills of male student athletes. One specific void in research is a firm examination of their health risk behaviors in relation to potential connection between athletic identity and their conformity to masculine norms. Since this population has been reported to participate in increased health risk behaviors, it is important comprehend the foundation (ideas, norms, roles) that bolsters coping strategies within them. If the students have insufficient coping strategies derived from adherence to these two identities that cause them to be more susceptible to behaviors that are a detriment to their health then increased comprehension of common triggers, causes, and precipitating events, needs to be facilitated in order to provoke change and promote support. Once further research is compiled, further informed professional development opportunities can formed, advanced curriculum can be created, student support programs can be facilitated, and a variety of students can be assisted during an critical time in their development.

Theoretical Context

Athletic identity is defined as "the degree to which an individual identifies with the athlete role" (Brewer, Van Raalte, & Linder, pg. 2, 1990). Under this definition, nearly anyone can be an athlete as long as they subscribe to the subjective values and ideals of what it means to be an athlete. Simons et al., (1999) found that the extent to which an individual adheres to the athletic role is significantly influenced by coaches, teammates, teachers, professors, and other important people within in an individual's social world. An athlete's frame of reference is important to their athletic identity. The development of athletic identity, amongst other identities, finds its roots in some social cognitive theory frameworks. According to Brewer and Stephan, (2007) athletic identity has found three distinct factors that make up athletic identity as a construct which were social identity, exclusivity, and negative affectivity.

Research suggests that an individual's exclusivity to their athletic identity can have both positive or negative effects for athletes (Brewer, 1991; Brewer et al., 1993). Some potential advantages to strong adherence to athletic identity can include, creation of in vivo social networks, increased coping strategies, and sustained motivation to participate in sports (Brewer, 1991). Inversely, there has been noted potential negative consequences to a strong adherence to athletic identity which can include, difficulty managing emotional challenges that stem from injury, increased challenges with athletic career termination and, impairment of individual career maturity, in and outside of sport (Brewer et al., 1993; Brewer et al., 2000). Those negative challenges produced by increased adherence to athletic identity can facilitate insufficient coping strategies and behaviors that require more research and assessment.

Masculinity is a significant aspect of male identity. From birth, males in America are taught a script of what it is to be a "the man." This script is layered with characteristics of toughness, independence, stoicism and competitiveness. These ideologies are commonly

reinforced in advertisements, cinema, popular culture and, sports. According to a report by the Bureau of Labor and statistics (2016), 18 percent of all Americans, aged 15 and older, between 2011 to 2015, engaged in some brand of daily sport or physical exercise, which totals approximately 47 million Americans (BLS, 2016). The bureau of labor statistics also reported (2019) that there were 13,500 jobs as athletes and sports competitors in America with an estimated 8 percent projected growth in the number of these jobs between 2018 and 2028. The vast majority of those jobs belong to men.

Males are encouraged to become involved in athletics at a young age in order to provide an opportunity to establish and display masculinity (Ricciardelli et al, 2006). These masculine ideologies are core values of the "American Psyche" which highlight the association between Americans and sports (Schrack-Walters et al, 2008). For example, the elite athletes with the most significant overall individual statistical success in collegiate sports are awarded the title "All American" (Schrack-Walters et al, 2008). This title can symbolize that they are recognized as the epitome of what it means to be a man and an athlete. Collegiate athletes compete for symbols of masculine supremacy; It can manifest in many ways.

Gender theorist, Mahalik et al. (2003) states that individual conformity to masculine norms can contribute to problematic drinking in men. Masculine norms are expectations, beliefs, and assumed principles of men that are socially created. These norms are believed to be the that a man must follow in order to attain and maintain his manliness within his social context. Mahalik et al. (2003) found that:

> *"Salient masculine norms in contemporary U.S. have been identified as: striving to win at all costs (winning), sexual prowess (being a playboy), controlling one's emotions (emotional control), engaging in risk-taking behaviors (risk- taking), inclination toward physical aggression (violence), asserting influence over situations (dominance), proclivity toward independence (self-reliance), regarding work as the main priority in life (primacy of work), controlling women (power over women), aversion to being*

perceived by others as being gay (heterosexual presentation), and the desire to be important in society (pursuit of status)" (Mahalik et al., 2003).

Men adhere to masculine scripts which elicit these norms in order to continue to thrive inside of the "in group" of their social world. Conformity to masculine norms pose as a barrier or a protector factor to adaptive alcohol usage when applied effectively. Adherence to masculine norms such as, independence (self-reliance) or emotional control, have the potential to protect against problematic drinking behaviors. Self-reliance and emotional control can evoke principles of discipline and objectivity, allowing for them to effectively regulate alcohol intake; Some conformists to masculine norms are not as strong willed.

In the United States, males are specifically encouraged to engage in substance use, and participate in health risk behavior (Courtenay, 2000). Theoretical models of masculinity suggest that conformity to masculine norms has the potential to protect individuals from adverse participation in alcohol consumption or increase risk for it (Courtenay, 2000). Adhering to the masculine norms of risk taking and the power placed on dominance may increase the risk of problematic drinking because they can be used to overestimate ones perceived ability to endure amounts of alcohol (Young et al., 2005). For example, a rite of passage into "manhood" for many young males is drinking their first alcoholic beverage. It determines whether or not as a man, he will be able to "hold his liquor" and effectively conform masculinity as established. According to theory surrounding masculine norms (Courtenay, 2000), men who are able to hold their liquor are socially accepted by their peers to be "manly," and those who are unable to are believed to be impotent (Lemle & Mishkind, 1989). The inability to consume and tolerate exorbitant amounts of alcohol can be perceived as a sign of weakness, a feminine attribute, or reflect shades of homosexuality (Gough & Edwards, 1998). Males are believed to engage in alcohol use as a means to develop and maintain their masculine status in the social order

(Courtenay, 2000 & Mahalik et. al, 2015). When males begin to lose their masculine status, or not be perceived as masculine, they begin to overconform to male typical behaviors in order to regain their "manhood" (Courtenay, 2000).

Research has consistently found that adult males drink alcohol more and engage in binge drinking more often than adult females (Courtenay, 2012). In a 2015 study by the ACHA, 62.6 percent of all college students report recent alcohol use (American College Health Association, 2015). A systematic review of articles related to college drinking and sport related factors found that 61 percent of male student-athletes binge drink compared to only 43 percent of non-student athlete males (Martens, Dams-O'Connor et al., 2006). This review also reported that 29 percent of male student athletes also reported heavy episodic drinking incidents compared to only 18 percent of non-athlete males (Martens, Dams-O'Connor et al., 2006). Male collegiate student athletes have been found, to at times be a very fragile population with a need for direct support.

The intersection between conformity to masculine norms and athletic identity is based speculation coupled with theoretical examples. Mahalik et al. (2003) proposed a group of masculine scripts that men often use to cope with stressful situations in their social worlds. Mahalik et al. (2003) proposed scripts of as salient masculine norms that include, the "Strong-and-Silent" script, the "Tough-Guy" script, the "Give-'em Hell" script, the "Playboy" script, the "Homophobic" script, the "Winner" script, and the "Independent" script. These scripts appear to align closely with three central constructs of athletic identity which are, negative affectivity, social identity, and exclusivity (Brewer and Stephan, 2007). Both masculine scripts and athletic identity constructs may align in order to promote adaptive and maladaptive functioning as an athlete and as a man. Masculine scripts and athletic identity may have similar components or a correlation that drive coping strategies for males, which can be a gift or a curse.

Negative Affectivity is similar to the winning script as, male athletes are supposed to be both competitive and successful (Mahalik et al, 2003). Male athletes who exhibit strong adherence to masculine norms and athletic identity who also experience consistent losing efforts and are deemed to not be a competitive match, experience feelings of weakness, fragility, or feelings insecurity with their identity as a male athlete. These feelings can be contradictory to the both masculine norms and the constructs of athlete role which can facilitate dysfunction. Decreased identification with masculine and athletic identities can lead to maladaptive coping strategies such as, substance use (Mahalik et al., 2003). Males who endorse competition, success, and power have also been found to display more maladaptive psychological defenses. (Mahalik et al., 1998). These maladaptive psychological defenses can also lead to increased substance use.

Social identity is a part of the homophobic, playboy, tough-guy, and independent scripts. Male athletes are being rated, ranked, and critiqued by their competition, coaches, fans, and their peers, in categories reaching far beyond points per game. In order to reinforce their social identity as an elite male athlete, males want to be viewed as a heterosexual, emotionally suppressed, ladies' man, strong enough to take on an entire team in the spirit of competition. Inadequacies in these aspects lead to feelings of fragility and decreased identification as an athlete and or man, leading to insufficient coping strategies such as, substance abuse, projection, turning against their peers, and other immature psychological defenses (Mahalik et al., 1998).

Exclusivity closely aligns with all of the proposed scripts as its processes closely resembles to progression that occurs within male gender role conflict. Males interact with themselves and their social worlds, in order to be perceived, recognized, and respected, as a male. Any conflicts in their behavior and beliefs as a male or athlete can, again, lead to dysfunction, which has been shown to be at times coupled with insufficient coping strategies

(Mahalik et al.,1998) For example, if a male athlete is unable to express the emotions of sadness or grief, he is likely to turn to alternate coping mechanisms, such as substance abuse (Mahalik et al.;2003). Exclusivity to athletic identity and masculine norms can lead to similar modes of dysfunction.

Strong adherence to these identities (male and athlete) can be adaptive or maladaptive depending on the individual′s self-esteem, ego, situation, social standing, and a multitude of other variables. Strong adherence to these masculine scripts have been shown to have inhibiting interactions with tasks associated with help seeking behaviors such as, admitting that you need some brand of help, being able to effectively label emotions, and being able to express your needs to another person, in times of turmoil (Mahalik et al, 2003). There is research highlighting the inverse relationship for males′ adherence to gender roles and help seeking for physiological and psychological needs (Good et al.,1990, Robertson & Fitzgerald, Pollack, 1998). There is also research highlighting periods of anxiety and depression that student athletes face which has found that they have been less likely than non-student athletes to report these experiences (Kearns Davoren & Hwang, 2014). Coupled with the point that male collegiate student athletes have been found to be more likely to be characterized as ″heavy drinkers″ and exhibit increased binge drinking behaviors in comparison with non-student athletes (Martens, Dams-O′Connor et al., 2006; (SAMHSA, 2018), it may be assumed that maladaptive coping strategies in managing athletic and male identity conflicts can lead to excessive alcohol use (Watson, Royland, and Beck; 2005). The most significant determinant of excessive alcohol use in America is identifying as a male (CDC, 2017); Understanding the interaction of between these identities may help us to better manage these challenges within our student populations.

Purpose of the Study

The purpose of the study was to examine the alcohol consumption patterns of male collegiate student athletes and the relationship these behaviors have to their athletic identity, conformity to masculine norms, age, and years in sport. This study investigated the predictors of alcohol consumption among male college student athletes using predictors of: Alcohol Use Disorders Identification Test (AUDIT), The Athletic Identity Measurement Scale (AIMS), and the Conformity to Masculine Norms (CMNI-46), the reported age of participants in the study, and the number of years in participation in NCAA sanctioned sports. This study attempted to answer the following question: To what extent, if any, do the *athletic identity, conformity to masculine norms, age, and years in sport,* predict *alcohol consumption* in male collegiate athletes.

Significance of Study

As mentioned above, student athletes experience significant issues with anxiety, depression, and identity which can cause them to increase a health risk behaviors. There is significant research into the stressors that make male student athletes susceptible to these experiences but there is very little research into comprehension how the adherence to their identity as an athlete and their conformity to masculine norms, and how it can predict their engagement in health risk behaviors. This study could provide scientific insight into specific norms held and how they are linked with given health risk behaviors. The results of this study can be used to spread awareness of the maladaptive norms and thought processes that continue to hinder the progress of student athletes.

Summary

The aim of this study was to examine the alcohol use and or abuse, of male student athletes and the relationship these behaviors have to their athletic identity and conformity to masculine norms. Institutions continue to emphasize core values of what it means to be an

adaptive student-athlete and hold a common philosophy that the well-being of student-athletes is a top priority. The amount of responsibility and expectations are significant for these student-athletes. These pressures can often increase a student-athlete's susceptibility to health risk behaviors and create emotional and socio-behavioral dysfunction. Student athlete pressures may continue to expand each year as participants in organized sport continues to grow. It is obvious that this population of students would benefit from increased support. It is important that programs, curriculum, and policies are created in order to support and foster adaptive growth within this population. Since the factors of athletic identity and conformity to masculine norms have been found to be detrimental to student athletes at times, this study looks to provide necessary research into the nuances of these two variables and how they intersect with alcohol use. Chapter two works to present a review of literature relevant to the proposed study.

Chapter Two REVIEW OF SCHOLARLY LITERATURE

As discussed in Chapter 1, the proposed study sought to examine the health risk behaviors, alcohol use and or abuse, of male student athletes and the relationship that these behaviors have to their endorsement of athletic identity and conformity to masculine norms. This chapter provided a review of literature that is relevant to the study. First, this chapter reviewed literature relevant to male collegiate student athletes and alcohol consumption behaviors. Secondly, this chapter reviewed theoretical constructs related to athletic identity and conformity to masculine norms and how they may be related to alcohol usage behaviors in male collegiate student athletes. Lastly, this chapter reviewed and critique relevant research surrounding the identified constructs and assess how they examine their relationship to male collegiate student athletes.

Population

The physical and emotional demands of participating in collegiate sports has been found to be more of a strain than the typical stressors that non-student athlete′s experience (Humphrey et al., 2000). College student athletes must balance the demands of participation in sports, the academic demands, and the demands of their peers, coaches, and family, in the midst of maturing as a person, let alone as an athlete. The time commitment to athletics can create increased strained on student athletes when compared to their peers. The NCAA (Jcoram, 2013) mandated that student′s athletes can spend no more than 20 hours per week and no more than 4 hours per day, participating in organized athletic activities during the season. That same year, Chen, Mason, Middelton, and Salazar (2013) found that student athletes spend more than 23 hours participating in athletic activities, on average. Not only is this higher than the mandated 20 hour per week limit, it also highlights the fact that student athletes are commonly working to the latter

end of that time limit, increasing their time commitment athletically causing potential disparities academically, emotionally, and spatially.

Research suggests that student athletes utilize alcohol in order to cope with the increased stressors and pressures of athletic participation (Martens, Watson, Royland, and Beck; 2005). The "normal" college experience in America also sadly includes some brushes with alcohol and drugs, especially student athletes. The ACHA (2015) reported, 62.6 percent of all college students report recent alcohol use (American College Health Association, 2015). There is also empirically supported data citing that alcohol use is perceived as an accepted practice within the context of sport (Ford, 2007). These perceptions are believed to be related to the alcohol use of student athletes (Ford, 2007). The final report of the NCCA's National Study of Substance Use Habits of College Student Athletes asserts that, 80 percent of all student-athletes reported using alcohol over a one-year period with 44 percent of males reporting engaging in binge drinking behavior (Rexroat, 2014). A systematic review of articles related to college drinking and sport related factors found that 61 percent of male student-athletes participate in binge drinking compared to only 43 percent of non-student athletes (Martens, Dams-O'Connor et al., 2006). This review also reported that 29 percent of male student athletes participated in heavy episodic drinking incidents compared to only 18 percent of male non-athletes (Martens, Dams-O'Connor et al., 2006). These staggering numbers are also coupled with the findings of several studies that student athletes are significantly more likely to engage in binge drinking behaviors than non-collegiate student athletes. More staggering, Ford (2007) even when controlling for significant variables such as, age, gender, race and academic performance, student athletes were still found to engage in binge drinking behaviors at significantly higher rates than their counterparts. Student athletes have been found to have increased access to alcohol use prevention and

reduction resources and yet, higher rates of binge drinking and negative alcohol related consequences among student athletes continue to persist (Nelson & Wechsler; 2001).

With these findings related to maladaptive student athlete drinking behaviors come a significant increase in negative consequences for this fragile population. Studies have found significantly higher rates in the likelihood of, inconsistent attendance (Doumas et al., 2007; Nelson & Wechsler, 2001), interpersonal dysfunction (Doumas et al., 2007; Leichliter et al., 1998; Nelson &Wechsler, 2001), engagement in potentially volatile sexual practices (Barry et al., 2015; Hildebrand et al., 2001; Nelson & Wechsler, 2001), and increases in reported suicidal ideation (Barry et al., 2015) in college athletes than in non- student athletes. This population is in dire need of support.

Theoretical Framework

The theoretical framework for this study proposed relationships among athletic identity, conformity to masculine norms and, health risk behaviors among the male student athletes. There has been some research in examining the health risk behaviors associated with strict adherence to athletic identity and conformity to masculine norms independently but, there has not been research examining those constructs in conjunction with each other. Further research needs to be completed in order to fully comprehend the similarities and connections between then and how they may cause maladaptive coping. To start, I reviewed literature related to the constructs independently, from a foundational level.

Identity

Stryker & Burke (2000) define identity as parts of our self-concept which is composed of meanings that we attach to the variety of roles we enact within our different social environments (pg. 284). Our identities, can include a variety of aspects such as, being a good brother, a dependable friend, or elite athlete. Identity can involve a cognitive measure of one's

self-description and self-evaluation (Duda, 1999). The interaction of these processes allows for a subjective and objective critique of internal and external stimuli which can inform our self-esteem and sense of self-worth (Duda, 1999). The positive and negative feelings we experience towards our sense of self can maintain and or, significantly change our identity. Erikson's stages of Psychosocial Development are used a framework for identity development for this study.

Erik Erikson was a premier child psychoanalyst of the 19th century (Elkind, pg.2, 1970). His ideas of the stages of psychosocial development further added to Freudian ideas of developmental stages, adding a social interaction component (Elkind, pg.6, 1970). This social interaction component is described as "a new dimension in a person's interaction with himself, and with his social environment" (Elkind, pg.6, 1970). In Erikson's theory, there are 8 stages of psychosocial development. At each stage, individuals will encounter and overcome a psychosocial crisis in order to move forward in their development (Sokol, pg. 147, 2009). According to Erikson, the fifth stage of psychosocial development is "identity v.s role confusion" (Elkind pg. 12, 1970). This stage is said to occur roughly between the ages of 12 through 18 (Elkind, pg.12.1970). During the fifth stage, the critical crisis for the individual is to establish a clear personal identity, within themselves and in their social environment, without issues of role confusion (Elkind pg. 12, 1970). Elkind (1970) describes this process:

> "given the adolescent's newfound integrative abilities, his task is to bring together all of the things he has learned about himself as a son, student, athlete, friend, Scout, newspaper boy and so on, and integrate these different images of himself into a whole that makes sense and that shows continuity with the past while preparing for the future. To the extent that the young person succeeds in this endeavor, he arrives at a sense of psychosocial identity, a sense of who he is, where he had been and where he is going" (pg. 13).

Elkind (1970) finds that there is still no concrete link to adherence to your identity and success or failure. As each person interacts with their social world, there are opportunities to comprehend cultural and societal values that can shift an individual's frame of reference (Elkind,

1970). Erickson saw identity development as an "ongoing process that captures one's investments throughout the long years of adulthood" (Sokol, pg.143, 2009). For student athletes, typically in their late teens and early twenties, they are in a phase of life trying to define who they are within classroom, on the field, with their friends, and in the mirror, all under a microscope; This task is daunting.

Social Identity Theory

Social Identity Theory (SIT) states that individuals are predisposed classifying ourselves and others into various social groups (Ashforth & Mael, 1989). Common group classifications are, age gender, religion, and or, sexual orientation (Ashforth & Mael, 1989). Male Student-athletes are an example of these proposed social groups as they are classified by athlete specific norms and characteristics based on athletic affiliation and gender. Individuals with higher levels of athletic identity typically surround themselves with other athletes who also strongly adhere to the concentrated characteristics of athletics, which strengthens their identification with the athlete role (Stryker, 1980). Ashforth and Mael (1989) have found that student-athletes who strongly identify with their athletic role may have an increased sense of self-esteem derived from their affiliation with their given athletic group. Male student athletes may compare their team to other teams in order to strengthen their positive self-esteem (Krane et al, 2002). Social identity theory states that male athletes are motivated to sustain a collective self-esteem which increases pride in membership of the group, creating in-group bias (Krane et al., 2002). Team, cohort, defense, offense, a wide range of athletic classifications can outline an athletes' attributes and role within that group. These classifications within the group can lead to a stronger affirmation of assumptions about the group by an individual (Brown, 2000). These assumptions can thereby cause athletes to further internalize characteristics of the group (Krane et al., 2002). As male student athletes fighting to be accepted and classified within this outlined social group, the

psychosocial stressors created can increase the level of dysfunction due to the nature of the attributes of this group and difficulty living up to them.

Identity Foreclosure

The concept of identity foreclosure has often been explored in conjunction with athletic identity. James Marcia, a clinical and developmental psychologist, theorized that individuals experience four milestone stages of identity development which are, Identity Diffusion, Identity Foreclosure, Identity Moratorium, and Identity Achievement (Marcia, 2010). His theory states that an individual's identity is primarily determined by the decisions and experiences that they acquired in their social settings (Marcia, 2010). A well develop identity gives an individual a rich sense of their uniqueness, strengths, and areas of improvement (Marcia, 2010). A person with a less well-developed identity has a limited sense of self (Marcia, 2010).

Marcia (2010) states that Identity foreclosure occurs when individuals make a commitment to an ideology or occupation, prematurely. Individuals who are foreclosed in their identity may not allow for exploration of their internal values because they may have conceded to the demands of their social environment in order to adopt their social role identity (Marcia, 2010). Male collegiate student-athletes can be primarily focused on their identity as a male student athlete and which causes them to negate other possibilities to truly explore their values system. As males athletic identity matures, identity foreclosure begins to take shape, as they begin to dissociate with other important aspects of their social identity (Good et al., 1993). Athletic identity can be a monopolizing identity as the level of identity foreclosure increases with the level of involvement sports. Foreclosure of their identity as an male student athlete, can lead to dissociation from values and ideals that do not further promote that identity. For example, a male student athlete who does not seek help with a physical injury, instead clinging to a bottle of vodka for support, may not seek the potential assistance because, "as an elite male student

athlete, I never get injured, I only produce." The negative outcomes can be dire for this population.

Athletic Identity

Athletes develop their athletic identity through progress in their athletic skills, performance, and positive social interactions with players, coaches, and their peers. The social interactions and their responses to them, help to shape their cognitive and social roles in sport and beyond. Cognitively, athletic identity helps male student athletes quickly interpret information and determine adaptive approaches that help them maintain adaptive lifestyle, inside and outside of sports. Socially, athletic identity allows male student athletes to gain a sense of power and connectedness with their team, coaches, coaches, and fans who believe in their abilities. An athletes' identification with the athletic role often works to determine an athletes' sense of self-worth and competence.

Athletic identity has been defined as the degree to which an individual identifies with the athletic role (Brewer et al., 1993). According to Brewer and Stephan (2007) athletic identity has three distinct factors that make up athletic identity as a construct which are, social identity, exclusivity, and negative affectivity. An individual's identification to their athletic identity may vary across athletes due past and current athletic experiences and their reaction to it all. Exclusivity refers to degree in which an individual's athletic identity disregards other identities causing strict adherence athletic identity (Stephan & Brewer, 2007).

Social identity refers to the subjective degree to which an individual perceives themselves as an athlete through the perspective of others in their social world (Stephan & Brewer, 2007). Brewer et al. (1993) find that the social identity construct of athletic identity may be influenced by interactions with family, friends, coaches and teammates, grossly shifting their perception toward their confidence as an athlete.

Negative Affectivity refers to the degree of which poor performance in sport, physical or mental injury, and demotion from a position or team, can negatively affect an individual's adherence to their athletic identity (Stephan & Brewer, 2007). A student athlete who places a high value on their athletic performance outcomes could be significantly affected by negative affectivity. Athletic identities are far more complex than initially understood.

Student athletes can experience a variety of interruptions in athletics that can cause a significant chain reaction of lasting effects. For example, consistent below average athletic performance may lead to demotion of position on the team or decreased playing time. These potential consequences can lead the athlete to lose the motivation to train or continue to participate in the sport. Decreases in quality and frequency of training can cause a higher propensity for injury leading to sport termination or premature retirement. This series of events is common and even one of these events can facilitate significant difficulties in adjusting and coping to any type of athletic failure (Horton et al., 2000). It is common for male student athletes use their athletic performance as a measure of their self-worth and athletic value (Horton et al., 2000). Studies have shown that student athletes with significant levels of athlete identity and are dissatisfied with their athletic progress and performance tend to have lower levels of self-esteem (Brewer et al., 2005; Stephen & Brewer, 2007). Brewer et al., (2005) also found that student athletes who define themselves based on their performance and athletic identity, may be vulnerable to depression following negative athletic performances which further adds to the notion of the potential correlation between athletic identity, personal values and self-worth.

Adherence to Athletic Identity

When adherence to athletic identity is critical to one's self-concept and is coupled with sport specific failures, it can have the potential to cause inhibit success in other facets of life (Coakley, 2007). Though it may be obvious, male student athletes are also, students. Melendez

(2007) found that students athletes should be considered "more at risk for emotional adjustment to college." Brown and Hartley (2003) also found that identification as an athlete may cause significant challenges to academic performance and can potentially minimize career potential options due to identity foreclosure. Strong adherence to the athletic role would denote that an individual that is has high exclusivity to the role of an athlete implying that they would disregard other identities in order to strengthen their athletic identity. For example, an athlete may place more time and energy into athletic activities (training, film study, scouting reports) in order to strengthen their athletic performance and athletic value. Student athletes only have some many hours in the day and the choice to devote more of those hours towards athletics can lead to significantly reduced emphasis on academics. Couple that with the fact that burnout, physically and emotionally, can occur, our athletes are definitely an increase risk than their peers.

Conformity to Masculine Norms

Masculine norms are standards for adaptive behaviors that are created and communicated through social interactions (Mahalik, Locke, et al., 2003). Interactions between men and women provide the stimulus for the role of each gender (Mahalik, Locke, et al., 2003). Passive observation and deduction of social interactions allow for individuals to comprehend these principles and continue to enact them (Mahalik, Locke, et al., 2003). For example, a young male can be attentive to older male aesthetic patterns and make superficial inferences about masculine norms such as, "men don't wear pink," "always wear a belt," and "never close both buttons on your sport coat." In a more direct manner, masculine norms can be communicated and reinforced through direct verbal interaction from parents and perceived important actors in their social realm. A prominent example of direct communication of masculine norms is, when a father highlighting the perceived fact that, "big boys don't cry" in order comfort him during emotionally challenging periods. As a result, men gradually begin to understand what "normal"

male behaviors are in specific social situations, and how those behaviors are viewed within the realm that they live.

Conformity to masculine norms is measured as the degree to which men adhere to socially communicated masculine norms (Mahalik, Locke, et al., 2003; Parent & Moradi, 2009). According Mahalik (2000), men experience normative gender behaviors that are filtered through individual and group aspects, such ethnicity, race, and or SES. Those aspects work to determine the extent in which an individual does or does not conform to specific masculine norms (Mahalik, 2000). For example, men who are taught to partake in physical exercise and athletics at a young age are viewed as "manly." A young man from an underprivileged background may be less likely to take up the sport of golf due to the expense that it costs to play competitively. He may experience some social discomfort due to not being able to play golf (participate in athletics or exercise) but he will still be deemed to be a man by society if he chose to play soccer instead. Depending on which specific group of male athletes (golfers or soccer players) he most identifies with, will determine not only the level of his adherence to athletic identity but also his level of conformity to masculine norms.

Mahalik et al. (2003) proposed the masculine norms of, winning (at all costs), being a playboy (having high sexual prowess), emotional control, risk-taking, violence (having an inclination towards use of physical violence), dominance, self-reliance, primacy of work (work as the main priority in), power over women, heterosexual presentation, and the pursuit of status (the desire to be important in society). Researchers have found adherence to these masculine norms may foster dysfunction, including decline in physical health, psychological symptomology, and negative attitudes towards seeking professional assistance (Green & Addis, 2012; Levant et al., 2011; Mahalik & Rochlen, 2006; Wong, Owen, & Shea, 2012). Specific

psychological symptoms that can be caused were, changes in levels of depressive symptoms, somatic concerns and irritability (Blashill & Vanderwal, 2009; Good & Wood, 1995; Good, Dell, & Mintz, 1990; Green & Addis, 2012; Magovcevic & Addis, 2008; Mahalik, Good, & Englar-Carlson, 2003). With the increased risk of these negative consequences, undergraduate males were found to be less likely to utilize mental health professionals for their psychological symptoms especially if they adhere strictly to masculine norms (Green & Addis, 2012; Levant et al., 2011). Rigid conformity to these norms can pose quite a threat to the safety and well-being of male student athletes across the world. Their coping strategies may further complicate potential adaptive functioning.

Athletic Identity & Alcohol Consumption

There is limited research evidence that alcohol consumption is related to athletic identity. Brenner and Swanik (2007) conducted a study to examine the relationship of alcohol use and collegiate athletes. The study sampled 720 student athletes (Male & Female) from NCAA Division I through III sports programs, at nine selected colleges, using an anonymous self-report survey developed and administered by the researcher at each institution (Brenner & Swanik, (2007). The survey included questions on high-risk drinking, drinking patterns, and drinking behaviors in the past month (Brenner & Swanik, 2007). Researchers asserted that they collected data for the study from the months of September to November (Brenner & Swanik, 2007). The data was analyzed by time of the year (off season v.s. in season) and Division of the athletes (Brenner & Swanik, 2007).

The results of the study found that 75 percent of all respondents reported high risk drinking in the past two weeks with 81 percent of male reporting significantly higher drinking rates than their female counter parts (Brenner & Swanik, 2007). The results of the study also found that that athletes exhibit increased high-risk drinking behaviors during their off-season

(Brenner & Swanik, 2007). This study provided a firm foundation to expand studies of to explore alcohol behaviors and athletic identity. The results are in line with previous research that collegiate males often exhibit more maladaptive drinking behaviors but also highlighted the differences in those behaviors based on time frame of sampling. In order to effectively further research to examine the link between collegiate athletes and alcohol consumption, it may be beneficial for future the researchers to take into account time frame for sampling based on the collegiate athletic calendar. One limitation of the study is utilization of an unstandardized tool to measure alcohol consumption behaviors which can potentially decrease the validity of the data. In order to further research in this area, it would be recommended to use a standardized tool in order to produce more consistent data that is easier to analyze. Another limitation is the study only used freshmen which may not be representative of the total population and can lead to difficulty in generalizing results of the study.

Grossbard et al. (2009) conducted a study to examine the link between college students, student athlete norms, athletic identity, their influence on drinking, and related consequences among incoming students. The study randomly sampled 1119 freshmen at two universities (Northeastern & Northwestern U.S.) by examining athletic identity (measured by AIMS), drinking patterns (measured by Daily Drinking Questionnaire DDQ), drinking norms (measured by Drinking Norms Rating Scale (DNRF), and problem drinking (measured by Rutgers Alcohol Problem Index (RAPI) through web-based surveys (Grossbard et al., 2009). The researchers hypothesized that athletic identity will moderate interactions between athlete specific descriptive norms and weekly drinking and high athletic identity will be associated with greater alcohol related consequences in respondents reporting greater levels of weekly drinking (Grossbard et al., 2009).

The results of the study found that athletic identity worked to moderate the relationships among perceived norms, drinking, gender and related consequences in college student athletes (Grossbard et al., 2009). Grossbard et al. (2009) found a significant positive association between the perceived athlete norms of respondents and weekly drinking patterns with higher levels of athletic identity (Grossbard et al., 2009). Researchers also reported that students with low levels of athletic identity that perceived athlete norm as low, were negatively associated with weekly drinking (Grossbard et al., 2009). This study highlighted the importance of examining athletic identity with alcohol consumption rates of collegiate student athletes coupled with other critical variables. Further research into other norms and their influence on identities is the most effective trajectory. One limitation to the study is that the researchers did not collect the type of sport each respondent participated in which cause a threat to validity and limit replication of the study. Collecting the sport that each respondent participates in allows for more directed data analysis and more generalizable results overall.

Zhou, Heim, and O'Brien (2015) conducted a study to examine the rates of alcohol consumption and psychosocial aspects between team and individual collegiate athletes. The study sampled 1785 student athletes (male & female; male n=1048) examining involvement in team or individual sport (measured by self-report), alcohol consumption patterns (measured by ADUIT-C scale), individual general happiness (measured by the Subjective Happiness Scale (SHS)), and athletic identity (measured by the AIMS) using in person surveys which tool approximately 15 minutes to complete (Zhou, Heim, and O'Brien, 2015). Researchers collected data for the study from September of 2010 until February of 2012 which allowed for them to assess athletes in both winter and summer season sports (Zhou, Heim, and O'Brien, 2015).

Results of the study found that team sports student athletes exhibited significantly higher rates of alcohol usage, subjective happiness, and athletic identity (Zhou, Heim, and O'Brien, 2015). The results found that athletic identity moderated the level of alcohol consumption between sport type (Zhou, Heim, and O'Brien, 2015). This study further perpetuates the importance of collecting the sport types of collegiate athletes while examining their relationship with alcohol consumption as there may be some sports specific norms that can be uncovered with more directed research. This study also highlighted a potentially significant variable the relationship between individual and team sport participation of the respondents which will allow for further directed analysis of potential critical interactions within their athletic identities.

The existing research indicates the significance of athletic identity and its importance when examining the drinking patterns of male collegiate student athletes. Athletic identity can be used as a more efficient variable to examine the overall behaviors of male collegiate student athletes as opposed to less stringent variables as age, division, and sport participation. The intended study seeks to expand research into this specific variable.

Conformity to Masculine Norms and Alcohol Consumption

There is firm evidence that alcohol consumption is related to specific norms of masculinity. Iwamoto et al, (2011) completed a study examining the relationship between drinking to intoxication, alcohol related consequences and, masculine norms. The study sampled the drinking experiences of 776 undergraduate males examining, fraternity status (belonging to a fraternity), frequency of drinking, Rutgers Alcohol Problems Index (RAPI), Daily Drinking Questionnaire (DDQ), and the CMNI-46 (Iwamoto et al, 2011). The study hypothesized that male college student′s individual adherence to masculine norms had a much more significant

influence on rate of drinking to and alcohol related problems than, fraternity status and perceived peer norms (Iwamoto et al, 2011).

Results of the study found that conformity to the masculine norms of being a playboy, risk-taking, and winning placed male college students at increased risk for drinking to intoxication (Iwamoto et al, 2011). The study also found that conformity to the masculine norms of being a playboy, risk taking, and self-reliance also placed male college students at increased risk to experience alcohol related problems (Iwamoto et al, 2011). The results reinforce the notions that there is a significant relationship between conformity to masculine norms and alcohol consumption behaviors. The study was one of the first to examine the multi-dimensionality of conformity to masculine norms and its influence on male college students. In order to further research in this area it would be imperative for researchers to examine the link between conformity to masculine norms and other understudied constructs. The major limitation of this study limited generalizability is that they only sampled from one collegiate university in Southern California. In order to expand the potential research on the topic, it would be imperative for further researcher to expand the sample to university across the United states and beyond.

Iwamoto et al, (2014) also conducted a study to investigate the relationship positive alcohol expectancies with masculine norms as it they contribute to alcohol use in male college students. The study sampled 804 undergraduate males examining, positive alcohol expectancies (measured by the Brief Comprehensive Effects of Alcohol (B-CEOA), conformity to masculine norms (measured by CMNI-46), drinking patterns (measured by Daily Drinking Questionnaire (DDQ) binge drinking behaviors (measured by self-report), fraternity status (measured by self-report) through web-based assessments (Iwamoto et al, 2014).

The study found that conformity to masculine norms of playboy and risk taking where positively related to heavy alcohol use (Iwamoto et al, 2014). The study also found that conformity to masculine norms of emotional control and heterosexual presentation were negatively associated with alcohol use after controlling for both, positive expectancies and fraternity status (Iwamoto et al, 2014). The study again affirms the direct link between conformity to masculine norms and alcohol consumption. More significantly, the study is one of the first to look into potential mediators of drinking behaviors in relation to conformity of masculine norms. In order to further research in this area, it is imperative that researchers to examine the potential interactions between conformity to masculine norms and other understudied constructs. The study also highlighted the effective use web-based procedures in the study of conformity to masculine norms. One limitation to the study is solicitation of unstandardized self-report of binge drinking behaviors. In order to protect the validity of future research the responses, this question should be asked within the confines of a standardized screening tool.

Zamboanga et al (2017) conducted a study to investigate the relationship between behaviors, related consequences, and drinking game motives amongst young adult males. The study sampled 905 males examining, frequency of participation in drinking games (measured by items from the Drinking Game Measure (DGM), negative drinking game consequences (measured by items from the Brief Young Adult Alcohol Consequences Questionnaire (B-Y AACQ), conformity to masculine norms (measured by CMNI-29), motives for playing drinking games (measured by Motives for Playing Drinking Games measure), and typical alcohol use on non-drinking game occasions (measured by Alcohol Use Disorders Identification Test-Consumption Scale (AUDIT-C) the anonymous self-report surveys (Zamboanga et al, 2017).

Researchers assert that the timing of their data collection was after spring break for most colleges and used Amazon′s Mechanical Turk (M-Turk) to gather data (Zamboanga et al, 2017).

The results of the study found that conformity to the masculine norms of risk taking, winning, and playboy norms were related to drinking game behaviors and related consequences as they aligned with increased endorsement of enhancement and thrill motives (Zamboanga et al, 2017). The results of the study found that conformity to the masculine norms of risk taking, winning, and power over women were related to drinking game frequency as, they aligned with positive associations with competition motives (Zamboanga et al, 2017). The study effectively utilized the standardized alcohol assessment tool, the AUDIT. With the addition of this tool, the data pertaining to typical alcohol use was standardized and easy to interpret for the researcher which is encouraging for usage in further research related to alcohol consumption and conformity to masculine norms. The researchers also employed sampling of respondents through use of Amazon′s Mechanical-Turk. The researchers assert that the sample may not be as generalizable to the population being studied as it is one of convenience but with increased demographic inclusion and exclusion criteria, it may be possible to increase overall generalizability of respondents.

One limitation of the study that may make results less generalizable is the timing of data collection being after spring break. The time frame, after spring break, is a time when the frequency drinking game participation may be increased due to the stereotypical behaviors of college students while on spring break. Respondents may have either participated in spring break activities and have some residual behaviors from their time away or did not participate in spring break activities and want to feel more connected to peers through drinking games once they return which could skew the normative frequencies of participation of drinking games for

respondents. In order to further research adaptively, it would be imperative for researchers to collect data at more normative points in the collegiate calendar, such as in the middle of fall semester or the beginning of spring semester as the fall to winter months of the collegiate are marked with decreased sporting and festive engagement events at these time.

Potential Construct Connections

Negative Affectivity refers to the degree of which poor performance in sport, physical or mental injury, and demotion from a position or team can negatively affect an individual′s adherence to their athletic identity (Stephan & Brewer, 2007). Student athletes who have strong athletic identity will likely be highly competitive in order to decrease poor performance and or demotion from their prized position. Winning as a masculine norm would cause a student athlete to place significant value on being successful and competitive in sport (Mahalik, Good, & Englar-Carlson, 2003). Men who endorse the winning masculine norm or have strong adherence to their athletic identity in order to decrease the level of negative affectivity, may be more likely to display rigid interpersonal behavior, hostility towards others, and social discomfort (Mahalik, Good, & Englar- Carlson, 2003). The connection of these two constructs, passive or direct, promote alcohol use and or abuse. I also suspect some connection between primacy of work and exclusivity and as well as pursuit of status and social identity.

As mentioned in previous studies, student athletes have been proven less likley to seek psychological assistance during periods of emotional dysfunction. Alcohol has also been proven to be readily available and a considerable means to cope for student athletes. It is important to note that strict adherence to masculine norms and variables of athletic identity are associated with the aforementioned negative consequences, but adherence to each cannot be cited as the cause of these effects. It is also important to note that fewer studies exist regarding the association between negative health outcomes, athletic identity, and conformity to masculine

norms, when compared to the larger amount of literature examining the psychological effects of rigid adherence to these constructs. The connection of these constructs is noteworthy but still unclear. It is imperative to that further research be done to understand the connections of these constructs but first there must be further complete and thorough study using the entirety the total scores against larger populations in order to appropriately begin to work to narrowly inspect each subscale (script) independently against other variables. A central purpose the current study is to assist in providing a more definitive determination of the significance of their relationship in order to provide more effective estimates to formulate more adaptive regression, mediation, and or moderation models, in further research. Using the results of this study allows future researchers to utilize a more narrowed subscale criterion of the CMNI-46 in future athletic identity research.

Conformity to Masculine Norms & Athletic Identity

There has been a variety of research that has examined conformity to masculine norms as predictors for specific outcomes (Locke & Mahalik, 2005; Mahalik et al., 2007), but there has been limited research into variables that may predict adherence to traditional masculine norms. There is even less research into how conformity to masculine norms interacts in sports and athletic identity. Some of the short list of studies were discussed in order to understand the current trajectory of research pertaining to the relationship between conformity to masculine norms and athletic identity.

Lantz and Schroeder's (1999) conducted a study that examined the relationship between athletic identity, masculinity, and femininity of college students. The study sought to expand on research by Brewer, Van Raalte, and Linder (1991) which identified a relationship between athletic identity and masculinity and exposed some learned societal gender differences in athletics. Lantz and Schroeder (1999) hypothesized that athletes with a high level of adherence to

the athletic role is associated more with the masculine role while lower adherence to the athletic role would is associated with the feminine role (Lantz & Schroeder, 1999).

The study had a sample of 409 college students who completed the AIMS and the Bem Role-Sex Inventory (BSRI) (Lantz & Schroeder, 1999). The BSRI is an assessment inventory used to measure the degree to which a person self identifies as masculine and or, feminine role (Lantz & Schroeder, 1999). The participants included, 296 non-student athletes (n=111 males and n=185 females) and one hundred thirteen student-athletes (n=62 males and n=51 females) (Lantz & Schroeder, 1999). The theory behind the study is that the scores of the AIMS and the BSRI could be correlated in order to determine the strength and exclusivity of respondent's athletic identity to their feminine or masculine role (Lantz & Schroeder, 1999).

The descriptive statistics were generated for both the overall AIMS scores and the overall BSRI scores and the total sample was then organized based on ascending score, gender, athletic status (non-student athlete v.s. student athlete) (Lantz & Schroeder, 1999). The results of the study indicated that the student athletes and those who identified highly with their athletic role, identified themselves as more masculine while non-student athletes and those who had limited adherence to their athletic role, identified themselves as more feminine (Lantz & Schroeder, 1999). The results of the study also found that across genders, the athlete role appears to be more positively correlated to masculinity and negatively related to femininity which can support the idea that sports maintain the societal ideologies and learned gender differences referenced by Brewer, Van Raalte, and Linder (1991) (Lantz & Schroeder, 1999). In order to appropriately expand the results of the study, future research would need to utilize the AIMS in conjunction with other construct assessment tools. Constructs such as, the current proposed study with

conformity to masculine norms and alcohol consumption would work to further understand the scope of intervention options for student athletes suffering.

Miller (2009) conducted a study that sought to examine the level in which collegiate student athletes identified as athletes and or jocks, as well how much these identities promote the "toxic jock." The study sampled 581 undergraduate athletes examining, conformity to masculine norms (measured by CMNI-94), primary sport ratings (self-report Likert scale items), goal orientation in sports (measured by Task and Ego Orientation in Sports Questionnaire), and sport related identities (Self evaluative statements on Likert scale), through in person and web-based surveys (Miller, 2009). The study hypothesized that strong adherence to athletic identity and or jock identity would be facilitated the conditions necessary to promote the toxic jock archetype within student athletes (Miller, 2009). Respondents attended a large university in the Northeastern U.S. and where compensated for their time through funds or research credits towards course (Miller, 2009).

Results of the study found that 55 percent respondents identified as athletes with men reported significantly higher sport related identities and conformity to masculine norms than women (Miller, 2009). Results of the study also found that athletic identity had significant interactions between was positive correlated with CMNI subscale "Winning" and "Violence" (Miller, 2009). One limitation to the study is that did not employ a standardized measure of athletic identity which significantly limits the generalizability and creates a significant threat to overall validity of the data. Another limitation to the study is the utilization of both male and female respondents. The researcher already had previous knowledge of the preeminent studies of male and female ideologies regarding masculinity norms and athletic identity. In order to

appropriately further research it would be important for researchers to analyze the interactions of constructs based in gender, separately.

Steinfeldt and Steinfeldt (2012) conducted a study to explore the relationship between athletic identity and conformity to masculine norms with collegiate football players. The researchers sampled 523 male student athletes, from NCAA Division I through III (8 U.S. colleges), examining, athletic identity (measured by AIMS), and conformity to masculine norms (CMNI-46), through voluntary in person participation of the survey (Steinfeldt & Steinfeldt, 2012). The study hypothesized that higher levels of athletic identity would predict higher levels of conformity of masculine norms within the sample (Steinfeldt & Steinfeldt, 2012).

The results of the study that younger athletes exhibited higher conformity to the masculine norm of risk taking while older athletes reported lower conformity to heterosexual presentation (Steinfeldt & Steinfeldt, 2012). This may be explained through potential growth in maturity and self-esteem that often precedes students during pivotal periods of growth during their college years. In order to increase comprehension of the variables that may shift conformity to masculine norms based on age, it is imperative that more research be done on the topic with a narrow age rage in order to rule out other constructs influence by age and increase generalizability of the sample. The results of the study also found that higher levels of athletic identity appeared to be correlated to higher conformity of masculine norms, excluding, being a playboy and exerting emotional control (Steinfeldt & Steinfeldt, 2012). More research also needs to be completed on this relationship in the prediction of other outcomes in order to increase the overall understanding of their interaction between each other and their influence or other under studied variables that may affect the male collegiate athlete population.

One limitation to the study is that if sampled football players from eight school which significantly hinders the generalizability across collegiate athletes in the U.S. In order to more effectively conduct research on the topic in the future it would be recommended that the population of sports and the number of schools be expanded in order to garner a more representative sample for the study.

Summary

This chapter provided an overview of the research analyzing athletic identity, conformity to masculine norms and their sperate interactions with alcohol consumption within male collegiate student athletes. There is evidence suggesting that the conformity to masculine norms and athletic identity are correlated but little to no research has been done to examine their specific interaction in the prediction of alcohol consumption behaviors within student athletes. There is also limited research into how conformity to masculine norms interacts with athletic identity, individually. This study aimed to examine the interaction of conformity to masculine and athletic identity in the prediction of alcohol consumption in order to expand research on this fragile population and guide more adaptive intervention models to assist in their care.

Chapter Three METHODOLOGY

Introduction

The method that was utilized for this study was a four predictor and one dependent variable design using linear multiple regression. The proposed study included the total score from the dependent variable the Alcohol Use Disorders Identification Test (AUDIT) (WHO, 2001). Additionally, the study included the following independent variables: The total score from the Athletic Identity Measurement Scale (AIMS) (Brewer & Cornelius, 2001), the total score of the Conformity to Masculinity Norms Inventory-46 (CMNI-46) (Parent & Moradi, 2009), the age of participants, and their number of years in participation of NCAA sanctioned sports on the active roster during their undergraduate collegiate career. The subscales for the Conformity to Masculinity Norms Inventory-46 (CMNI-46) were not used because there is not enough research using the total score of the scale coupled with total scale score of the athletic identity Athletic Identity Measurement Scale (AIMS) to appropriately proceed in determining if the subscales are correlated let alone if they are moderated and or mediated by specific subscales within the CMNI-46. A critical intention of this study was to assist in providing a more definitive determination of the significance of their relationship in order to provide more effective estimates to formulate more adaptive regression, mediation, and or moderation models, in further research. Using the results of this study allows future researchers to utilize a more narrowed subscale criterion of the CMNI-46 in future athletic identity research.

The following research questions and hypotheses guide this quantitative study:

RQ1: To what extent, if any, are athletic identity and conformity to masculine norms correlated to each other in male collegiate athletes.

H01: Athletic identity is significantly correlated with conformity to masculine norms in male collegiate athletes.

RQ2: To what extent, if any, are athletic identity and age correlated to each other in male collegiate athletes.

H02: Athletic identity is significantly correlated with the age of male collegiate athletes.

RQ3: To what extent, if any, are athletic identity and years correlated to each other in male collegiate athletes.

H03: Athletic identity is significantly correlated with years in sport of male collegiate athletes.

RQ4: To what extent, if any, are conformity to masculine norms and age correlated to each other in male collegiate athletes.

H04: conformity to masculine norms is significantly correlated with age in sport of male collegiate athletes.

RQ5: To what extent, if any, are conformity to masculine norms and years correlated to each other in male collegiate athletes.

H05: conformity to masculine norms is significantly correlated with years in sport of male collegiate athletes.

RQ6: To what extent, if any, are age and years correlated to each other in male collegiate athletes.

H06: Age is significantly correlated with years in sport of male collegiate athletes.

RQ7: To what extent, if any, are athletic identity and alcohol consumption correlated to each other in male collegiate athletes.

H07: Athletic identity is significantly correlated with alcohol consumption in male collegiate athletes.

RQ8: To what extent, if any, are conformity to masculine norms and alcohol consumption correlated to each other in male collegiate athletes.

H08: Conformity to masculine norms is significantly correlated with alcohol consumption in male collegiate athletes.

RQ9: To what extent, if any, are age and alcohol consumption correlated to each other in male collegiate athletes.

H09: Age is significantly correlated with alcohol consumption in male collegiate athletes.

RQ10: To what extent, if any, are years in sport and alcohol consumption correlated to each other in male collegiate athletes.

H10: Years in sport is significantly correlated with alcohol consumption in male collegiate athletes.

RQ11: To what extent, if any, do the athletic identity, conformity to masculine norms, age, and years in sport predict alcohol consumption in male collegiate athletes.

H011: Athletic identity, conformity to masculine norms, age, and years in sport, significantly predict alcohol consumption in male collegiate athletes.

Participants

A priori power analysis was conducted, which was required to calculate the effect size of the study. A minimum of 15 participants was recommended to be included per predictor in order to create a reliable regression equation (Sapp, 2006). After proper power analyses, it was found that a sample size of 108 participants would be needed in order to produce a statistical power of at least .90 at the .05 level of significance. These results were found using G*power (Faul et al., 2007). .90 statistical power is enough to reject the null hypothesis with a 10% chance that the test

will fail to reject the null hypothesis when the hypothesis is false. Years of participation in sport was defined by number of seasons an athlete was on the active roster of their given sport.

The sample in this study included at least 165 (n=165) individuals who self-identify as male with ages ranging from 18 to 24 years of age. The participants also self-identified as an athletic participant in NCAA sanctioned athletic sports that allow for participation by men: Baseball, Softball, Football, Basketball, Cross Country, Golf, Fencing, Lacrosse, Soccer, Gymnastics, Volleyball, Ice Hockey, Water Polo, Rifle, Tennis, Skiing, Track and Field, Swimming and Diving, and Wrestling (JCoram, 2015). Participants from a university setting were recruited using random sampling from Amazon Mechanical Turk (MTurk) and word of mouth. M-Turk and other crowdsourcing research websites have been found to provide reliable and effective data collection with student athletes (Merz et al., 2020; Yankov et al., 2019). The number of participants who participated through word of mouth and through M-Turk could not be differentiated as each were directed to the same Qualtrics survey link.

Following the informed consent agreement (see appendix V), participants were asked the following question to determine eligibility for the study. (1)How old are you? (2) Is English your primary language? (3) Are you a current U.S Citizen? (4) What is your gender Identity? (5)Please indicate the racial/ethnic background (s) that best applies to you? (6) Are you currently completing your undergraduate degree? (7) Are you a current participant in a NCAA men's sanctioned sport (On the team)? (8) Please identity your current sport(s) from the choice below (9) How long have you been participating in sports at the collegiate level? (10)Have ingested alcohol in the last 6 months? An answer of yes on questions 3, 6,7, and an identification as "male" on question 4, deemed the participant to be eligible to complete the study. Those who were found eligible were allowed to complete the Qualtrics survey and those who did not meet

inclusion criteria were dismissed. All participants who properly completed the survey (all questions), received $2.00 compensation for their participation. Sample demographics were reported collected for future research studies. They were not used as the research was unable to compile enough eligible participants in order to analyze the variables and have the results be generalizable to the total population.

Table 1
Sample Demographics

Variable	N	Mean	Std Dev	Min	Max
Age	165	20.879	1.011	18	23
Years in Sport	165	2.806	1.035	1	5
AIMS	165	36.473	7.371	7	49
CMNI	165	76.648	17.229	45	132
AUDIT-C	165	14.527	9.261	1	40

Table 2
Sample Demographics

Race /Ethnic	n	Percentage of N
White	119	72.10%
African American/Black	21	12.70%
Asian American	15	9.10%
Hispanic	6	3.70%
American Indian	2	1.20%
Native Hawaiian/Pacific Islander	1	0.60%
Other	1	0.60%

165 male student athletes were recruited randomly through Mechanical Turk and word of mouth. Data was collected from February 2021 to October 2021. The demographic sample data that analyzed for the study included participants age, race, number of years engaged in male NCAA sanctioned sport(s), and the NCAA sanctioned sports that participants were involved in. Tables 1 provides descriptive statistics for age, years in sport, AIMS scores, CMNI scores, and Audit-C scores. Table 2 provides descriptive statistics for ethnic / racial background.

Measures

Participants completed a demographic questionnaire and 3 instruments: Conformity to Masculine Norms Inventory - 46 (Parent & Moradi, 2009), Athletic Identity Measurement Scale (Brewer & Cornelius, 2001), and Alcohol Disorders Identification Test (WHO, 2001).

Demographic questionnaire

The demographic questionnaire (See appendix A) includes these items(1)How old are you? (2) Is English your primary language? (3) Are you a current U.S Citizen? (4) What is your gender Identity? (5)Please indicate the racial/ethnic background (s) that best applies to you? (6) Are you currently completing your undergraduate degree? (7) Are you a current participant in a NCAA men's sanctioned sport (On the team)? (8) Please identity your current sport(s) from the choice below (9) How long have you been participating in sports at the collegiate level? (10)Have ingested alcohol in the last 6 months? These items were added in order to provide inclusion criteria for respondents and screen out those who did not qualify for the study. Questions 1, "How old are you?" and, "How long have you been participating in sports at the collegiate level?," were used in order to inform dependent variables of age and years in sport.

Athletic Identity Measurement Scale

The original Athletic Identity Measurement Scale (AIMS) (See appendix III) was created by Brewer,Van Raalte, and Linder (1993). The 10-items scale allowed for athletes to rate themselves on questions related to positive and negative self-perceptions of the athletic role using a range of responses from "strongly disagree" to "strongly agree" (Brewer, Van Raalte, & Linder, 1993). The instrument items included questions that were set to gage both negative and positive self-perceptions of the athlete role (Duda, 1999). The questions are rated on a 7-point Likert scale with the sum of scores being indicating an individual's athletic identity (Brewer & Cornelius, 2002). Higher scores of athletic identity were conceptualized as a person who believes in the importance of being involved in sport and increased knowledge of self within athletic role

(Brewer, Van Raalte, & Linder, 1993). Brewer et al., (1990) initially developed the scale in order to test their hypothesis that the strength of an individual′s athletic identity has an effect on the outcomes of involvement in sport competition and participation (Brewer, Van Raalte, & Linder, 1990). Between 1990 and 1991, devised 4 separate studies in order to test this hypothesis working with student athletes and non-student athletes (Brewer, Van Raalte, and Linder 1993).

Brewer and Cornelius (2001) found three instrument items to be psychometrically problematic within the original AIMS model. The researchers also found that a multidimensional AIMS model demonstrated high factorial reliability across athletic status and gender (Brewer & Cornelius, 2001). This multidimensional model consisted of three highly correlated constructs which were social identity, exclusivity, and negative affectivity which later became subscales to the instrument (Brewer & Cornelius, 2001). The 7-item version of the AIMS, which was utilized for this research, utilizes a Likert-type scale ranging from 1 which denotes, ″strongly disagree,″ to 7, which denotes ″strongly agree (Brewer & Cornelius, 2001)″. Scores were computed by a composite score of the 7 items with the range of possible scores being from 7 to 49, as higher scores indicating a more prominent athletic identity (Brewer and Cornelius, 2001).

There is significant evidence for the psychometric integrity of the AIMS. Several studies has referenced the test-retest reliability of (r =.89) over a two week period with internal consistency ranging from .81 to .93 over that same two week span (Brewer & Cornelius, 2001; Brewer, Van Raalte, & Linder, 1993; Good, Brewer, Petitpas, Van Raalte, & Mahar, 1993). Melendez (2001) used a multiracial sample and found Cronbach alphas ranging from .82 in nonathletes, to .91 for the student-athletes (NCAA Division I). This study also found, the coefficient alpha of .81 for the AIMS (Melendez, 2001). Studies has also found some discriminant validity within the instrument. Curry & Weiss (1989), utilized the ″Self-Role Scale,″ which is used to

measure an individual's involvement in "sport role" and found that it was significantly correlated with the AIMS ($r = .61$, $p < .01$), signifying that the two constructs are were similar in nature. Brewer et al., (1993) found that the two instruments only share approximately 38% of the variance in common, which means that they are likely not assessing the same constructs.

Conformity to Masculine Norms Inventory

The Conformity to Masculine Norms Inventory (CMNI-46) (Parent & Moradi, 2009; See appendix II) is the brief version based on the original CMNI-94 (Mahalik et al., 2003). The CMNI assesses an individual's level of conformity to traditional and non-traditional masculine norms in American cultural beliefs and attitudes (Mahalik et al., 2003). Due to the length of the original CMNI-94, the CMNI-46 was developed through a confirmatory factor-analytic study that reduced the length of the CMNI measure to about half, while still maintaining the original factor structure (Parent & Moradi, 2009). The removal of the remaining 44 low items significantly reduced the overall length while maintaining acceptable reliability and improved the model-data fit of the instrument (Parent & Moradi, 2009).

The CMNI-46 consists of 46 items. Respondents rate each item 0-3 on a 4-point Likert-type scale (0=strongly disagree and 3=strongly agree) (Parent & Moradi, 2009). A respondents total CMNI-46 masculinity score can be calculated by the sum of all of the subscale scores. Higher scores on the total CMNI-46 and subscales are indicative of significant levels of conformity to traditional norms of masculinity found in the United States (Parent & Moradi, 2009).

Parent and Moradi (2009) found that internal consistency estimates of the CMNI-46 subscales ranged from.77 to .91, which were good. The results were indicative that the CMNI-46 is psychometrically consistent with the CMNI-94 measure. Parent and Moradi (2011) also found Cronbach's alpha coefficients for the CMNI-46 subscales that ranged from .78 to .89, with a

median value of .82. Discriminant validity of the CMNI-46 was assessed through a statistical comparison of the CMNI-46 subscales to the Balanced Inventory of Desirable Responding Impression Management Subscale (BIDR-IM) which exhibited discriminant validity coefficients that ranged from -.03 to -.48, with a median value of -.11 (Paulhus,1994). With eight of the nine correlations representing small effects and one in the upper medium range, these results support the discriminant validity of the CMNI.

Alcohol Use Disorders Identification Test

The Alcohol Use Disorders Identification Test (AUDIT) (See appendix IV) is an instrument that was developed by the World Health Organization in 1982 (Saunders, Aasland, Babor, de la Fuente & Grant, 1993). It was designed to be a screening tool to identify harmful misuse of alcohol and excessive drinking behavior (Who, 2001). The AUDIT is able to effectively measure a range of alcohol risk levels, from "low risk drinking" to "hazardous drinking" coupled with certain alcohol use disorders (De Silva, Jayawardana, & Pathmeswaran, 2008). The instrument consists of 10 multiple choice items that assess, alcohol consumption, frequency of consumption, alcohol-related behaviors, and alcohol-related issues (WHO, 2001). The potential responses to items may be scored from 0 which denotes "never," to 4, which denotes "daily or almost daily," with a range of scores between 0 to 40 (WHO, 2001). Scores of 7 and under are indicative low risk drinking patterns within respondents. Scores from 8-13 for women and 8-15 for men, are indicative of risky drinking patterns (Babor, Higgins-Biddle, Saunders & Monteiro, 2001). Scores above 13 for women and 15 for men are indicative of high risk (hazardous) drinking patterns within respondents (Babor, Higgins-Biddle, Saunders & Monteiro, 2001). Among college students, a score of 6 or more is indicative of risky drinking behavior within respondents, while a score of 8 or more is a strong indicator of hazardous or harmful drinking (WHO, 2001).

The AUDIT is among one of the most thoroughly researched instruments for measuring alcohol consumption and alcohol usage behaviors. It has been found to be valid and reliable in screening for excessive drinking (Bohn, Babor, & Kranzler, 1995; DeSilva, Jayawardana, & Pathmeswaran, 2008; & Piccinelli et al., 1997). Internal reliability has been high as well (Cronbach's alpha of .86) (Saunders et al., 1993) The instrument has also been validated across six different countries (Saunders et al., 1993). The AUDIT has shown evidence of validity and reliability within the college age population (Fleming, Barry & MacDonald, 1991).

Additionally, the AUDIT exhibited significantly high internal consistency, reliability and validity in relation to a respondent's diagnosis of an alcohol use or dependence disorder (Moussas et al, 2009). Johnson et al. (2013) completed validation study which used to AUDIT to detect maladaptive alcohol use by patients treated at primary care practices. The AUDIT exhibited a 97% accuracy rate in identifying patients with excessive drinking behaviors (Johnson et al., 2013). The study was used as the basis to reevaluate commonly accepted binge drinking cutoffs (5 drinks for men /3 drinks for women) during a single episode. ADUIT scores of 15 (men) and 13 (women) detected alcohol dependence with 100% specificity but was coupled with low sensitivity of 20% (men) and 18% (women) (Johnson et al., 2013). Johnson et al. (2013) concluded that combining the lower cutoff scores and drinking measures, increased the instrument accuracy in detecting problematic drinking patterns, leading to the change.

Procedures

After the study received IRB approval (Feburary 3, 2021) from the university, the survey was developed through Qualtrics using the measures outlined above. The link to the study survey was then uploaded and advertised on Amazon Mechanical Turk (M-Turk) in order to garner perspective participants. Upon starting the study, participants were navigated to an electronic message informing them that their participation was voluntary, assured that their participation

would be kept confidential, and informed that the survey would ask about their athletic identity, conformity to masculine norms, and their alcohol usage. Participants who chose to complete the stud, provided electronic consent and evaluated for further participation in the study using the demographic questionnaire.

Eligible participants then completed the main study which included the demographic questionnaire, Athletic Identity Measurement Scale (AIMS) (Brewer & Cornelius, 2001), Conformity to Masculinity Norms Inventory-46 (CMNI-46), and the Alcohol Use Disorders Identification Test (AUDIT) (WHO, 2001). In total, the survey was estimated to take 15 minutes to complete.

When eligible participants completed the survey, they were provided with a unique code which they were instructed to submit to M-Turk in order to receive their $2.00 compensation. Their data was then reviewed by the principal investigator to ensure that all questions were completed as instructed. If surveys were found to be properly completed, participant funds were released.

Chapter Four RESULTS

Introduction

The purpose of the study was to examine the alcohol consumption patterns of male collegiate student athletes and the relationship these behaviors have to their athletic identity, conformity to masculine norms, age, and years in sport. This study investigated the predictors of alcohol consumption among male college student athletes using predictors of: Alcohol Use Disorders Identification Test (AUDIT), The Athletic Identity Measurement Scale (AIMS), and the Conformity to Masculine Norms (CMNI-46), the age of participants in the study, and the number of years in participation in NCAA sanctioned sports. This study attempted to answer the following question: To what extent, if any, do the athletic identity, conformity to masculine norms, age, and years in sport, predict alcohol consumption in male collegiate athletes. All data analysis was conducted with SAS 9.4. An alpha level of .05 was used for statistical test.

The following research questions and hypotheses guide this quantitative study:

RQ1: To what extent, if any, are athletic identity and conformity to masculine norms correlated to each other in male collegiate athletes.

H01: Athletic identity is significantly correlated with conformity to masculine norms in male collegiate athletes.

RQ2: To what extent, if any, are athletic identity and age correlated to each other in male collegiate athletes.

H02: Athletic identity is significantly correlated with the age of male collegiate athletes.

RQ3: To what extent, if any, are athletic identity and years correlated to each other in male collegiate athletes.

H03: Athletic identity is significantly correlated with years in sport of male collegiate athletes.

RQ4: To what extent, if any, are conformity to masculine norms and age correlated to each other in male collegiate athletes.

H04: conformity to masculine norms is significantly correlated with age in sport of male collegiate athletes.

RQ5: To what extent, if any, are conformity to masculine norms and years correlated to each other in male collegiate athletes.

H05: conformity to masculine norms is significantly correlated with years in sport of male collegiate athletes.

RQ6: To what extent, if any, are age and years correlated to each other in male collegiate athletes.

H06: Age is significantly correlated with years in sport of male collegiate athletes.

RQ7: To what extent, if any, are athletic identity and alcohol consumption correlated to each other in male collegiate athletes.

H07: Athletic identity is significantly correlated with alcohol consumption in male collegiate athletes.

RQ8: To what extent, if any, are conformity to masculine norms and alcohol consumption correlated to each other in male collegiate athletes.

H08: Conformity to masculine norms is significantly correlated with alcohol consumption in male collegiate athletes.

RQ9: To what extent, if any, are age and alcohol consumption correlated to each other in male collegiate athletes.

H09: Age is significantly correlated with alcohol consumption in male collegiate athletes.

RQ10: To what extent, if any, are years in sport and alcohol consumption correlated to each other in male collegiate athletes.

H10: Years in sport is significantly correlated with alcohol consumption in male collegiate athletes.

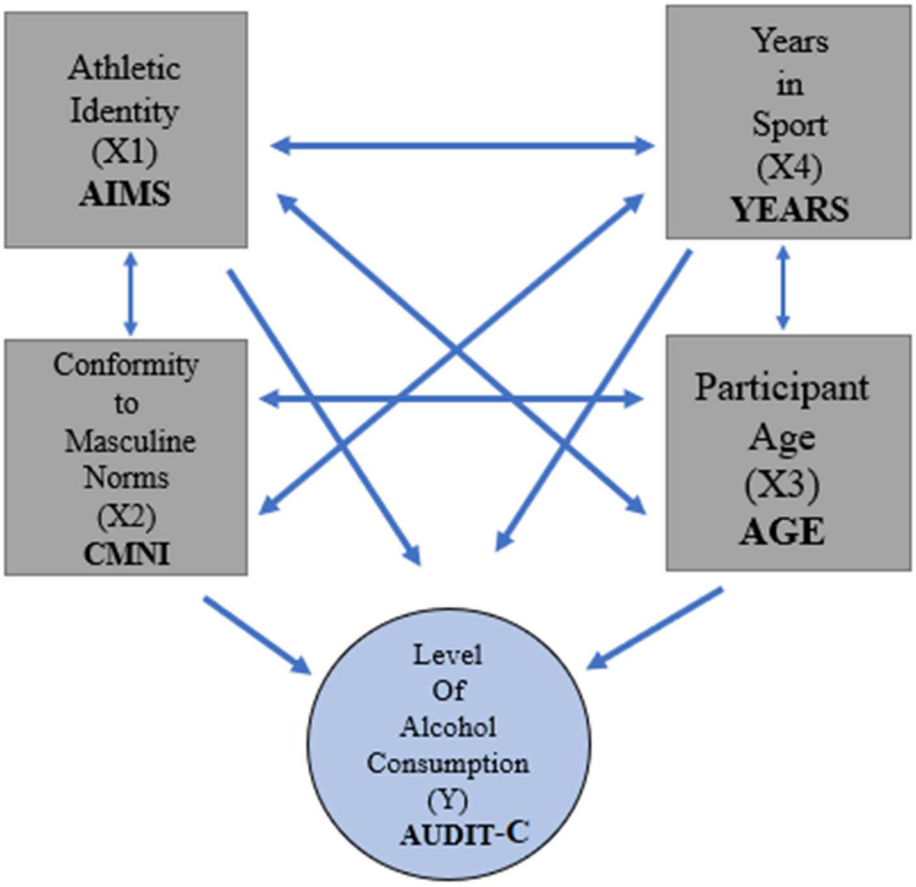
RQ11: To what extent, if any, do the athletic identity, conformity to masculine norms, age, and years in sport predict alcohol consumption in male collegiate athletes.

H011: Athletic identity, conformity to masculine norms, age, and years in sport, significantly predict alcohol consumption in male collegiate athletes.

Conceptual Diagram

The diagram below (Diagram 1) was used to display the conceptual pathway of these hypotheses. The goal of this this diagram is to model the hypothesized positive relationships between conformity to masculine norms, athletic identity, participant age, and years in sport and their value in predicting alcohol consumption. The reader should note the dependent variable of the first proposed diagram will be the total score of the ADUIT scale (Y). The first diagram also includes the 4 predicator variables which are athletic identity, conformity to masculine norms participant age, and years in NCAA sanctioned sport. The reader should also note that X1 (independent variable number 1) is athletic identity which is measured by the total score of AIMS. The reader should note that X2(independent variable 2) is conformity to masculine norms which is measured by the total score of CMNI-46. The reader should also note that X3 (independent variable number 3) is age which is measured by participants reported age. The reader should also note that X4 (independent variable number 4) is years in sport which is measured by participants reported years on the active roster of an NCAA sanctioned sport.

Diagram 1



Results of Correlation Analyses

Tests of assumptions.

The data analysis plan consisted of testing the data against correlation assumptions. The following steps were the data analysis procedures. Assumption 1 asserts that there should be a linear relationship between the predictor(s) and criterion variable(s) (Laerd, 2015). This assumption was determined by assessing a scatterplot of studentized residuals against the unstandardized predicted values established between AIMS, CMNI, AGE, and YEARS predictors and AUDIT. The studentized residuals against the unstandardized predicted values established that a linear relationship existed between AIMS, CMNI, AGE, YEARS and, AUDIT

as the residuals appear to be evenly scattered around the zero line (Refer to Chapter VII, Graph 1) . The assumption was met.

Assumption 2 asserts that the variables should be continuous. This assumption was determined analyzing the attributes of the variables AIMS, CMNI, AGE, YEARS predictors and AUDIT-C. Continuous variables are typically numeric variables that have an infinite number of variables that don't have a finite number of values between any 2 given values. A continuous variable's value is found by measuring. AI, CMNI, AGE, YEARS, and AUDIT appear to be continuous as they do not have a finite number of values between any 2 given values and the individual value of each is found by interval measurement. This assumption was met and the correlation analysis may continue .

Table 3
Results of Correlation Analysis

Variable	1	2	3	4	5
AIMS	-	0.300*	0.201*	0.232*	0.139
CMNI	0.300*	-	0.182*	0.272*	0.491*
AGE	0.201*	0.182*	-	0.490*	0.152*
YEARS	0.232*	0.272*	0.490*	-	0.259*
AUDIT-C	0.139	0.491*	0.152*	0.259*	-

*p<0.05;

Hypothesis 1

Table 3 shows the correlation matrix for AIMS and CMNI. The first hypothesis in this study sought to determine if there is a correlation between athletic identity and conformity to masculine norms. This hypothesis was tested using a correlational analysis. The results suggest a

moderate positive correlation between athletic identity and conformity to masculine norms, of male collegiate athletes. The positive correlation between AIMS and CMNI was found to be statistically significant, r(163)= .300, p <.0001, two- tailed. This indicated that as athletic identity increases conformity to masculine norms also increases. After squaring "r," it was determined that approximately 9% of the variance in male collegiate athletes' responses on the CMNI scale could be accounted for by AIMS.

Hypothesis 2

Table 3 shows the correlation matrix for AIMS and AGE. The second hypothesis in this study sought to determine if there is a correlation between athletic identity and a participants reported age. This hypothesis was tested using a correlational analysis. The results suggest a weak positive correlation between athletic identity and reported age of male collegiate athletes. The positive correlation between AIMS and AGE was found to be statistically significant, r(163)= .201, P=.0094, two- tailed. This indicated that as adherence to athletic identity increases with age. After squaring "r," it was determined that approximately 4% of the variance in male collegiate athletes' responses to AGE could be accounted for by AIMS.

Hypothesis 3

Table 3 shows the correlation matrix for AIMS and YEARS. The third hypothesis in this study sought to determine if there is a correlation between athletic identity and a participants reported number of years on the active roster in a NCAA sanctioned sport. This hypothesis was tested using a correlational analysis. The results suggest a weak positive correlation between athletic identity and reported years in sport, of male collegiate athletes. The positive correlation between AIMS and YEARS was found to be statistically significant, r(163)= .232, P=.0026, two-tailed. This indicated that as adherence to athletic identity increases with time in participating in

sport. After squaring "r," it was determined that approximately 5.4% of the variance in male collegiate athletes' responses to YEARS could be accounted for by AIMS.

Hypothesis 4

Table 3 shows the correlation matrix for CMNI and AGE. The fourth hypothesis in this study sought to determine if there is a correlation between conformity to masculine norms and a participants reported age. This hypothesis was tested using a correlational analysis. The results suggest a weak positive correlation between conformity to masculine norms and reported age of male collegiate athletes. The positive correlation between CMNI and AGE was found to be statistically significant, r(163)= .182, P=.0193, two- tailed. This indicated that conformity to masculine norms increases with age. After squaring "r," it was determined that approximately 3.3% of the variance in male collegiate athletes' responses to AGE could be accounted for by CMNI.

Hypothesis 5

Table 3 shows the correlation matrix for CMNI and YEARS. The fifth hypothesis in this study sought to determine if there is a correlation between conformity to masculine norms and a participants reported number of years on the active roster in a NCAA sanctioned sport. This hypothesis was tested using a correlational analysis. The results suggest a weak positive correlation between conformity to masculine norms and reported years in sport, of male collegiate athletes. The positive correlation between CMNI and YEARS was found to be statistically significant, r(163)= .272, P=.0004 two- tailed. This indicated that conformity to m asculine norms increases with time in participating in sport. After squaring "r," it was determined that approximately7.3% of the variance in male collegiate athletes' responses to YEARS could be accounted for by CMNI.

Hypothesis 6

Table 3 shows the correlation matrix for AGE and YEARS. The sixth hypothesis in this study sought to determine if there is a correlation between participants reported age and a participants reported number of years on the active roster in a NCAA sanctioned sport. This hypothesis was tested using a correlational analysis. The results suggest a moderate positive correlation between reported age and reported years in sport, of male collegiate athletes. The positive correlation between AGE and YEARS was found to be statistically significant, r(163)= .490, P=<.0001 two- tailed. This indicated that age increases with time in participating in sport. After squaring "r," it was determined that approximately 24% of the variance in male collegiate athletes' responses to YEARS could be accounted for by AGE.

Hypothesis 7

Table 3 shows the correlation matrix for AIMS and AUDIT-C. The seventh hypothesis in this study sought to determine if there is a correlation between athletic identity and alcohol consumption, of male collegiate athletes. This hypothesis was tested using a correlational analysis. The results suggest a weak positive correlation between athletic identity and alcohol consumption of male collegiate athletes. The positive correlation between AIMS and ADUIT-C was found not to be statistically significant, r(163)= .139, p=.074, two- tailed. After squaring "r," it was determined that approximately 2% of the variance in male collegiate athletes' responses on the AUDIT-C scale could be accounted for by AIMS. AIMS was used within the original model in order to allow for audience to understand its limited significance in comparison to CMNI, AGE, and YEARS, in the prediction of AUDIT.

Hypothesis 8

Table 3 shows the correlation matrix for CMNI and AUDIT-C. The eighth hypothesis in this study sought to determine if there is a correlation between conformity to masculine norms and alcohol consumption, of male collegiate athletes. This hypothesis was tested using a

correlational analysis. The results suggest a moderate positive correlation between conformity to masculine norms and alcohol consumption of male collegiate athletes. The positive correlation between AGE and ADUIT-C was found to be statistically significant, r(163)= .491, P <.0001 two- tailed. This indicated that as conformity to masculine norms increases alcohol usage among male collegiate athletes increases. After squaring "r," it was determined that approximately 24.1% of the variance in male collegiate athletes' responses on the AUDIT-C scale could be accounted for by CMNI.

Hypothesis 9

Table 3 shows the correlation matrix for AGE and AUDIT-C. The ninth hypothesis in this study sought to determine if there is a correlation between reported age of study participants and alcohol consumption, of male collegiate athletes. This hypothesis was tested using a correlational analysis. The results suggest a weak positive correlation between conformity to masculine norms and alcohol consumption of male collegiate athletes. The positive correlation between AGE and ADUIT-C was found to be statistically significant, r(163)= .152, P =.050, two- tailed. This indicated that as participants age increases alcohol usage among male collegiate athletes increases. After squaring "r," it was determined that approximately 2.3% of the variance in male collegiate athletes' responses on the AUDIT-C scale could be accounted for by AGE.

Hypothesis 10

Table 3 shows the correlation matrix for YEARS and AUDIT-C. The tenth hypothesis in this study sought to determine if there is a correlation between participants reported number of years on the active roster in participation of an NCAA sanctioned sport and alcohol consumption of male collegiate athletes. This hypothesis was tested using a correlational analysis. The results suggest a weak positive correlation between conformity to masculine norms and alcohol consumption of male collegiate athletes. The positive correlation between CMNI and ADUIT-C

was found to be statistically significant, r(163)= .259, P=.0008, two- tailed. This indicated that as conformity to masculine norms increases alcohol usage among male collegiate athletes increases. After squaring "r," it was determined that approximately 6.7% of the variance in male collegiate athletes' responses on the AUDIT-C scale could be accounted for by YEARS.

Results of Regression Analysis

Tests of assumptions

The data analysis plan consisted of testing the data against multiple regression assumptions. The following steps were the data analysis procedures. Assumption 1 asserts that there should be a linear relationship between the predictor(s) and criterion variable(s) (Laerd, 2015). This assumption was determined by assessing a scatterplot of studentized residuals against the unstandardized predicted values established between AIMS, CMNI AGE, YEARS and, AUDIT. The studentized residuals against the unstandardized predicted values established that a linear relationship existed between AIMS, CMNI AGE, YEARS and, AUDIT as the residuals appear to be evenly scattered around the zero line (Refer to Chapter VII, Graph 1) . The assumption was met.

Assumption 2 asserts that the variables should be continuous. This assumption was determined analyzing the attributes of the variables AIMS, CMNI AGE, YEARS and, AUDIT-C. Continuous variables are typically numeric variables that have an infinite number of variables that don't have a finite number of values between any 2 given values. A continuous variable's value is found by measuring. AI, CMNI, AGE, YEARS and, AUDIT appear to be continuous as they do not have a finite number of values between any 2 given values and the individual value of each is found by interval measurement. This assumption was met and the correlation analysis may continue .

Assumption 3 asserts that there is a normal distribution of the residuals at each value of X_1 (AI), X_2 (CMNI), X_3 (AGE), X_4 (YEARS) and, Y(AUDIT). This assumption was determined by a histogram of the standardized residuals against their frequency/probability. According to the histogram of the standardized residuals against their frequency/probability (Chapter VII, Graph 2) the residuals were close enough to normal distribution in order to not violate the assumption of normality for the data(Laerd, 2015). The assumption was met.

Assumption 4 asserts that the data shows homoscedasticity of the residuals. The homoscedasticity of residuals was analyzed using a scatter plot of the studentized residuals against the unstandardized predicted values (Bates et al., 2014). This assumption was specifically determined by analyzing if there was a funnel or fan shape present and if there was any systematic pattern of plots (Laerd, 2015). According to the Chapter VII, Graph 1, there was no funnel or fan shape present and there did not appear to be any systematic pattern of plots noted on either side of the zero line. The assumption was met.

Assumption 5 asserts that the study design should have independence of residuals. The units of observation and units of analysis were the same as the individual participants responses to the electronically administered questionnaire. The independence of residuals was tested using the Durbin Watson statistic through SAS 9.4. According to Laerd (2015), Durbin Watson statistical values close to 2 +/- and in the range of 0−4 are likely to indicate independence of residuals for a study model. According to the Table 4, the Durbin Watson statistical values were all below was 1.980 which indicated that the values were near 2 and in the range of 0-4. This indicated lack of autocorrelation and an independence of residuals. The assumption was met.

Assumption 6 asserts that the data is absent of multicollinearity. This assumption was determined by inspection of correlation coefficients and variance inflation factors (VIF). VIF

with values over 10 suggests the presence of multicollinearity (Menard, 2009). According to Table 4, the variance inflation factors respective to the AI, CMNI, AGE, and YEARS values were all less than 10 (1.394). This inferred that there was absence of multicollinearity within the study data. The assumption was met.

Hypothesis 11

The eleventh hypothesis in this study sought to determine if athletic, identity, reported age, and reported number of years on the active roster in participation of an NCAA sanctioned sport are statistically significant predictors of alcohol use in male collegiate athletics. This hypothesis was tested using a multiple regression model with continuous predictors. The study model included the total scores from the independent variables (CMNI-46 scores and AIMS scores), the total score from the dependent variable (ADUIT scores), the reported age of study participants and the number of reported years of participation in NCAA sanctioned sport. The subscales for the Conformity to Masculinity Norms Inventory-46 (CMNI-46) were not used because there is not enough research using the total score of the CMNI-46 coupled with the Athletic Identity Measurement Scale (AIMS) to appropriately proceed to determine if the subscales are correlated, separately with athletic identity. R^2 was assessed in order to provide information regarding how much variance can be accounted for by the predictors. AIMS, CMNI, AGE, and YEARS, accounted for approximately 26% of the variance as noted by the regression coefficient (R2= .2599) in alcohol usage of college male athletes (Table 4). The F-statistic was used to determine the statistical significance of the regression. The test of the regression coefficient for this variable was statistically significant for the model, F (14.05), p <.0001 . Overall, conformity to masculine norms was the strongest predictor variable of alcohol usage in male collegiate athletes. After controlling for AIMS, AGE, and YEARS, CMNI is a statistically significant predictor (β=0.46302, P<.0001) of AUDIT-C. Athletic identity was not a statistically

significant predictor (β = -0.03329,P=0.6472) of AUDIT-C , when controlling for other predictive variables. Age was not a statistically significant predictor (β = 0.00789,P=0.9200) of AUDIT-C, when controlling for other predictive variables. Years in sport was not a statistically significant predictor (β = 0.13729,P=0.0893) of AUDIT-C, when controlling for other predictive variables.

Table 4
Multiple Regression Results for Alcohol Use

Predictor	B	SE B	β	DW	VIF	R^2	P
Model						0.2599	<.0001*
Constant	-7.981	14.211	0		0		0.5752
AIMS	-0.041	0.091	-0.033	1.980	1.139		0.6472
CMNI	0.248	0.039	0.463	1.966	1.155		<.0001*
AGE	0.072	0.719	0.007	1.995	1.331		0.9200
YEARS	1.228	0.718	0.137	1.637	1.394		0.0893

Note. Model="Enter" method in SAS; B=unstandardized regression coefficient; SE B=standard error of the coefficient; β= standardized coefficient; CI= Confidence Interval; LL=Lower Level; UL=Upper Level; Tol= Durbin-Watson Statistic; VIF=Variance Inflation; R^2 = coefficient of determination.

*p<0.05. **p<0.001.

Chapter Five DISCUSSION

The purpose of the study was to examine the alcohol consumption patterns of male collegiate student athletes and the relationship these behaviors have to their athletic identity, conformity to masculine norms, age, and years in sport. This study investigated the predictors of alcohol consumption among male college student athletes using predictors of: Alcohol Use Disorders Identification Test (AUDIT), The Athletic Identity Measurement Scale (AIMS), and the Conformity to Masculine Norms (CMNI-46), the reported age of participants in the study, and the number of years in participation in NCAA sanctioned sports. This study attempted to answer the following question: To what extent, if any, do the athletic identity, conformity to masculine norms, age, and years in sport, predict alcohol consumption in male collegiate athletes.

Summary of Results

As previously mentioned, student athletes experience significant challenges with anxiety, depression, and identity which can cause increases in health risk behaviors. There is significant research into the stressors that make male student athletes susceptible to these experiences but there is very little research into comprehension how their adherence to their athletic identity and conformity to masculine norms, can predict their engagement in health risk behaviors. This study sought to provide concrete insight into specific norms held and how they are linked with given health risk behaviors. The results of this study can be used to spread awareness of the maladaptive norms and thought processes that continue to hinder the progress of student athletes.

A correlation analysis was used to assess the relationship between athletic identity, conformity to masculine norms, reported age, number of years involved in NCAA sanctioned sport, and alcohol usage. Results showed a statistically significant weak positive relationship between AIMS/AGE (H02), AIMS/YEARS (H03), CMNI /AGE (H04), CMNI / YEARS (H05),

AGE /AUDIT-C (H09) and, YEARS / AUDIT-C (H10). Result showed a statistically significant moderate positive relationship between AIMS/CMNI (H01), and AGE/YEARS (H07). Results of the study also showed that there was not a showed a statistically significant relationship between AIMS and AUDIT-C (H06).

To test the final hypothesis (H11), a regression analysis, was used to determine if athletic identity, conformity to masculine norms, reported age, and years in NCAA sanctioned sport were significant predictors of alcohol usage in male collegiate athletes. After controlling for AIMS, AGE, and YEARS, CMNI is a statistically significant predictor of AUDIT-C. The results of the regression model found that athletic identity, age, and years in sport, were not found to be statistically significant predictors of alcohol usage in male collegiate athletes.

Interpretation of Results

The results of the study produced results consistent with previous research on masculinity but some inconsistency with athletic identity research. In line with previous research (Iwamoto et al, 2011), with increased conformity to masculine norms correlated with athletes being more likely to have increased level of alcohol usage. Studies have already shown that males drink more than women (SAMHSA, 2018) and men make up the vast majority of collegiate student athletes (Schwarb, 2018). With gender norms and identities continuing to grow, in collegiate sports, it appears that the ideals and principles of masculinity continue to have a strong hold on males trying to compete. Theoretically, the results of this study show that men are fighting a battle within that is continuing to lead them to participate in risky behaviors, externally. According to the results of the correlation analysis, athletic identity and conformity to masculine norms were significantly correlated. Athletic identity may manifest as an masculine script of ones masculine identity. The study found that with age, years in sports, athletic identity increased. Athletes are may foreclose on their identity as a males early in life and continue to

foster ideas and opportunities (being a collegiate athlete) that further cement their role within their social world. With the strong predictive value of CMNI it would suggest that it is imperative that research more frequently utilizes the subscales of the CMNI-46 in order to further specify the influence that masculine norms can have within this population. With a firmer, more concrete understanding of its predictive value, more structured assistance can be informed and provided to this fragile population.

On the latter end of the study, it was found that athletic identity was not a statistically significant predictor of alcohol consumption in male collegiate athletes. Previous research has found that student athletes are more likely to participate in binge-drinking behaviors than non-student athletes (Barry et al., 2015; Nelson & Wechsler, 2001; Wechsler et al., 1997). With the results of this study not found to be in line with previous research. Statistically, with the sample size being 165 and the number of questions specifically related to athletic identity only being 7 items, there may be room for statistical error in the data. For future research into athletic identity, I would recommend utilizing the Private-Public Athletic Identity Scale (PPAIS) (Nasco & Webb, 2006) as it allows for a more thorough assessment of an athlete's adherence to athletic identity from a public and private vantages using its subscales. Research with collegiate athletes using the PPAIS has reported Cronbach alpha levels of .74 (public subscale) and .75(private subscale) (Nasco & Webb, 2006).

Theoretically, the results could infer that male student athletes appear to adhere more to masculine norms than to their identity as an athlete. With age and years in sport being significantly correlated to ones individual level of conformity of masculine norms, It may also allude to the theory that, with time being an athlete, conformity to masculine values can be more clearly defined. Being an athlete is more of a norm as a man instead of its own identity within

their social realm. For future research, it would be important to more narrowly analyze external factors surrounding student athlete drinking behaviors such as, the ease of access to alcohol, the collegiate social drinking norms, coping strategies, other critical identities and systems in place, in order to determine aspects leading to the increased drinking behaviors of student athletes. If it is not their athletic identity, there has to be another variable(s), in play increasing health risk behavior.

Limitations

One limitation to the proposed study is all instruments are self-report measures. The study was completed using compensation ($2) through Amazon Mechanical Turk.
The estimated time to complete the surveys is 15 minutes. The compensation exceeds the minimum wage average of $7.25 per hour. It is possible that some study participants lacked the motivation or attention to complete the survey honestly, without haste to respond. Research by Rand (2011) found that participants answers from M-Turk were consistent and truthful. Research by Buhrmester et al. (2016) also found that compensation did not affect the quality of data on from M-Turk. Several direct attempts to encourage participants to answer the questions to the best of their ability were made through the research process. Unfortunately, there is no way to ensure that the participants are honest when answering the questions.

Another limitation of the study was the less stringent definition of the variables AGE and YEARS. For the purposes of the study, AGE was the number that each participant reported while completing the demographic portion of the survey, which may limit the generalizability of the study. For the purposes of the study, YEARS was defined by number of years on the active roster in NCAA sanctioned sport. The terms "years" leaves too much space for interpretation as collegiate athletes typical have seasons that last 3-4 month spans. In order to improve the

reliability of these variables it would be important to more narrowly define age and years in sport through specific criterion using years, months, and days.

Another limitation to the study is that the sampling method cannot ensure that one percent of the respondents are actually student athletes due to incentive-based solicitation offered through M-Turk. More effective sampling techniques are not currently feasible to the researcher at this time. When convenient sampling techniques are utilized, they have the potential to increase bias amongst respondents as the athletes and the researcher may attend the same institution. The respondents were asked to submit to a declaration that they have answered all questions, including the demographic survey for inclusion, to the best of their abilities to ensure the validity of their answers.

Another limitation is demand characteristics that the study warrants which are cues that may be interpreted during the study that have the potential to influence participants to respond in a particular fashion, not inspired by the independent variable (Hepner, Kivlighan, & Wampold, 2014). It was the objective of the writer to conduct a rigorous and valid study with techniques, information, and resources available. It is possible that the writer is unaware of any questions, instructions, or terminology employed on the study will influence a particular response.

Another limitation to the study was that the demographic variables where not utilized to further dissect the potential influence that they may have posed through moderation or mediation models. For this study, a sample size of 108 participants was needed in order to produce a statistical power of at least .90 at the .05 level of significance. With a significant sample sized required for a proper medication analysis, coupled with several niche inclusion criteria, it was not feasible for this researcher to find ~300 eligible participants in the midst of a global pandemic with years of sampling, further funding, and physical assistance with third parties.

Finally, the author is must take into account the potential skew of responses that may occur due to the spread of the COVID-19 virus. Colleges across America, which house potential respondents to the study, have implemented online classes and social distancing measures that have currently prevent student athletes from participating in normal athletic and academic activities. The response to the virus within college settings currently cannot be effectively be accounted for at this time as the global response to the virus is still be determined. The researcher delayed collection of data with the intent of soliciting respondents when population conditions return to those more closely aligned with those before the spread of COVID-19 (from February 2021 to November 2021).

Further Research Recommendations

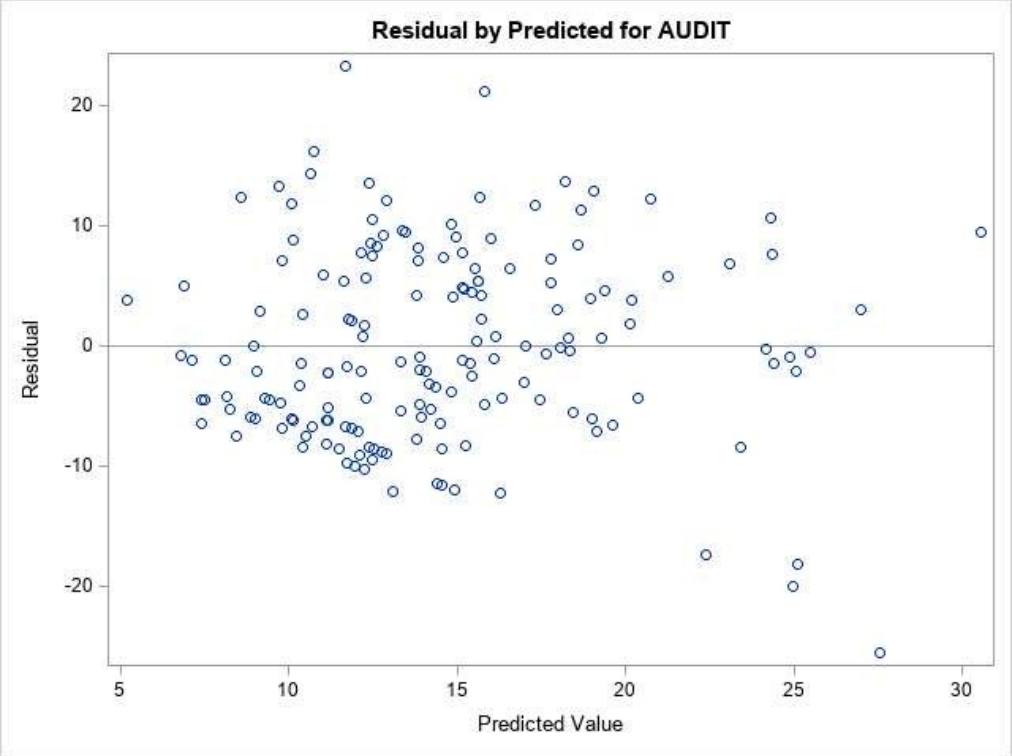
With such a high predictive of value of conformity to masculine norms in male athlete drinking behaviors, it is beneficial to study the relationship between conformity to masculine norms and alcohol usage in female athletes. This research can provide clarity into the variable of conformity to masculine norms by helping us to understand if it is being a "man" or simply "acting" like one, that can lead to increased levels of alcohol usage. Female athletes are a very fragile population who also participate in health risk behaviors at the collegiate level. It is imperative that they are provided the proper support as well.

As mentioned above, further research with a more narrowly focused population will allow for more specific results. The present utilized a wide sample across divisions and sports. Completion of the study separating participants by NCAA divisions, specific sports, race, ethnicity, gender, and or years involved in sanctioned, will allow for more conclusive and generalizable information. When a researcher is able to pinpoint the most fragile population(s) of athletes it will allow for a more focused approach to aid, allow for resources to be more practically distributed.

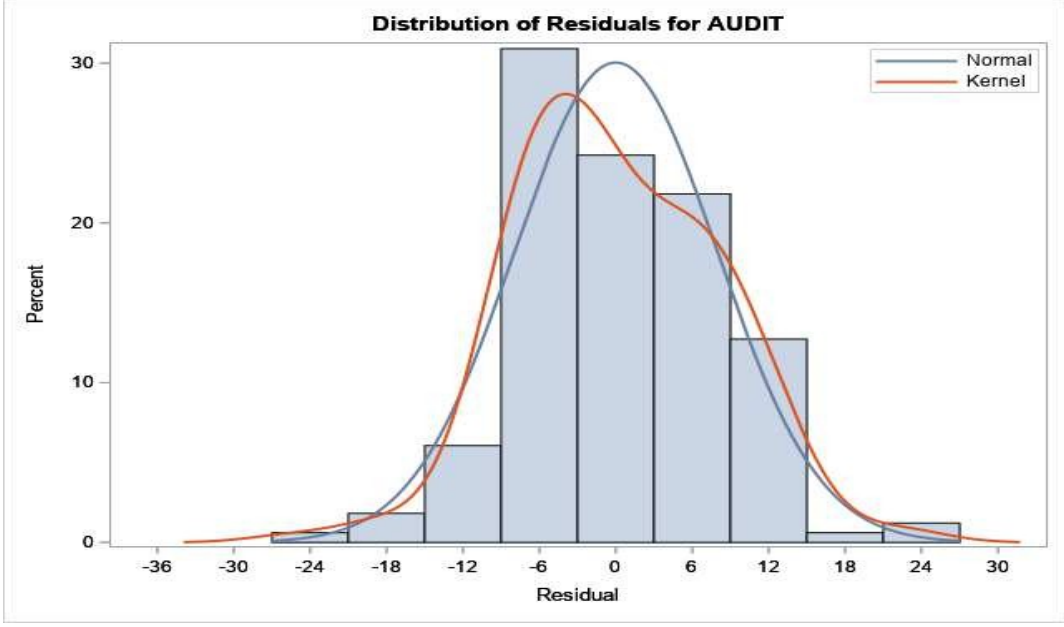
Further research should also expand the analysis of health risk behaviors that collegiate athletes participate in. Alcohol usage is but one of many. With such a fragile population who battling the strain of athletics and academics, coupled with limited coping strategies, it is imperative that research be completed on collegiate athletes and illicit drug, tobacco usage, sleeping patterns, and overall nutrition. In grand scheme of things, this population are developing adults who often have not fully formed adaptive identities, effective coping strategies, and healthy ego strength. Most of what we learn about ourselves in is hindsight. If we can understand the intensity and propensity of some of the health risk behaviors of collegiate athletes we can help foster more adaptive journeys in personal growth and exploration. Instead of hindsight, they can be empowered to understand themselves with foresight.

Chapter Six GRAPHS

Graph 1



Graph 2



Chapter Seven REFERENCES

American College Health Association (2015). American College Health Association-national college health assessment II: Undergraduate student reference group executive summary spring 2015. Hanover, MD: American College Health Association

Anderson, C. B. (2004). Athletic Identity and Its Relation to Exercise Behavior: Scale Development and Initial Validation. *Journal of Sport and Exercise Psychology*, *26*(1), 39‑56. doi: 10.1123/jsep.26.1.39

Armstrong, S. & Oomen-Early, J. (2009). Social connectedness, self-esteem, and depression symptomatology among collegiate athletes versus nonathletes. *Journal of American College Health*, 57(5), 521-526.

Ashforth, B. E., & Mael, F. (1989). Social Identity Theory and the Organization. *Academy of Management Review, 14*(1), 20-39.

Babor, T. F., Higgins-Biddle, J. C., Saunders, J. B., & Monteiro, M. G. (2001). The Alcohol Use Disorders Identification Test Guidelines for Use in Primary Care. In *Manual* (2nd ed., pp. 1-40). World Health Organization.

Badenhausen, K. (2019, June 14). Behind The Numbers Of The Top-Earning Athletes 2019. Retrieved January 17, 202AD, from https:// www.forbes.com/sites/kurtbadenhausen/2019/06/11/behind-the-numbers-of-the-top-earning-athletes-2019/#1ce434a76bbe

Baron, R. M., & Kenny, D. A. (1986). The moderator‑mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173‑1182. https://doi.org/10.1037/0022-3514.51.6.1173

Barry, A. E., Howell, S. M., Riplinger, A., & Piazza-Gardner, A. K. (2015). Alcohol use among college athletes: Do intercollegiate, club, or intramural student athletes drink differently. *Substance Use & Misuse*, *50,* 302-307. doi:10.3109/10826084.2014.977398

Bates, D., Mächler, M., Bolker, B., & Walker, S. (2014). Fitting linear mixed-effects models using lme4. ArXiv preprint arXiv:1406.5823. Retrieved from arxiv.org

Blashill, A.J., Vanderwal, J.S. (2009). Gender role and gender role conflict: Preliminary considerations for psychotherapy with gay men. *Journal of Gay and Lesbian Mental Health*, 13, 170-186

Boca, F. K. D., & Darkes, J. (2003). The validity of self-reports of alcohol consumption: state of the science and challenges for research. *Addiction*, *98*, 1−12. doi: 10.1046/j.1359-6357.2003.00586.x

Bohn, M.J., Babor, T.F., & Kranzler, H.R. (1995). The Alcohol Use Disorders Identification Test (AUDIT): Validation of a screening instrument for use in medical settings. Journal of Studies on Alcohol, 56(4), 423-432.

Brenner, J., & Swanik, K. (2007). High-Risk Drinking Characteristics in Collegiate Athletes. *Journal of American College Health, 56*(3), 267-272.

Brewer, B.W. & Cornelius, A.E. (2001). Norms and factorial invariance of the athletic identity measurement scale (AIMS). *The Academic Athletic Journal*, Fall, 103- 113.

Brewer, B.W., Van Raalte, J.L. & Linder, D.E. (1990). Development and preliminary validation of the athletic identity measurement scale. *Paper presented at the North American Society of Sport and Physical Activity Conference, Houston, Texas.*

Brewer, B.W., Van Raalte, J.L. & Linder, D.E. (1991). Construct validity of the athletic identity measurement scale. *Presented at the annual meeting of the North American Society for the Psychology of Sport and Physical Activity, Monterey, CA.*

Brewer, B. W., Van Raalte, J. L., & Linder, D. E. (1993). *Athletic Identity Measurement Scale (AIMS)* [Database record]. PsycTESTS. https://doi.org/10.1037/t15488-000

Brown, C., & Hartley, D. L. (1998). Athletic identity and career maturity of male college student-athletes. International Journal of Sport Psychology, 29, 17-26.

Brown, R. (2000). Social identity theory: past achievements, current problems and future challenges. *European Journal of Social Psychology*, *30*(6), 745-778.

Buhrmester, M., Kwang, T., & Gosling, S. D. (2016). Amazon′s Mechanical Turk: A new source of cheap, yet high-quality, data? *Perspectives on Psychological Science, 6*, 3-5.

Bureau of Labor Statistics, US. Department of Labor, *The Economist Daily,* Sports and exercise among Americans. (2016, August 4). Retrieved February 9, 2020, from https:// www.bls.gov/opub/ted/2016/sports-and-exercise-among-americans.html

Bureau of Labor Statistics, US. Department of Labor, Athletes and Sports Competitors: Occupational Outlook Handbook. (2019, September 4). Retrieved February 9, 2020, from https://www.bls.gov/ooh/entertainment-and-sports/athletes-and-sports-competitors.html

Cadigan, J. M., Littlefield, A. K., Martens, M. P., & Sher, K. J. (2013). Transitions into and out of intercollegiate athletic involvement and risky drinking. *Journal of Studies on Alcohol and Drugs*, *74*, 21-29.

Chen, S., Mason, N., & Middleton, S. (2013). An examination of behavioral data and testing scores as indicators of student-athletes′ academic success. *Kentucky Association of Health, Physical Education, Recreation and Dance, 51*, 34-43.

Cimini, M. D., Monserrat, J. M., Sokolowski, K. L., Dewitt-Parker, J. Y., Rivero, E. M., & Mcelroy, L. A. (2015). Reducing High-Risk Drinking Among Student-Athletes: The Effects of a Targeted Athlete-Specific Brief Intervention. *Journal of American College Health*, *63*(6), 343‑352. doi: 10.1080/07448481.2015.1031236

Coakley, J. (2001). Sport in society. Boston, MA: McGraw-Hill.

Coakley, J. (2007). Sport in society: Issues and controversies. (9th ed.). Boston, MA: McGraw-Hill.

Cornelius, A. (1995). The relationship between athletic identity, peer and faculty socialization, and college student development. Journal of College Student Development, 36, 560-573.

Courtenay, W. H. (2000). Constructions of masculinity and their influence on mens well-being: a theory of gender and health. *Social Science & Medicine*, *50*(10), 1385‑1401. doi: 10.1016/s0277-9536(99)00390-1

Courtenay, W. H. (2012). *Dying to be men: psychosocial, environmental, and biobehavioral directions in promoting the health of men and boys*. London: Routledge.

Curry, T. J. & Weiss, O. (1989). Sport identity and motivation for sport participation: A comparison between American college athletes and Austrian student sport club members. Sociology of Sport Journal. 6. 257-268.

DeSilva, P., Jayawardana, P, & Pathmeswaran, A. (2008). Concurrent validity of the alcohol use disorders identification test (AUDIT). Alcohol & Alcoholism, 43(1), 49-50.

Doumas, D. M., & Midgett, A. (2015). Ethnic differences in drinking motives and alcohol use among college athletes. *Journal of College Counseling*, *18*, 116-129. https://doi.org/10.1002/jocc.12009

Doumas, D. M., Turrisi, R., Coll, K. M., & Haralson, K. (2007). High−risk drinking in college athletes and non-athletes across the academic year. *Journal of College Counseling*, *10*, 163-174. https://doi.org/10.1002/j.2161-1882.2007.tb00016.x

Duda, J.L. (1999). *Advances in Sport and Exercise Psychology Measurement.* Morgontown, WV: Fitness International Technology.

Elkind, D. (1970, April 5). Erik Erikson′s Eight Ages of Man. *The New York Times Magazine, 1-27.*

Erikson, E. H. (1968). *Identity, youth, and crisis.* New York: Norton.

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*, 175-191

Ford, J. A. (2007). Alcohol use among college students: A comparison of athletes and nonathletes. *Substance Use & Misuse*, *42*, 1367-1377. https://doi.org/10.1080/10826080701212402

Fleming, M. F., Barry, K. L., & MacDonald, R. (1991). The Alcohol Use Disorders Identification Test (AUDIT) in a college sample. *International Journal Of The Addictions*, *26*(11), 1173-1185. doi:10.3109/10826089109062153

Gonzalez, J. M., Alegria, M., & Prihoda, T. J. (2005). How do attitudes toward mental health treatment vary by age, gender, and ethnicity/race in young adults? *Journal of Community Psychology*, 33, 611−629.

Good, G. E., & Mintz, L. B. (1990). Gender role conflict and depression in college men: Evidence for compounded risk. *Journal of Counseling & Development, 69,* 17-21.

Good, G. E., Schopp, L. H., Thomson, D., Hathaway, S., Sanford-Martens, T., Mazurek, M.O., et al. (2006). Masculine roles and rehabilitation outcomes among men recovering from serious injuries. *Psychology of Men and Masculinity, 7*, 165-176.

Good, G.E., Wood, P.K. (1995). Male gender role conflict, depression, and help seeking: Do college men face double jeopardy? *Journal of Counseling and Development*, 74, 70-75.

Green, J.D., Addis, M.E. (2012). Individual differences in masculine gender socialization a predictive of men′s psychophysiological responses to negative affect. *International Journal of Men's Health*, 11, 63-82.

Greenfield, B., Hallgren, K., Hagler, K., & Venner, K. (2013). Factor Structure of the Alcohol Use Disorders Identification Test in a Sample of Native American and Non-Hispanic

Grossbard, J. R., Geisner, I. M., Mastroleo, N. R., Kilmer, J. R., Turrisi, R., & Larimer, M. E. (2009). Athletic identity, descriptive norms, and drinking among athletes transitioning to college. Addictive Behaviors, 34, 352-359.

Hammond, T., Gialloreto, C., Kubas, H., & Davis, H. (2013). The prevalence of failure-based depression among elite athletes. *Clinical Journal of Sport Medicine*, 23(4), 273-277.

Harper, Shaun R. and Frank Harris III. 2010. *College Men and Masculinities: Theory, Research, and Implications for Practice*. San Francisco: John Wiley & Sons.

Heppner, P., Kivlighan, Dennis M, & Wampold, Bruce E. (2008). *Research design in counseling* (Third ed.). Australia ; Belmont, CA: Thomson Brooks/Cole.

Hernandez-Avila, Ca, Diaz-Martinez, Rl, Diaz-Martinez, A, & Burleson, Ja. (2008). Validity and factor structure of the alcohol use disorders identification test (AUDIT) in a sample of Mexican college students. *Alcoholism-Clinical And Experimental Research, 32*(6), 68A.

Hildebrand, K. M., Johnson, D. J., & Bogle, K. (2001). Comparison of patterns of alcohol use between high school and college athletes and non-athletes. *College Student Journal*, *35*, 358 -366.

Horton, R. S., & Mack, D. E. (2000). Athletic identity in marathon runners: Functional focus or dysfunctional commitment. Journal of Sport Behavior, 23(2), 101-119.

Humphrey, J. H., Yow, D. A., & Bowden, W. W. (2000). *Stress in college athletics: Causes, consequences, and coping.* New York, NY: Routledge.

Iwamoto, D., Cheng, A., Lee, C., Takamatsu, S., & Gordon, D. (2011). "Man-ing" up and getting drunk: The role of masculine norms, alcohol intoxication and alcohol-related problems among college men. *Addictive Behaviors*, *36*(9), 906‐11.

Iwamoto, D., Corbin, W., Lejuez, C., & MacPherson, L. (2014). College men and alcohol use: Positive alcohol expectancies as a mediator between distinct masculine norms and alcohol use. *Psychology of Men & Masculinity*, *15*(1), 29‐39.

Iwamoto, D., & Smiler, A. (2013). Alcohol makes you macho and helps you make friends: The role of masculine norms and peer pressure in adolescent boys' and girls' alcohol use. *Substance Use & Misuse*, *48*(5), 371‐378.

Iwamoto, D., Takamatsu, S., & Castellanos, J. (2012). Binge drinking and alcohol-related problems among U.S.-born Asian Americans. *Cultural Diversity & Ethnic Minority Psychology*, *18*(3), 219‐227.

Jcoram. (2015, April 13). Definition of "Prospective Student-Athlete". Retrieved January 17, 2020, from http://www.ncaa.org/enforcement/basketball-certification/definition-prospective-student-athlete

Jcoram. (2013, November 19). Division I 20/8-Hour Rule Materials. Retrieved February 3, 2020, from http://www.ncaa.org/division-i-20/8-hour-rule-materials

Johnson, J. A., Lee, A., Vinson, D., & Seale, J. P. (2013). Use of AUDIT-based measures to identify unhealthy alcohol use and alcohol dependence in primary care: A validation study. Alcoholism Clinical and Experimental Research, 37(1), 253−259. doi: 10.1111/j.1530-0277.2012.01898.x

Kearns Davoren, A., & Hwang, S. (2014, October 8). Mind, Body and Sport: Depression and anxiety prevalence in student-athletes. Retrieved January 3, 2020, from http://www.ncaa.org/sport-science-institute/mind-body-and-sport-depression-and-anxiety-prevalence-student-athletes

Keith, T. Z. (2019). *Multiple regression and beyond: An introduction to multiple regression and structural equation modeling*. New York, NY: Routledge

Kokotailo, P., Egan, J., Gangnon, R., Brown, D., Mundt, M., & Fleming, M. (2004). Validity of the Alcohol Use Disorders Identification Test in College Students. *Alcoholism: Clinical and Experimental Research,28*(6), 914-920.

Kotre, J., & Hall, E. (1990). *Seasons of life*. Boston, MA: Little, Brown

Krane, V., Barber, H., & McClung, L. (2002). Social psychological benefits of gay games participation: A social identity theory explanation. *Journal of Applied Sport Psychology*, *14* (1), 27-42.

Laerd Statistics (2015). Multiple regression using SPSS statistics. Statistical Tutorials and Software Guides. Retrieved from https://statistics.laerd.com/

Lantz, C.D. & Schroeder, P.J. (1999). Endorsement of masculine and feminine gender roles: differences between participation in and identification with the athletic role. *Journal of Sport Behavior*, 22(4), 545-557.

Larson, S., Eyerman, J., Foster, M., & Gfroerer, J. (2007). *Worker Substance Use and Workplace Policies and Programs*(pp. 1−185). DEPARTMENT OF HEALTH AND HUMAN SERVICES Substance Abuse and Mental Health Services Administration Office of Applied Studies

Leichliter, J. S., Meilman, P. W., Presley, C. A., & Cashin, J. R. (1998). Alcohol use and related consequences among students with varying levels of involvement in college athletics. *Journal of American College Health*, *46*, 257-262. doi:10.1080/07448489809596001

Lemle, R., & Mishkind, M. E. (1989). Alcohol and masculinity. Journal of Substance Abuse Treatment, 6, 213−222.

Levant, R., Wimer, D., Williams, C. (2011). An evaluation of the Health Behavior Inventory-20 (HBI-20) and its relationships to masculinity and attitudes towards seeking psychological help among college men. *Psychology of Men and Masculinity*, 12, 26-41.

Magovcevic, M., & Addis, M.E. (2008). Linking gender role conflict to non-normative and self stigmatizing perceptions of alcohol abuse and depression. *Psychology of Men and Masculinity*, 6, 127-136.

Mahalik, J. R. (2000). A model of masculine gender role conformity. Symposium−Masculine gender role conformity: Examining theory, research, and practice. Paper presented at the 108th Annual Convention of the American Psychological Association, Washington DC.

Mahalik, J. R., Cournoyer, R. J., DeFranc, W., Cherry, M., & Napolitano, J. M. (1998). Men's gender role conflict and use of psychological defenses. *Journal of Counseling Psychology*, *45*, 247‑255.

Mahalik, J.R., Good, G., Englar-Carlson, M. (2003). Masculinity scripts, presenting concerns, and help seeking: Implications for practice and training. *Professional Psychology: Research and Practice*, 34, 123-131.

Mahalik, J. R., Levi-Minzi, M., & Walker, G. (2007). Masculinity and health behaviors in Australian men. *Psychology of Men & Masculinity*, 8, 240‑249.

Mahalik, J. R., Locke, B. D., Ludlow, L. H., Diemer, M. A., Scott, R. P. J., Gottfried, M., & Freitas, G. (2003). Development of the Conformity to Masculine Norms Inventory. *Psychology of Men & Masculinity*, 4, 3‑25.

Mahalik, J. R., Lombardi, C. M., Sims, J., Coley, R. L., & Lynch, A. D. (2015). Gender, male-typicality, and social norms predicting adolescent alcohol intoxication and marijuana use. *Social Science & Medicine*, *143*, 71‑80. doi: 10.1016/j.socscimed.2015.08.01

Mahalik, J.R., Rochlen, A.B. (2006). Men's likely responses to clinical depression : What are they and do masculinity norms predict them? *Sex Roles*, 55, 659-667.

Marcia J.E. (2010) Life Transitions and Stress in the Context of Psychosocial Development. In: Miller T. (eds) Handbook of Stressful Transitions Across the Lifespan. Springer, New York, NY

Marcia, J. E., Waterman, A. S., Matteson, D. R., Archer, S. L., & Orlofsky, J. L. (1993). Ego identity: A handbook for psychosocial research. New York: Springer- Verlag.

Martens, M., Dams-O′Connor, K., & Beck, N. (2006). A systematic review of college student-athlete drinking: Prevalence rates, sport-related factors, and interventions. *Journal of Substance Abuse Treatment, 31*, 305-316.

Martens, M. P., Watson II, J. C., Royland, E. M., & Beck, N. C. (2005). Development of the athlete drinking scale. *Psychology of Addictive Behaviors*, *19*, 158-164. doi:10.1037/0893-164X.19.2.158

Maruyama, G., & Ryan, C. S. (2014). *Research methods in social relations* (8th ed.). Chichester, West Sussex, UK: Wiley Blackwell.

Melendez, M. (2001). *Contributions of Gender, Ethnic Status, Athletic Participation, and Athletic Identity to *college Adjustment,* ProQuest Dissertations and Theses.

Melendez, M. (2007). The influence of athletic participation on the college adjustment of freshman and sophomore student athletes. Journal of College Student Retention, 8(1), 39-55.

Melendez, M. (2010). Psychosocial influences on college adjustment in division I student-athletes: The role of athletic identity. Journal of College Student Retention: Research, Theory & Practice, 11(3), 345-361.

Menard, S. (2009). Logistic regression: From introductory to advanced concepts and applications. Thousand Oaks, CA: Sage.

Merriam-Webster. (2020, January 12). Athlete. Retrieved January 17, 2020, from https://www.merriam-webster.com/dictionary/athleteMoussas, G., Dadouti, G., Douzenis, A., Poulis, E., Tselebis, A., & Bratis, D. (2009). The Alcohol Use Disorders Identification Test (AUDIT): Reliability and validity of the Greek version. Annals of General Psychiatry, 8(1), 11.

Merz, Z. C., Perry, J. E., Brauer, A. H., Montgomery, T. L., Shulze, J., & Ross, M. J. (2020). The cost of mental illness: The public's derogation of athletes with psychological distress. *Stigma and Health*.

Miller, K. (2009). Sport-Related Identities and the "Toxic Jock". *Journal of Sport Behavior, 32*(1), 69-91

Murphy, G. M., Petitpas, A. J., & Brewer, B. W. (1996). Identity foreclosure, athletic identity, and career maturity in intercollegiate athletes. The Sport Psychologist, 10, 239-246.

Nasco, S. A., & Webb, W. M. (2006). Toward an expanded measure of athletic identity: The inclusion of public and private dimensions. *Journal of Sport and Exercise Psychology*, *28*(4), 434–453. https://doi.org/10.1123/jsep.28.4.434

National Collegiate Athletic Association. (2020). Student-Athletes. Retrieved January 2, 2020, from http://www.ncaa.org/student-athletes

National Federation of State High School Associations. (2018, September 11). High School Sports Participation Increases for 29th Consecutive Year. Retrieved January 17, 2020, from https://www.nfhs.org/articles/high-school-sports-participation-increases-for-29th-consecutive-year/

National Institute of Mental Health. (2019, April). Suicide. Retrieved February 2, 2020, from https://www.nimh.nih.gov/health/statistics/suicide.shtml

Nelson, T. F., & Wechsler, H. (2001). Alcohol and college athletes. *Medicine & Science in Sports & Exercise*, *33*, 44-47. http://dx.doi.org/10.1097/00005768-200101000-00008

O'Neil, J. M. (2010). Is criticism of generic masculinity, essentialism, and positive-healthy-masculinity a problem for the psychology of men [Commentary]. *Psychology of Men & Masculinity, 11,* 98–106. doi: 10.1037/a0018917

Outlaw KR, Toriello PJ. Off the court: helping African American athletes address behavioral health concerns while using motivational interviewing. J Hum Behav Soc Environ. 2014;24:557‑564.

Parent, M.C., & Moradi, B. (2009). Confirmatory Factor Analysis of the Conformity to Masculine Norms Inventory and Development of the Conformity to Masculine Norms Inventory-46. Psychology of Men & Masculinity,10(3), 175‑189. doi: 10.1037/a0015481

Parent, M. C., & Moradi, B. (2011). An abbreviated tool for assessing conformity to masculine norms: Psychometric properties of the Conformity to Masculine Norms Inventory-46. Psychology of Men & Masculinity, 12, 339-353. http://dx.doi.org/10.1037/a0021904

Paulhus, D. L. (1994). Balanced Inventory of Desirable Responding: Reference manual for BIDR Version 6. Unpublished manuscript, Department of Psychology, University of British Columbia, Vancouver, BC.

Picinelli, M., Tessari, E., Bortolomasi, M., Piasere, O., Semenzin, M., & Garzotto, N. (1997). Efficacy of the Alcohol Use Disorders Identification Test (AUDIT) as a screening tool for hazardous alcohol intake and related disorders in primary care: A validity study. BMJ Clinical Research, 314(7078), 420-424.

Pituch, K. A., & Stevens, J. (2016). *Applied multivariate statistics for the social sciences: Analyses with SAS and IBMs SPSS*. New York: Routledge, Taylor et Francis Group.

Pollack, W. (1998). *Real boys: Rescuing our sons from the myths of boyhood*. New York: Random House.

Rand, D. G. (2011). The promise of Mechanical Turk: How online labor markets can help theorists run behavioral experiments. *Journal of Theoretical Biology*, doi:10.1016/j.jtbi.2011.03.004.

Rexroat, M. (2014). *NCAA national study of substance use habits of college student-athletes: Final report* [PowerPoint slides]. Retrieved from http://www.ncaa.org/sites/default/files/Substance%20Use%20Final%20Report_FINAL.pdf

Ricciardelli, L. A., Mccabe, M. P., & Ridge, D. (2006). The Construction of the Adolescent Male Body through Sport. *Journal of Health Psychology*, *11*(4), 577‑587. doi: 10.1177/135910530606501

Robertson, J., & Fitzgerald, L. F. (1992). Overcoming the masculine mystique: Preferences for alternative forms of assistance among men who avoid counseling. *Journal of Counseling Psychology*, *39*, 240‑246.

Rosiek, A., Rosiek-Kryszewska, A., Leksowski, L., & Leksowski, K. (2016, February 15). Chronic Stress and Suicidal Thinking Among Medical Students. Retrieved January 20, 2020, from https://doi.org/10.3390/ijerph13020212

Royce, W.S., Gebelt, J.L. & Duff, R.W. (2003). Female athletes: Being both athletic and feminine. *Athletic Insight: The Online Journal of Sport Psychology*, 1-16.

Sapp, M. (2006). *Basic psychological measurement, research designs, and statistics without math*. Springfield, IL: Charles C. Thomas Publisher.

Saunders, J. B., Aasland, O. G., Babor, T. F., de la Fuente, J. R., & Grant, M. (1993). Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption: II. *Addiction*, *88*(6), 791-804. doi:10.1111/j.1360-0443.1993.tb02093.x

Schrack-Walters, A., O′Donnell, K. A., & Wardlow, D. L. (2008). Deconstructing the Myth of the Monolithic Male Athlete: A Qualitative Study of Men′s Participation in Athletics. *Sex Roles*, *60*(1-2), 81‑99. doi: 10.1007/s11199-008-9499-y

Schwarb, W. (2018, October 16). Number of NCAA college athletes reaches all-time high. Retrieved January 17, 2020, from http://www.ncaa.org/about/resources/media-center/news/number-ncaa-college-athletes-reaches-all-time-high

Simons, H. D., Van Rheenen, D., & Covington, M. V. (1999). Academic motivation and the student athlete. *Journal of College Student Development, 40*(2), 151-162.

Stephan, Y., & Brewer, B. W. (2007). Perceived determinants of identification with the athlete role among elite competitors. *Journal of Applied Sport Psychology, 19*(1), 67-79. doi: 10.1080/10413200600944090

Stryker, S. (1980). *Symbolic interactionism: A social structural version.* Menlo Park, CA: Benjamin Cummings.

Substance Abuse and Mental Health Services Administration. (2018). Key substance use and mental health indicators in the United States: Results from the 2017 National Survey on Drug Use and Health (HHS Publication No. SMA 18-5068, NSDUH Series H-53). Retrieved from https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHFFR2017/NSDUHFFR2017.pdf

Substance Abuse and Mental Health Services Administration. (2018). Results from the 2017 National Survey on Drug Use and Health: Detailed Tables. Retrieved from https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHDetailedTabs2017/NSDUHDetailedTabs2017.pdf

Steinberg, B. (2019, November 25). Super Bowl Ads Sell Out Early For First Time in Five Years. Retrieved January 17, 2020, from https://variety.com/2019/tv/news/super-bowl-commercials-2020-fox-sell-out-1203415238/

Steinfeldt, Matthew, & Steinfeldt, Jesse A. (2012). Athletic Identity and Conformity to Masculine Norms Among College Football Players. *Journal of Applied Sport Psychology, 24*(2), 115-128.

Stryker, S. & Burke, P.J. (2000). The past, present, and future of an identity theory. *Social Psychology Quarterly*, 63(4), 284-297.

Sokol, J. T. (2009). Identity Development Throughout the Lifetime: An Examination of Eriksonian Theory. *Graduate Journal of Counseling Psychology*, *1*(2), 138‑149. Retrieved from http://epublications.marquette.edu/gjcp/vol1/iss2/14

Taylor, E. A., Ward, R. M., & Hardin, R. (2017). Examination of Drinking Habits and Motives of Collegiate Student-Athletes. *Journal of Applied Sport Management*, *9*(1), 56‑77. doi: 10.18666/jasm-2017-v9-i1-7470

Thomas, E.(2008).A College perspective on academics and the student-athlete. Coach & Athletics Director, 77(8), 29-36.

Tuliao, A., Landoy, B., & Mcchargue, D. (2016). Factor structure and invariance test of the alcohol use disorder identification test (AUDIT): Comparison and further validation in a U.S. and Philippines college student sample. *Journal of Ethnicity in Substance Abuse, 15*(2), 127-143.

Turrisi, R., Mastroleo, N. R., Mallett, K. A., Larimer, M. E., & Kilmer, J. R. (2007). Examination of the mediational influences of peer norms, environmental influences, and

parent communications on heavy drinking in athletes and nonathletes. *Psychology of Addictive Behaviors*, *21*, 453-461. doi:10.1037/0893-164X.21.4.453

Vaillant, G. E., & Milofsky, E. (1980). Natural history of male psychological health: IX. Empirical evidence for Erikson's model of the life cycle. *American Journal of Psychiatry, 137,* 1348–1359.

Wechsler, H., Davenport, A. E., Dowdall, G. W., Grossman, S. J., & Zanakos, S. I. (1997). Binge drinking, tobacco, and illicit drug use and involvement in college athletics: A survey of students at 140 American colleges. *Journal of American College Health*, *45*, 195-200. doi:10.1080/07448481.1997.9936884

Wong, J.Y., Owen, J., Shea, M. (2012). A latent regression analysis of men's conformity to masculine norms and psychological distress. *Journal of Counseling Psychology*, 59, 176-183.

World Health Organization. (2001). The alcohol use disorders identification test: Guidelines for use in primary care (2nd ed.). Retrieved from http://www.who.int

Yankov, G. P., Davenport, N., & Sherman, R. A. (2019). Locating mental toughness in factor models of personality. *Personality and Individual Differences*, *151*, 109532.

Young, A., Morales, M., McCabe, S., Boyd, C., & D'Arcy, H. (2005). Drinking like a guy: Frequent binge drinking among undergraduate women. Substance Use & Misuse, 40(2), 241–267. doi:10.1081/JA-200048464.

Zamboanga, B. L., Audley, S., Iwamoto, D. K., Martin, J. L., & Tomaso, C. C. (2017). The risks of being "manly": Masculine norms and drinking game motives, behaviors, and related consequences among men. *Psychology of Men & Masculinity*, *18*(4), 280–292. doi: 10.1037/men0000064

Zhou, J., Heim, D., & O'Brien, K. (2015). Alcohol Consumption, Athlete Identity, and Happiness Among Student Sportspeople as a Function of Sport-Type. *Alcohol and Alcoholism, 50*(5), 617-623.

APPENDICES

Appendix A: Demographic Questionnaire

How old are you? _____

Is English your primary language?
☐Yes ☐No

Are you a current U.S Citizen?
☐Yes ☐No

What is your gender Identity?
☐Female ☐Male ☐Other:_____

Please indicate the racial/ethnic background (s) that best applies to you
☐ Black or African American ☐ American Indian
☐ Native Hawaiian or Pacific Islander ☐ Asian
☐ Hispanic ☐ Other _____

Are you currently completing your undergraduate degree?
☐Yes ☐No

Are you a current participant in a NCAA men's sanctioned sport (On the team)?
☐Yes ☐No

Please identity your current sport(s) from the choice below
☐Baseball ☐ Softball ☐ Football ☐ Basketball

☐Cross Country ☐ Golf ☐Fencing ☐Lacrosse, Soccer,

☐Gymnastics ☐Volleyball ☐ Ice Hockey ☐Water Polo

☐Rifle ☐ Tennis ☐ Skiing ☐ Track and Field

☐Swimming and Diving ☐Wrestling

How long have you been participating in sports at the collegiate level? _____

Have ingested alcohol in the last 6 months?
☐ Yes ☐No

Appendix B: Conformity to Masculine Norms Inventory-46 (CMNI)

Instructions: Read each item and indicate to what degree it reflects your own thoughts and feelings, using the 4-point scale below. There are no right or wrong answers. Base your responses on your opinion at the present time. To ensure **that your** answers **can be** used, please **respond** to the statements as **written,** and place your numerical response on the line provided to the left of each question.

0	1	2	3
Strongly Disagree	Disagree	Agree	Strongly Agree

_____1. In general, I will do anything to win.

_____2. If I could, I would frequently change sexual partners.

_____3. I hate asking for help.

_____4. I believe that violence is never justified.

_____5. Being thought of as gay is not a bad thing.

_____6. In general, I do not like risky situations.

_____7. Winning is not my first priority.

_____8. I enjoy taking risks.

_____9. I am disgusted by any kind of violence.

_____10. I ask for help when I need it.

_____11. My work is the most important part of my life.

_____12. I would only have sex if I was in a committed relationship.

_____13. I bring up my feelings when talking to others.

_____14. I would furious if someone thought I was gay.

0	1	2	3
Strongly Disagree	Disagree	Agree	Strongly Agree

_____15. I don't mind losing

_____16. I take risks.

_____17. It would not bother me at all if someone thought I was gay.

_____18. I never share my feelings.

_____19. Sometimes violent action is necessary.

_____20. In general, I control the women in my life.

_____21. I would feel good if I had many sexual partners.

_____22. It is important for me to win.

_____23. I don't like giving all my attention to work.

_____24. It would be awful if people thought I was gay.

_____25. I like to talk about my feelings.

_____26. I never ask for help.

_____27. More often than not, losing does not bother me.

_____28. I frequently put myself in risky situations.

_____29. Women should be subservient to men.

0	1	2	3
Strongly Disagree	Disagree	Agree	Strongly Agree

_____30. I am willing to get into a physical fight if necessary.

_____31. I feel good when work is my first priority.

_____32. I tend to keep my feelings to myself.

_____33. Winning is not important to me.

_____34. Violence is almost never justified.

_____35. I am happiest when I am risking danger.

_____36. It would be enjoyable to date more than one person at a time.

_____37. I would feel uncomfortable if someone thought I was gay.

_____38. I am not ashamed to ask for help.

_____39. Work comes first.

_____40. I tend to share my feelings.

_____41. No matter what the situation I would never act violently.

_____42. Things tend to be better when men are in charge.

_____43. It bothers me when I have to ask for help.

_____44. I love it when men are in charge of women.

0	1	2	3
Strongly Disagree	Disagree	Agree	Strongly Agree

_____45. I hate when people ask me to talk about my feelings.

_____46. I try to avoid being perceived as gay.

Appendix C: Athletic Identity Measurement Scale (AIMS)

Instructions: Read each item and indicate to what degree it reflects your own thoughts and feelings, using the 7-point scale below. There are no right or wrong answers. Base your responses on your opinion at the present time. To ensure **that your** answers **can be** used, please **respond** to the statements as **written,** and place your numerical response on the line provided to the left of each question.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat disagree	Neither agree nor disagree	somewhat agree	Agree	Strongly agree

_____1. I consider myself an athlete.

_____2. I have many goals related to sports.

_____3. Most of my friends are athletes.

_____4. Sport is the most important part of my life.

_____5. I spend more time thinking about sport than anything else.

_____6. I feel bad about myself when I do poorly in sport.

_____7. I would be very depressed if I were injured and could not compete in sport.

Appendix D: Alcohol Use Disorder Identification Test (AUDIT)

The Alcohol Use Disorders Identification Test: Interview Version

Read questions as written. Record answers carefully. Begin the AUDIT by saying "Now I am going to ask you some questions about your use of alcoholic beverages during this past year." Explain what is meant by "alcoholic beverages" by using local examples of beer, wine, vodka, etc. Code answers in terms of "standard drinks". Place the correct answer number in the box at the right.

1. How often do you have a drink containing alcohol?
   (0) Never [Skip to Qs 9-10]
   (1) Monthly or less
   (2) 2 to 4 times a month
   (3) 2 to 3 times a week
   (4) 4 or more times a week

2. How many drinks containing alcohol do you have on a typical day when you are drinking?
   (0) 1 or 2
   (1) 3 or 4
   (2) 5 or 6
   (3) 7, 8, or 9
   (4) 10 or more

3. How often do you have six or more drinks on one occasion?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily
   Skip to Questions 9 and 10 if Total Score for Questions 2 and 3 = 0

4. How often during the last year have you found that you were not able to stop drinking once you had started?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

5. How often during the last year have you failed to do what was normally expected from you because of drinking?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

7. How often during the last year have you had a feeling of guilt or remorse after drinking?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

9. Have you or someone else been injured as a result of your drinking?
   (0) No
   (2) Yes, but not in the last year
   (4) Yes, during the last year

10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?
    (0) No
    (2) Yes, but not in the last year
    (4) Yes, during the last year

Record total of specific items here

If total is greater than recommended cut-off, consult User's Manual.

Appendix E: Informed Consent

University of Wisconsin-Milwaukee
Informed Consent to Participate in Research

Study title: Masculinity, Athletic Identity, and Alcohol: An examination of the potential relationship between Conformity to Masculine Norms and Athletic Identity and their interaction with alcohol usage in male collegiate student athletes.

Researcher[s]: Travis Love, M.A. UW-Milwaukee; Marty Sapp, Ph.D., UW-Milwaukee
We're inviting you to participate in a research study. Participation is completely voluntary. If you agree to participate, you can always change your mind and withdraw. There are no negative consequences, whatever you decide.

What is the purpose of this study?
To examine the potential affect that athletic identity and conformity to masculine norms has on male collegiate athlete's alcohol consumption.

What will I do?
You'll be taking an online survey that tries to assess your current beliefs and behaviors related to your identity as a male, as an athlete, and your current drinking patterns. The questions will be related to athletic performance and roles, common masculine stereotypes, and alcohol consumption. The total time will be 10 minutes to 15 minutes (likely less).

Risks

- Some questions may be very personal or upsetting. You can skip any questions you don't want to answer, or stop the survey entirely.
- Online data being hacked or intercepted: This is a risk you experience any time you provide information online. We're using a secure system to collect this data, but we can't completely eliminate this risk.
- Amazon could link your worker ID (and associated personal information) with your survey responses. Make sure you have read Amazon's mTurk participant and privacy agreements to understand how your personal information may be used or disclosed.
- Breach of confidentiality: There is a chance your data could be seen by someone who shouldn't have access to it. We're minimizing this risk in the following ways:
    - All identifying information is removed and replaced with a study ID.
    - We'll store all electronic data on a password-protected, encrypted computer.

Possible benefits: Besides the compensation listed below, you'll be helping to increase the understanding how the roles and beliefs of student athletes can affect their behavior.

Estimated number of participants: 160 former student-athletes.

How long will it take? The survey will take an estimated 10 minutes.

Costs: None

Compensation: Successful completion of the survey will result in a five-cent ($2.00) benefit.

Future research: De-identified data (all identifying information removed) may be shared with other researchers. You won't be told specific details about these future research studies.

Confidentiality and Data Security
Your mTurk ID will be collected but will be withheld during statistical analysis.

Where will data be stored? On the servers for the online survey software (Qualtrics), accessible through the researchers' computers.

How long will it be kept? De-identified data will be kept for 6 years.

Who can see my data?

- We (the researchers) will have access to de-identified information (no names, birthdate, address, etc.). This is so we can analyze the data and conduct the study.
- The Institutional Review Board (IRB) at UWM, the Office for Human Research Protections (OHRP), or other federal agencies may review all the study data. This is to ensure we're following laws and ethical guidelines.
- We may share our findings in publications or presentations. If we do, the results will be de-identified.
- Amazon: Because they own the MTurk internal software, and to issue payment, Amazon will have access to your MTurk worker ID. There is a possibility Amazon could link your worker ID (and associated personal information) with your survey responses.

Contact information:
For questions about the research, complaints, or problems: Contact Travis Love, M.A. tslove@uwm.edu, or Marty Sapp. sapp@uwm.edu.

For questions about your rights as a research participant, complaints, or problems: Contact the UWM IRB (Institutional Review Board; provides ethics oversight) at 414-229-3173 / irbinfo@uwm.edu.

Please print or save this screen if you want to be able to access the information later.
IRB #: 21.206
IRB Approval Date: 2/3/21
Agreement to Participate
If you meet the eligibility criteria below and would like to participate in this study, click the button below to begin the survey. Remember, your participation is completely voluntary, and you're free to withdraw at any time.

- How old are you?
- Is English your primary language?
- Are you a current U.S Citizen?
- What is your gender Identity?

- Please indicate the racial/ethnic background (s) that best applies to you
- Are you currently completing your undergraduate degree?
- Are you a current participant in a NCAA men's sanctioned sport (On the team)?

- Please identity your current sport(s) from the choice below
- How long have you been participating in sports at the collegiate level?
- Have ingested alcohol in the last 6 months?