

WORK HARD PLAY HARD: EXPLORING ALCOHOL CONSUMPTION AMONG
STUDENT-ATHLETES

by

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B.A., Oakland University, 2012

A THESIS

submitted in partial fulfillment of the requirements for the degree

MASTER OF SCIENCE

School of Journalism and Mass Communications
College of Arts and Sciences

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2014

Approved by:

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Abstract

Collegiate student-athletes have been identified as an especially at-risk subgroup for heavy alcohol use as compared to the general college student population. Despite the intense physical demands required for athletic participation, national studies have found that intercollegiate athletes consumed more alcohol, engaged in more frequent heavy episodic drinking, and experienced more negative alcohol-related consequences as compared with non-athletes.

A combination of structured open-ended and closed-ended questions was used in the current study. Data was collected from student-athletes across the United States through semi-structured, individual interviews informed by the theory of planned behavior (Ajzen, 1991) and its constructs (attitudes, subjective norms, and perceived behavioral control). Open coding was the chosen method for data analysis for the study. Codes, accompanied by descriptives, were organized into themes as they related to the research questions and the theory of planned behavior.

Results show that nearly half (49%) of student-athletes report drinking five or more drinks in one-sitting, with the majority of student-athletes consuming alcohol only 1-2 times per week at parties. Student-athletes' attitudes towards heavy drinking and alcohol outcome expectancies are apparent in two themes: sexual risk taking and athletic training justification. Many respondents expressed alcohol-drinking relationships with other student-athletes at their institution.

The NCAA has recognized the importance of addressing alcohol related issues among collegiate athletes. However, the type of educational programming being assigned by the NCAA has been generally ineffective in reducing alcohol use of student-athletes. In fact, of the student-athletes surveyed in this study, the majority struggled with recalling NCAA alcohol prevention programs that they are familiar with—only 13% of student-athletes use alcohol prevention skills and tools taught by the NCAA or their athletic department to reduce alcohol consumption. Similarly, there is a belief among student-athletes that the NCAA is not doing enough to reduce alcohol use among student-athletes is exemplified by the fact that the majority (57%) gave the NCAA an F letter-grade for their current alcohol intervention and prevention strategies that are being taught to student-athletes.

Although the NCAA requires student-athletes to participate in alcohol, tobacco and other drug education programming, only approximately 25% of student-athletes surveyed recalled viewing a NCAA drug and alcohol educational video or reading a brochure detailing the effect alcohol has on athletic performance at the beginning of the academic year. Furthermore, 85% of student-athletes reported that they were not informed of the counseling or alcohol treatment options that the NCAA provides.

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Acknowledgements

First, I would like to thank my major professor, Dr. Nancy Muturi. She has helped me tremendously during my time at Kansas State University and has encouraged and inspired me throughout the process. I would also like to thank the two other members of my thesis committee, Dr. William Schenck-Hamlin and Dr. Louise Benjamin. They provided excellent feedback and guidance despite their demanding schedules. Collectively, I am forever grateful for the members of my committee along with the academic leadership of the School of Journalism and Mass Communications, which has provided me with the academic skills and tools necessary for success.

Next, I would like to acknowledge my parents—Jean and Robert Rodgers—for being great role models throughout my academic career and providing me with a creative and supportive learning environment. Also, I would like to thank Alyssa Vela, without her love and support I would not have made it this far. Despite the distance, she kept me motivated throughout my graduate career.

Chapter 1 - Introduction

Excessive alcohol use among college students is widely recognized as a serious public health problem in the United States (Martens, 2012). An overwhelming majority of college students use alcohol—nearly half of all college students are binge drinkers, and college binge drinkers drink more often than in the past (Ford, 2007). In 2005, there were 1,825 deaths and 599,000 injuries among college students that were directly or indirectly associated with alcohol use (Hingson, Zha, & Weitzman, 2009). National epidemiological studies indicate that as many as 40% of college students report heavy drinking in the preceding two weeks (Wechsler, Lee, Kuo, Seibring, Nelson, & Lee, 2002).

Heavy, or binge drinking is defined as five or more drinks for men and four or more drinks for women in one-sitting. It has been associated with educational difficulties, psychosocial problems, antisocial behaviors, injuries, overdoses, high-risk sexual behaviors, and alcohol-impaired driving (Wechsler et al., 2002; WHO, 2002). Long term negative effects of substance use are known to cause an increased risk of heart attack, stroke, lung and liver cancer, brain and liver failure, and depression to name a few. The American College of Sports Medicine (1982) stated in its position statement on alcohol use and sport that acute alcohol and drug consumption is associated with (a) compromised psychomotor skills; (b) decreased maximal oxygen consumption; (c) decreased exercise capacity, muscular strength, and cardiovascular endurance; and (d) impaired body-temperature regulation system.

Interestingly, intercollegiate athletes, a sub-group of the college student population are more at-risk for heavy alcohol consumption than their peers. Hyatt (2003) describes student-athletes as a special population whose university experience is different from those of non-athletes. The National Collegiate Athletic Association (NCAA), the governing body for all collegiate athletes, released a study in 2012 that analyzed the frequency of alcohol use by college athletes from 1993 to 2009.

Figure 1 Increase in Alcohol Consumption From 2005 to 2009 (NCAA, 2012)

Overall Percentage of Use Within Past 12 Months	Female	Male
2005	77.3	77.6
2009	83.1	83.1

The study reported that the number of college athletes who consumed alcohol increased significantly over the past 12 years, including an increase of 5.8 percentage points for females and 5.5 percentage points for males from 2005 to 2009 (see *figure 1* on previous page). In addition, 85% of college student-athletes who reported using alcohol in the last year did so an average of two or fewer times per week. Intercollegiate athletes also report consuming an average of 7–8 drinks per week, as compared to their non-athlete counterparts who report consuming an average of about 4 drinks per week (Leichliter, Meilman, Presley, & Cashin, 1998).

College athletes may be at a higher risk of alcohol abuse because of their dual identities as both students and athletes. Despite the intense physical demands essential in sport competition, national studies have found that intercollegiate athletes consumed more alcohol, engaged in more frequent heavy episodic drinking, and experienced more negative alcohol-related consequences as compared with non-athletes (Leichliter et al., 1998; Nelson & Wechsler, 2001; Wechsler, Davenport, Dowdall, Grossman, & Zanakos, 1997).

They, unlike other students, are influenced by various stressors acting together (Wilson & Pritchard, 2005). Increased stress levels are correlated with student-athletes likelihood to experience alcohol-related negative consequences than are non-athletes, e.g, hangovers, academic problems, relationship problems, and criminal behavior and victimization (Martens, Dams-O'Connor, & Duffy-Paiement, 2006). Research has shown that student-athletes face up to six situation-specific challenges that regular college students do not face. According to Watson (2002), the six areas are: balancing athletics and academics, adapting to social challenges associated with athlete status, managing athletic successes and failures, minimizing physical injury, termination of their athletic career, and weight management issues. Watson believes that these six constructs are added contributing factors that are leading to increased alcohol use among student-athletes.

As part of alcohol prevention interventions, the NCAA mandates that athletic departments conduct drug and alcohol prevention programming at least once a semester (NCAA, 2010). These programs are designed to increase an athletes' amount of information about alcohol, concentrating on components such as team, department, institution, and conference alcohol polices, and viewing an NCAA alcohol education video. The NCAA also requires individual athletic departments to have guidelines on alcohol counseling or treatment options

(Martens, 2012). Additionally, the majority of NCAA universities participate in the NCAA-sponsored Champs/Life Skills program, which has alcohol and drug education and prevention as one its core components (Martens, Damns-O'Connor, Kilmer, 2007a). Another prevention approach, APPLE (Athletic Prevention Programming and Leadership Education), has been adopted by over 400 schools nationally and encourages athletic departments and their student-athletes to participate in prevention efforts and provides principles for seven prevention areas: recruitment practices, departmental expectations and attitudes, education programs, policies, drug testing, sanctioning procedures, and referral and counseling. Despite increased recognition and intervention efforts, heavy alcohol use by student-athletes is continuing to increase (Brenner & Swanik, 2007).

The goal of this study is to understand why anti-drinking campaigns targeting student-athletes are failing to reduce heavy alcohol consumption. In order to reduce the negative health and alcohol-related consequences that student-athletes face, researchers, practitioners, and clinicians should understand how student-athletes react to alcohol intervention and prevention efforts. If mandated efforts by the NCAA are unlikely to be effective at reducing alcohol intake and heavy episodic drinking among student-athletes, it is important that researchers condense the communication gap and create effective intervention plans tailored for student-athletes' needs. Although there exists a considerable amount of campus variability in terms of the ways that sport-specific factors might impact alcohol use among intercollegiate athletes, researchers believe that alcohol interventions with athletes will be made more effective if those delivering the services have a general understanding of the differences that often exist between intercollegiate athletes and non-athletes (Martens, Dams-O'Connor, & Beck, 2006).

Problem Statement

Every health promotion and public health interventions include some form of communication and excellent communication is crucial in the design of campaigns to promote health or prevent ill health (Corcoran, 2011). Health communication is defined as the ability and technique of informing, influencing, and motivating individual, institutional, and public audiences about important health issues. Furthermore, "health communication research has the great potential to inform health care and health promotion policy and practice, ultimately helping to save lives and increase quality of life" (Kreps, 2008 p. 7).

To understand why communication campaigns targeting student-athletes are failing to limit alcohol use, communication practitioners must first understand student-athletes attitudes towards heavy drinking. Attitudes inherent in the student-athlete culture, such as the aim to not seek help or to “deal with the pain,” can also result in higher amounts of alcohol use (NCAA, 2010). Much like the regular college student population, there appears to be considerable overlap between attitudes toward drinking and alcohol outcome expectancies among student-athletes (Hinson, McKee, & Wall, 1998). Furthermore some student-athletes have adopted the “work hard, play hard” approach, believing that the harder they work on the field during the week, the more they can encourage excessive consumption on the weekends (Leichliter et al., 1998).

The goal of health communication with student-athletes is to understand their attitudes, perceptions, motives, influences and promote behavioral change through strategic communication. Since having the ability to control risky behavior is essential in reducing student-athlete alcohol use, researchers should gain an insight into student-athletes’ attitudes and intentions toward alcohol consumption. As a result, researchers will be able to encourage the NCAA to go beyond its education-only programming and mandate social norm and personalized feedback campaigns to reduce alcohol consumption.

The influence of one’s peers, who among college athletes will often primarily include their teammates (Thombs & Hamilton, 2002), could be another factor that explains excessive alcohol use among intercollegiate athletes. According to Martens, Dams-O’Connor, Duffy-Paiement, and Gibson (2006), college athletes’ perception of close friends’ alcohol consumption was highly correlated to personal alcohol consumption and that these college athletes may in part consume alcohol in an effort to meet the expectations of their peers, especially their peers who are also athletes. It is also believed that certain aspects of the student-athlete culture make peer influences more intense. This social group encourages social interaction between members which may lead to behavioral influence. Prevention efforts should focus on the student-athlete culture and the roles that these subjective norms play in behavioral influence before attempting to implement an intervention campaign to reduce alcohol prevalence rate.

A number of theorists and researchers have speculated that factors such as excessive stress, heightened peer pressure, and personality factors, may be associated with increased overall alcohol use among athletes (Damm & Murray, 1996; Leichliter et al., 1998; Wechsler et al., 1997; Selby, Weinstein, & Bird, 1990). However, college athletes report that performance-

related demands are among the most commonly cited reasons for not using alcohol (Nelson & Wechsler, 2001). Understanding the contributing factors leading to increased alcohol consumption among student-athletes will increase effectiveness in alcohol reduction campaigns targeted for this population. In situations when student-athletes are shown both the negative impact of alcohol use on their performance and the perceived efficacy of the abstaining, positive behavioral change can be productive.

The current study is informed by the theory of planned behavior (Ajzen, 1991), a conceptual framework for the study of human action (Ajzen, 2002). It suggests individuals act “in accordance with their intentions and perceptions of control over the behavior, while intentions are influenced by attitudes toward the behavior, subjective norms, and perceptions of behavioral control” (Ajzen, 2001, p. 43). It details the determinants of an individual’s decision to enact a particular volitional behavior based upon informational and motivational influences on behavior (Conner & Armitage, 1998). Each component of the theory will be used to generate questions examining student-athletes behavioral intention towards heavy drinking, and subsequent behavior. First, student-athletes’ attitudes towards heavy drinking and alcohol outcome expectancies will be examined. Secondly, a key determinant of the subjective norms is the role that athletic department culture has on student-athletes and the roles that these social bonds play in influencing drinking behavior. Lastly, understanding perceived behavioral control, or the perceived ability to control risky behavior is vital in reducing student-athlete alcohol use.

Significance/Justification

The findings of this study are intended to inform the health communication field and provide necessary information and recommendations for the construction of future interventions targeting this population. The study adds to the existing knowledge on collegiate athletes increased chance for alcohol use and abuse. Student-athletes are members of an elite culture few can relate to or understand without having experienced it. Like non-athlete college peers, they are susceptible to the stress of college life, which includes factors such as increased autonomy, social pressure, and academic stress. As athletes, their stress is amplified by athletic-specific factors, such as long practices, missing class for competitions, and mandatory meetings and events. Based on the information gathered, health communication campaigns will have a better

understanding of how to tailor communication messages that will impact student-athletes' everyday lives.

A key significance of the study is that it is informed by personal experience. As a former collegiate athlete, the researcher has witnessed firsthand the detrimental impact alcohol use and abuse has on individuals, teammates, and performance. He has observed how alcohol use becomes a social norm within individual teams and within the college athletic environment as a whole. Upon examining the literature, he was surprised at how underrepresented personal perspectives were in this area, when it is clearly in dire need of attention. It is the researcher's sincere hope that this study sheds some light on the behavioral intention student-athletes have towards alcohol use and intervention tactics and that the research results are put to use by health communication practitioners, institutions, and the NCAA.

Qualitative in nature, this study offers a different methodological approach focusing on student-athletes perspectives. Since the majority of research among student-athletes and alcohol use has been empirical in nature, it is essential that student-athletes provide their own feedback towards heavy drinking behavior in order for their voice to be heard. This approach contributes to the understanding of the problem that exists in intercollegiate athletics in a way that few other researchers have examined. Also, this qualitative perspective will benefit health communication practitioners in better designing and tailoring alcohol prevention and intervention campaigns to reduce heavy drinking among student-athletes.

The study is organized as follows: Chapter 2, which follows, is a comprehensive review of the literature including the theoretical framework. Research questions are included in this chapter. Chapter 3 details the methodology. It provides a description of the sample population, sample selection method, the data collection, and the data analysis. Chapter 4 includes the results of the study, which are based on the research questions presented in Chapter 2. Chapter 5 includes a discussion of the research findings and includes theoretical implications of the findings. This chapter also includes recommendations for the NCAA and health communication practitioners.

Chapter 2 - Review of Literature

The intention of this study is to understand alcohol use among college students participating in a sanctioned university sport. The purpose of this literature review is to examine the collection of published research relevant to intervention tactics and student-athlete alcohol. First, this chapter will explore the prevalence rate of intercollegiate athlete alcohol use. It explicates how student-athletes as a population whole are uniquely affected by it, providing contributing factors why they are at such higher risk than other groups and describing how the culture of athletics and heavy drinking are so physiologically, psychologically, and behaviorally parallel to one another. These factors—which include attitudes, subjective norms, and perceived behavioral control—are presented within the context of the study’s theoretical framework, which is also discussed in this chapter. Research questions based on the study’s key constructs (i.e., attitudes, subjective norms, and perceived behavioral control) are presented in this chapter. Finally, current NCAA alcohol intervention, prevention, strategies and tactics are examined.

Culture of Intercollegiate Athletics

Hyatt (2003) describes university student-athletes as a special population whose university experience is different from those of non-athletes. They, unlike other students, are influenced by various stressors acting together (Wilson & Pritchard, 2005; Surujlal, Nolan, & Ubane, 2012). The highest cited stressor according to student-athletes is excessive pressure and stress related to balancing the demands of being both a student and an athlete (Damm & Murray, 1996; Marcello, Danish, & Stolberg, 1989). Fatigue caused by maintaining a full course load, exhaustive workouts, and film study is also a major stressor for college athletes (Evans, Weinberg, & Jackson, 1992; Watson, 2002). Student-athletes who suffer from physical pain or injury are more likely to experience stress and anxiety because they are unable to perform with their teammates thus feeling like they are letting the team and the fans down (Tricker et al., 1989; Watson, 2002). Perhaps the hardest stressor for student-athletes to overcome is the pressure to perform placed on them by their coaches, the media, and their peers. Negative psychological well-being among student-athletes occurs most when the demands to perform is outweighing their support group. Pressure and stress leads to substance abuse as a way to cope, but it can also lead to suicide (Caruso, 2012; Watson, 2002).

Although student-athletes reported more stress than did non-athletes in a wide variety of variables, Wilson and Pritchard (2005) found non-athletes reported more stress than their athlete counterparts in areas such as financial burdens, making important decisions about their education, and getting ripped off (e.g. paying too much for services).

Next, college athletes often exist in a somewhat isolated social environment unlike the rest of the college population (Ferrante et al., 1996). Athletes are less likely than other students to be involved in campus activities unrelated to sports (Harvey, 1999), and their social needs are almost exclusively through friendships with teammates and other athletes, (Miller & Kerr, 2002) whom they spend most of their free-time with (Pinkerton, Hinz, & Barrow, 1989). The athletic culture is an environment which is largely dominated by peer influence (Surujlal, et al., 2012) and increased pressures. Understanding these pressures and how student-athletes cope are vital to health, academic and athletic success for these young men and women. Many student-athletes struggle with stress management and choose poor coping strategies, (Watson, 2002) the most prevalent being that of alcohol use and abuse (Martens, Dams-O'Connor, & Beck, 2006).

Intercollegiate Athlete Alcohol Consumption

Previous studies suggest heavy drinking among student-athletes may be prevalent in as much as 86% of student-athletes nationwide (Wechsler et al., 1997). The NCAA collected data on intercollegiate athlete drug and alcohol use in 1985, 1989, 1993, 1997, 2001, 2005, and 2009. In the two most recent studies, athletes from all NCAA sports were sampled, and every member institution was invited to select a random sample of athletes to participate (Martens, Dams-O'Connor, & Beck, 2006). According to the NCAA (2012), over 83% of college student-athletes reported alcohol consumption in the past year and roughly 49% of those reporting heavy episodic drinking on one or more occasions (Wahesh, Milroy, Lewis, Orsini, & Wyrick, 2013).

Nelson and Wechsler (2001) and Wechsler et al., (1997) compared the overall prevalence rates of alcohol use between college student-athletes and non-athletes using data from the Harvard School of Public Health College Alcohol Studies programs. Both studies concluded that student-athletes described getting intoxicated more often than their non-athlete peers, participated in heavier episodic drinking sessions, and endorsed drinking more on peak social occasions.

Similarly, Yusko, Buckman, White, and Pandina, (2008) found that male student-athletes reported significantly more occasions of heavy episodic drinking and a greater number of drinks on their heaviest drinking day versus male non-athletes. Student-athletes because of their practice schedules don't drink as much during the week as regular students. Instead student-athletes tend to drink on the weekends and consume more alcoholic drinks in one-sitting than the regular college student (Wilson, Pritchard, & Schaffer, 2004; Yusko, Buckman, White, & Pandina, 2008). Martin (1998) discovered that almost 79% of female student-athletes at the University of South Carolina consumed alcohol, with the majority of the drinking occurring on Saturday nights. Leichliter et al. (1998) proposed that their findings regarding elevated alcohol use among college athletes may suggest that athletes endorsed a 'work hard, play hard' ethic to a greater degree than other students. This behavior may be clarified by the fact that most athletes have fewer opportunities to drink as a result of practice or competition schedules, which may somehow encourage excessive consumption when such opportunities do arise (Martens, Dams-O'Connor, & Beck, 2006).

Negative Alcohol-Related Consequences Among College Athletes

Another region of attention regarding college athlete alcohol use involves the negative consequences that are experienced as a result of drinking (Donohue, Pitts, Gavrilova, Ayarza, & Cintron, 2013; Labrie, 2009; Surujlal, et al., 2012; Tewksbury, Higgins, & Mustaine, 2008). A heavily cited article by Nattiv and Puffer (1991) found that student-athletes have a greater quantity of alcohol consumed per sitting, more frequent driving while intoxicated, less frequent use of seatbelts, experience more frequent academic problems, less frequent use of contraception, increased frequency of sexually transmitted diseases, and an increased number of sexual partners than their non-athlete peers. Paralleling Nattiv and Puffer's study, Leichliter et al. (1998) described that intercollegiate athletes were more likely than non-athletes to have experienced 18 of 19 possible negative consequences in the past year resulting from substance use (alcohol being the most frequently used substance). The researchers divided their sample of athletes into those involved with intercollegiate athletics in positions of leadership (e.g., team captains) and those not involved in leadership positions. They found that after drinking alcohol, a higher number of negative consequences arose among team leaders, including later regretting one's actions, being hurt or injured and sexually taking advantage of someone else.

Factors Contributing to Sports-Related Alcohol Use

Seasonal Differences

Several studies have examined the relationship between seasonal status (in or out of one's competitive season) and alcohol consumption among college student-athletes (Brenner & Swanik, 2007; Martens, Dams-O'Connor, & Duffy-Paiement, 2006; NCAA, 2001; Martin, 1998; Selby et al., 1990; Thombs, 2000; Yusko et al., 2008). These studies have specified that alcohol consumption was lower during the athletes' competitive seasons. Martens, Dams-O'Connor, and Duffy-Paiement (2006) found that nearly 65% of the student-athlete sample indicated that they drank less during the competitive season. The reason given for abstaining from alcohol during in-season is because they did not want their detrimental behavior to impact their performance on the field (Evans et al., 1992).

Coping Mechanism

One of the more common explanations for excessive alcohol use among college athletes is drinking to relieve the excessive pressure and stress related to balancing the demands of being both a student and an athlete (Damm & Murray, 1996; Marcello et al., 1989; Tricker et al., 1989). However, when student-athletes are motivated to drink for coping reasons, they are at the greatest risk of negative consequences (Tewksbury et al., 2008). The unique social and academic environment experienced by intercollegiate athletes suggests that this group may disproportionately experience a number of developmental, emotional, and/or psychological problems (Heyman, 1986) and choose poor coping strategies, such as alcohol (Marcello et al., 1989; Watson, 2002). One study (Wilson et al., 2004) examined whether differences in male and female student-athletes' and non-athletes' coping styles influenced their drinking behaviors. They found that the most significant predictor for drinking behaviors in college female athletes was 'drinking to cope.' For this group, the use of alcohol as "a way to feel better" was related to the quantity consumed, the frequency of alcohol consumption, and the frequency of intoxication.

Drinking Motives

According to Martens, Watson, Royland, and Beck, (2005), drinking motives are a theoretically identifiable construct among student-athletes and, when combined with other

drinking motives, accounted for a significant amount of variance in alcohol consumption and related problems. These authors recognized three sets of student-athlete drinking motives, (1) positive reinforcement (e.g., I drink to celebrate), (2) sport-related stress and coping (e.g., I drink to help me deal with the stress of being a student-athlete), and (3) team/group norms (e.g., I drink in order to “fit in”). These athlete-specific motives have been found to be associated with alcohol use and alcohol-related negative consequences among college student-athletes even after controlling for general college student drinking motives (Martens, Labrie, Hummer, & Pedersen, 2008; Wahesh et al., 2013).

Competitiveness

Another peer-related factor could be individual competitiveness that is manifested in drinking behaviors with teammates and other friends. Achieving success in college athletics generally requires a certain amount of competitiveness, which may be transferred over to one’s social and drinking behavior (Martens, Dams-O’Connor, & Beck, 2006). Serrao et al. (2008) found that competitiveness demonstrated positive associations with average alcohol consumption per week, peak drinking, and heavy episodic drinking. For athletes alone, competitiveness showed positive correlations with peak and heavy episodic drinking only. Thus athletes with higher levels of competitiveness may be more prone to drinking large quantities of alcohol in single settings. This study confirmed two other studies (Grossbard et al., 2007; Zamboanga, Horton, Leitkowski, & Wang, 2006) that said competitiveness was related to alcohol use in student-athletes because they are more likely to compete in alcoholic drinking games and mimic athletic competition through these drinking games.

Current NCAA Alcohol Intervention and Prevention Programs

The NCAA has recently funded three alcohol intervention and prevention programs; NCAA Student-Athlete Affairs Grant Program (SAA Grant), CHOICES Grant, and APPLE. However since January 11, 2013, the SAA Grant no longer provides financial services to member institutions and conference offices (Hollomon & Klossner, personal communication, January 11, 2013). In an effort to educate students-athletes about the risks involved with the misuse of alcohol, the NCAA has, through the support of the NCAA Foundation and Anheuser-Busch Companies, Inc., developed CHOICES, a grant program for alcohol education (NCAA, 2013).

Through the CHOICES program, the NCAA provides funding for NCAA member institutions and conferences to integrate athletics into campus-wide efforts to reduce alcohol abuse. CHOICES projects must partner athletics with other campus partners in the development and implementation of effective alcohol-education projects on college campuses (NCAA, 2013). The grant provides \$30,000 worth of funds to select schools, including \$8,000 for two years of advertisements, educational handouts and other materials (Kolsti, 2007).

Athletic Prevention Programming and Leadership Education (APPLE) is the sanctioned prevention program by the NCAA. The APPLE model is erected on the belief that all members of an athletics department must be empowered to help produce an environment that promotes healthy lifestyles, including responsible use of alcohol for those of legal age and prevention of illegal and performance-enhancing drugs (Bruce & Crockett, 2007). Since 1991 this program has been adopted by over 400 schools nationally. These weekend conferences encourage student-athletes to participate in prevention efforts and provides principles for seven prevention areas: recruitment practices, departmental expectations and attitudes, education programs, policies, drug testing, sanctioning procedures, and referral and counseling (Bruce & Sisk, 2006).

While the NCAA encourages individual athletic departments to create their own intervention and prevention efforts, Green, Uryasz, Petr, and Bray (2001) found alcohol education programs in just of half of college athletic departments in the NCAA. Also, Martin (1998) found that Division I female athletes averaged just four to eight hours of alcohol education programs throughout their entire college careers, with a majority of athletes reporting they wanted more educational programming. While it is encouraging that the NCAA has recognized the importance of addressing alcohol related issues among collegiate athletes, the type of programming being mandated by the NCAA is unlikely to have a significant impact on the alcohol use of student-athletes. Research has shown that education-only alcohol interventions are generally ineffective among college students (Larimer & Cronce, 2007; Martens, 2012).

Evaluation of Prevention Efforts

While the NCAA has been funding alcohol intervention and prevention efforts since 1985, only a handful of research studies have evaluated the success of NCAA mandated and individual athletic department efforts. An early study by Marcello et al. (1989) evaluated effects of a three session, six hour group substance abuse education and skills training program for

student-athletes (e.g., enhancing coping strategies, dealing with peer pressure) compared to delayed control. They found that there was no intervention effects on alcohol use or use of any other substance. However it should be noted that this study was limited by small number of subjects, low response rate, and high drop-out rate (Martens, 2012).

Thombs and Hamilton (2002) evaluated the effects of a mass media campaign intended at correcting overestimations of alcohol use to reduce drinking among student-athletes. They found that campaign-exposed students reported lower estimates of other students' alcohol use than non-exposed students but that the intervention had no behavioral effect on personal alcohol consumption (Martens, Dams-O'Connor, & Beck, 2006; Martens et al., 2007a). Another study informed by social norms (Perkins & Craig, 2006) aimed to reduce alcohol misuse among student-athletes. The intervention was designed to reduce harmful misperceptions of peer norms and, in turn, reduce personal risk. They wanted to know if the perception of close friends' drinking was strongly related to personal alcohol consumption. Despite no control condition and analyzing the group rather than individual data, the authors reported less drinking and lower normative perceptions among post-intervention samples compared to the pre-intervention sample (Martens, 2012).

Before Doumas and Haustveit (2008) delivered a personalized drinking feedback (PDF) intervention targeted specifically to college athletes, there were no randomized controlled trials addressing the behavioral effect that alcohol interventions among student-athletes. Doumas and Haustveit (2008) used data from other similar studies that included interventions designed to reduce other unhealthy behaviors in athletes (e.g., spit tobacco interventions, Gansky et al., 2005; Walsh et al., 2003). These studies showed that personalized feedback interventions were effective, as were alcohol interventions with regular college student populations (Larimer & Cronce, 2002; Martens, Dams-O'Connor, & Beck, 2006; Martens et al., 2007a;).

Although the majority of alcohol intervention studies among student-athletes have relied on self-report, Doumas and Haustveit (2008), in a small clinical trial (n=33; 64% follow-up rate), reported that a PDF-based intervention was effective relative to an education-only (EO) control condition at reducing drinks per week, peak alcohol consumption, and frequency of drinking to intoxication among heavy drinking in intercollegiate athletes.

Emulating Doumas and Haustveit (2008), and providing a larger sample size (n=263), Martens, Kilmer, Beck, and Zamboanga (2010) created web-delivered interventions that

included three conditions: PDF-targeted, PDF-standard, and education-only. In the PDF-standard condition participants received PDF information (e.g., summary of consequences, normative comparisons, calories associated with alcohol use; Martens, 2012). In the PDF-targeted condition, participants received typical feedback plus feedback was tailored to be exclusively pertinent for college athletes (social norms were specific to college athletes, athlete-specific negative alcohol-related consequences, potential impact on athletic performance of heavy drinking episodes, and potential injury risk associated with alcohol use; Donohue et al., 2013). The authors concluded that a PDF-targeted intervention could be particularly effective at impacting binge-alcohol use among student-athletes, since it is those types of drinking occasions that athletes associate with poor athletic performance (Martens, 2012).

Martens et al. (2010) recommendations were comparable to four other studies (Evans et al., 1992; Martin, 1998; NCAA, 2001; Nelson & Wechsler, 2001) that evaluated the reasons why athletes choose not to drink. Results cited adverse health and performance issues as the most validated reasons for athletes to engage in drinking refusal self-efficacy, (Martens, Dams-O'Connor, & Beck, 2006; Oei & Morawska, 2004).

Addressing the negative effects that alcohol can have on one's athletic performance may be one of the most powerful features of an intervention program with student-athletes. O'Brien and Lyons (2000) found that alcohol had a causative effect in sports related injury, with an injury incidence of 54.8% in drinkers compared with 23.5% in nondrinkers ($p < 0.005$). This may be due in part to the hangover effect of alcohol consumption, which has been shown to reduce athletic performance by 11.4%. However there were no prevention studies that focused solely on the impact alcohol has on performance (Martens, 2012).

Summary of Literature Review

The percentage of intercollegiate athletes that have consumed alcohol has significantly increased over the past 12 years, including an increase of 5.8 percentage points for females and 5.5 percentage points for males from 2005 to 2009 (NCAA, 2012). In addition, student-athletes also report consuming an average of 7–8 drinks per week, as compared to their non-athlete counterparts who report consuming an average of about four drinks per week (Leichliter et al., 1998). A number of contributing factors that lead to alcohol use exclusively among student-athletes have been reported, including: seasonal differences, alcohol as a coping mechanism,

athlete-specific drinking motives, balancing athletics and academics, adapting to social challenges associated with athlete status, and managing athletic successes and failures (Martens et al., 2005; Watson, 2002).

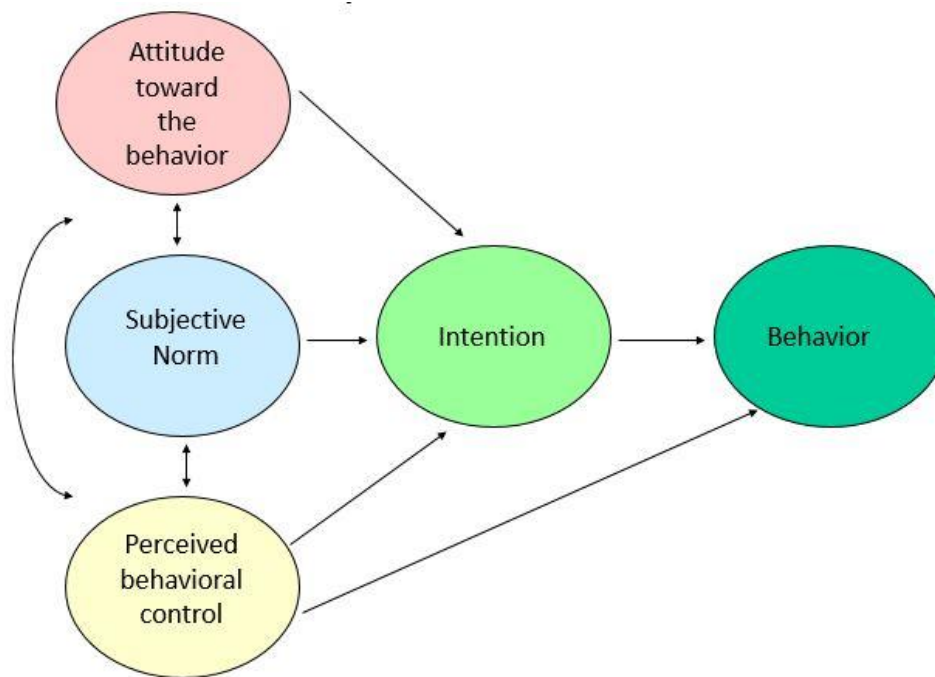
Individual athletic departments have taken various alcohol reduction approaches, including restrictions from alcohol, social norm campaigns, peer mentoring, and educational programs, all established with an attempt to alleviate alcohol related problems among student-athletes (Donohue et al., 2013). Yet the type of educational programming being mandated by their national governing body, the NCAA, is failing to have a significant impact on the reduction of alcohol use among student-athletes (Dutta-Bergman, 2005; Larimer & Cronce, 2002). Consequently, unless individual athletic departments are implementing intervention tactics that go beyond the NCAA sanctions, the organizations mandate regarding informational-based programming generally does not impact college athlete's behavior regarding alcohol use (Martens, 2012).

For a health communication intervention to be persuasive in motivating change in attitude formation, behaviors and in instilling self-efficacy it must be both transactional and response dependent (Cassell, Jackson, & Chevront, 1998). According to Cassell et al. (1998), health communication must "(a) motivate the receiver to actively attend to messages and perceive and interpret their content, (b) include iterative and transactional solicitation of feedback from audience members, and (c) activate elaboration of messages arguments and counterarguments to encourage individuals to move through the process of attitude change" (p. 73).

Theoretical Framework: Theory of Planned Behavior

The theory of planned behavior (Ajzen, 1991) is a conceptual framework for the study of human action (Ajzen, 2002). The theory proposes individuals act "in accordance with their intentions and perceptions of control over the behavior, while intentions are influenced by attitudes toward the behavior, subjective norms, and perceptions of behavioral control" (see Figure 2; Ajzen, 2001, p. 43). The theory of planned behavior details the elements of an individual's decision to enact a particular behavior is predicted through cognitive self-regulation, rather than a person's disposition, such as their general social attitudes or personality traits (Ajzen, 1991).

Figure 2 Theory of Planned Behavior (Ajzen, 2001)



The theory of planned behavior evolved from Dulany’s (1968) theory of propositional control, which later developed into the theory’s predecessor, the theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1985). The theory of planned behavior is an extension of the theory of reasoned action because of a construct measure of perceived behavioral control. This is a variable that had received attention in social cognition models designed to predict health behaviors (e.g. health belief model, protection motivation theory; see Armitage & Conner, 2000; 2001; Conner & Norman, 1996a). Literature suggests the theory of planned behavior is more effective since it explains significantly more variance than does the theory of reasoned action (Madden, Ellen, & Ajzen, 1992).

According to the theory of planned behavior, attitudes, subjective norms, and perceived behavioral control operate as three independent constructs of intention (Armitage & Conner, 2000; Doll & Ajzen, 1992). Doll and Ajzen (1992) hypothesize, “the more favorable the attitude and subjective norm with respect to a behavior, and the greater the perceived behavioral control, the stronger should be an individual’s intention to perform the behavior under consideration” (p. 755). Intention, then, is the one immediate precursor of volitional behavior (Schifter & Ajzen, 1985), as it “represents a person’s motivation in the sense of her or his conscious plan, decision

or self-instruction to exert effort to perform the target behavior” (Conner & Sparks, 2005, p. 171).

The theory of planned behavior is commonly used in health communication and the study of health behavior (Godin & Kok, 1996). Previous studies have provided support for the theory of planned behavior in predicting health behaviors (e.g. Blue, 1995; Conner & Sparks, 1996; Godin, Valois, & Lepage, 1993). Armitage and Conner (2001) concluded in their meta-analysis that “attitude, subjective norm and perceived behavioral control account for significantly more of the variance in individuals’ desires than intentions or self-predictions, but intentions and self-predictions were better predictors of behavior” (p. 471). Also, the theory has been used to predict several health behaviors. For example, Albarracin, Johnson, Fishbein, and Muellerleile (2001) found that the theory of planned behavior intentions predict actual behaviors in sexual behavior. The authors found a relationship in intentions to use a condom and actual condom use. Similarly, Norman, Bennett, and Lewis (1998) examined binge drinking from the perspective of the Theory of Planned Behavior. These authors found that frequent binge drinkers were more probable to have a positive attitude toward binge drinking, perceive social pressure to drink, and believe that binge drinking leads to several positive outcomes (Oei & Morawska, 2004). Hill, Boudreau, Amyot, Dery, and Godin (1997) sought to determine the differentiating the stages of smoking acquisition according to the theory of planned behavior. These researchers concluded that “the variables from the theory of planned behavior permitted the correct classification of 68.4% of adolescents into the stages of smoking acquisition” (p. 107). The theory of planned behavior has also been used to predict health behavior in smokeless tobacco use (Gottlieb, Gingiss, & Westein 1999), sun protective behavior (Armitage & Conner, 1999b) among many other behaviors.

Attitudes

Attitudes are assumed to develop from the beliefs that people hold about the object of the attitude and its positive or negative elements (Doll & Ajzen, 1992). Attitudes according the theory of planned behavior contain three aspects: affective, cognitive and behavioral. First, the affective aspect is simply an individual’s general feelings of emotion towards the behavior (Ajzen, 1991). Second, the cognitive aspect represents one’s awareness of and knowledge about said behavior (Ajzen, 1991; Conner & Sparks, 2005). Finally, the behavioral aspect is intentions and behavioral expectations. This component reflects a predisposition to action (Ajzen, 1991;

Doll & Ajzen, 1992). Therefore, the more favorable the attitude towards the behavior, the stronger should be the individual's intention to perform it (Armitage & Conner, 2001). Attitudes based on direct experience are believed to be “better defined, are held with greater confidence, are more stable over time, and are more accessible in memory” (Doll & Ajzen, 1992, p. 754). These attitudes generate a predisposition on behavioral situations and increases the probability an individual engages in a behavior (Doll & Ajzen, 1992).

Attitudes as a Reinforcing Factor

Attitudes concerning alcohol use appear to be significant in concurrently predicting drinking quantity and rate in the general college student population (Collins & Carey, 2007; Leigh, 1989). Further, longitudinal evidence has shown that positive attitudes toward alcohol use and intervention campaigns are positively correlated with future alcohol use among drinkers (Stacy, Bentler, & Flay, 1994). Similarly, student-athlete attitudes towards consuming alcohol and alcohol outcome expectancies predict their behavior. In a pilot study conducted by the researcher in 2012, student-athletes believe that drinking at parties is more sociable, fun, and are likely to experience hangovers and blackouts. Student-athletes also feel stress free while drinking, more confident with opposite sex, and believe they meet people easier. Other attitudes student-athletes have towards drinking alcohol is that it feels good, tastes good, and believe that they are more likely to have sex with people that they would not when sober. These finds are similar to other binge drinking studies that measured attitudes among student-athletes (Tewksbury et al., 2008; Wechsler et al., 1997; Wilson et al., 2004) and studies informed by the theory of planned behavior among regular college undergraduates (Hinson et al., 1998; McMillan & Conner, 2003). The first research question this study seeks to answer, therefore, is:

RQ 1: How do student-athletes describe their attitudes towards heavy drinking?

Subjective Norms

According to Ajzen and Fishbein (1973), subjective norms are defined by the theory of planned behavior as the “influence of the social environment on behavior” (p. 43). Likewise, subjective norms have been measured by asking “how much a person’s important others want the person to perform the behavior” (Finlay, Trafimow, & Moroi, 1999 p. 2381). According to Terry and Hogg (1996), social group normative values and actions were more predictive of intentions when they employed a measure of group identification. Since subjective norms are perceptions,

they do not necessarily reflect what other people actually think, but nevertheless they do have an impact on one's behavioral intentions (Ajzen, 1991; Ajzen & Fishbein, 1980).

Armitage and Conner's (2001) meta-analysis of 185 research articles points to the subjective norm concept as the weakest predictor in the theory of planned behavior. On the other hand, Ravis and Sheeran (2003) argue that other studies that found subjective norms to have a weak effect, failed to control for the effects of the theory of planned behavior variables. Also, concerning alcohol use in college populations have demonstrated a very strong association between perceived norms and personal drinking behavior (Perkins & Wechsler, 1996; Perkins & Craig, 2006).

Subjective Norms as a Reinforcing Factor

According to Nelson and Wechsler (2000), the increased likelihood of binge drinking among student-athletes is significant because their data also provided clear links to peer influence: a) student-athletes are more likely to have five or less close friends; b) student-athletes report that 70 percent of friends binge drink; and c) student-athletes are more likely to drink to fit in with friends. Many other studies (Doumas & Haustveit, 2008; Ford, 2007; Perkins & Craig, 2006; Tomon & Ting, 2010) also believe that athletes have higher rates of binge drinking because of social norms. Since participation in athletics is a source of both intrapersonal components (i.e., self-discovery and decision-making) and interpersonal components (i.e., relationships; teammates; Iso-Ahola, 1995), it is vital that individuals reflect on the behavior within and outside of athletic culture as at least a product of social influences.

The influence of one's peers, whom among college athletes will regularly include their teammates (Thombs & Hamilton, 2002), can be another factor that explains heavy drinking among student-athletes (Martens, Dams-O'Connor, & Beck, 2006). According to Grossbard et al. (2009), the closer or more proximal reference groups (such as close friends) are, the more powerful predictors of individual alcohol consumption subsists. Results from Martens, Dams-O'Connor, and Duffy-Paiement (2006) showed that athlete norms established a stronger main effect with personal alcohol use than the non-athlete norms, although both norms demonstrated strong effects. Based on the principles of the theory of planned behavior subjective norms, these results suggest that college athletes may in part consume alcohol in an attempt to meet the expectations of their peers, especially their peers who are also athletes (Martens, Dams-O'Connor, & Beck, 2006).

In the American culture, a strong societal link between alcohol and athletics exists, especially between sports and beer companies (Crompton, 1993). One study that inspected the frequency of alcohol advertising on televised sporting events between 1990 and 1992 discovered more advertisements for alcohol than for any other beverage, with 77% of all beverage commercials dedicated to selling beer (Madden & Grube, 1994). Martens, O'Connor, and Beck (2006) hypothesized that this societal relationship is a contributing factor leading to student-athlete alcohol use. One characteristic is that college sporting events appear to be a heavy-drinking environment (tailgating) and celebratory drinking is a frequently endorsed reason for drinking. Therefore, it is believed that athletes, as a result of their success, may also gain status in certain social settings where alcohol is more visible (Neal, Sugarman, Hustad, Caska, & Carey, 2005; Weschler et al., 2003). Furthermore, since athletes are directly accountable for the outcome of a sporting event, they are in turn, susceptible to the cultural influence of using alcohol as a means of celebration or consolation (Butts, 2009).

There is also investigations that indicate problematic drinking among student-athletes might be over-estimated by the student-athletes themselves. Leeper (2006) for example, recognized studies which showed that college athletes cognitively exaggerate the normal drinking rates both on campus and among their teammates. The authors suggested that this mistaken social norm, in and of itself, may lead to a growth in personal alcohol use as the student-athlete attempts to keep up with the perceived, yet false norm (Butts, 2009). This study seeks to confirm the literature and examine if subjective norms formed from these peer groups facilitate heavy drinking among intercollegiate athletes. The second research question this study seeks to answer, therefore, is:

RQ 2: What social pressures do student-athletes describe that make them susceptible to heavy drinking?

Perceived Behavioral Control

Ajzen (1988) defined perceived behavioral control concept as “the perceived ease or difficulty of performing the behavior,” based on one’s “past experience and anticipated impediments and obstacles” (p. 132). The inclusion of perceived behavioral control in the theory of planned behavior, “provides information about the potential constraints on action as perceived by the actor, and explains why intentions do not always predict behavior” (Conner & Sparks,

2005, p. 171). According to Ajzen and colleagues, if one's perception of control over the target behavior is accurate, then perceived behavioral control can directly predict behavior, over and above intentions (Hinson et al., 1998) which is similar conceptually to self-efficacy (Bandura, 1977).

Both self-efficacy, which has been defined as one's perceived control over a certain behavior in a specific situation (Bandura, 1977), and controllability beliefs, or beliefs that the performance of a behavior depends on the individual alone, make up the concept of perceived behavioral control (Ajzen, 2002; Collins & Carey, 2007). Therefore, if an individual believes he or she has the resources to control the behavior in combination with fewer obstacles, the greater should be their perceived behavioral control (Doll & Ajzen, 1992).

Perceived Behavioral Control as a Reinforcing Factor

Perceived behavioral control and drinking rejection self-efficacy have been reinforced in the literature as strong predictors of heavy drinking. For instance, greater drinking rejection self-efficacy and perceived behavioral control can predict lower drinking quantity, decreased occurrence, and fewer negative consequences (Ajzen, 2002; Collins & Carey, 2007; Johnston & White, 2003). According to Larimer and Cronce (2002), the best way to increase self-efficacy over heavy drinking is through cognitive-behavioral skills-based interventions, programs that challenged alcohol expectancies and brief motivational feedback—while prevention efforts focused on rules and sanctions and policy and education were both less effective (NIAAA, 2002). Similarly, researchers investigating alcohol use among student-athletes have recommended that these types of strategies promote self-efficacy and may reduce consumption, although the NCAA does not mandate it (Doumas, Haustveit, & Coll, 2010; Grossbard et al., 2009; Martens, 2012).

According to Martens (2012), only one published study (Marcello et al., 1989) investigated the efficacy of a group-based intervention focusing on education, prevention skills, and peer pressure skills training on student-athletes. The educational facet of the intervention involved sport-related information about alcohol. The perception skills training included stress management training, decision-making training, and exercises to simplify the skills. Finally peer pressure skills training included strategies for engaging in appropriate self-efficacy behavior. Ideas for refusing alcohol and general education material on assertiveness training. While this study failed to reduce effectiveness, some authors (Martens, 2012; Martens, Dams-O'Connor, &

Beck, 2006) believe if the study better controlled their variables, the skills learned from this intervention could reduce behavior.

One way to promote perceptions on alcohol behavioral control and self-efficacy among student-athletes is to incorporate the whole athletic department. One distinctive characteristic of student-athletes is the number of professionals who may have a day-to-day contact with the athletes. Just one day, an athlete may spend time with their athletic trainer, academic advisor, assistant coaches, head coach, strength coach, and other athletic department personnel (Martens, Dams-O'Connor, & Beck, 2006). This section examined student-athletes' perceptions on various control factors and their effects on heavy drinking behavior and intervention tactics. The third and fourth research question this study seeks to answer, therefore, is:

RQ 3: How do student-athletes describe their ability to control their drinking behavior?

RQ 4: What are student-athletes perceptions about current alcohol prevention interventions tailored for them?

Chapter 3 - Methodology

The intention of this study is to understand alcohol use among college students participating in a sanctioned university sport and to understand why anti-drinking campaigns targeting student-athletes are failing to reduce heavy alcohol consumption by utilizing a qualitative research design. In particular, the research based on the theory of planned behavior, explore an individual's attitudes towards heavy drinking, the impact subjective norms have on student-athlete alcohol use, as well as student-athletes perceived behavior control towards alcohol use. This chapter focuses on the data collection methods that were used in the study. The chapter starts by discussing the qualitative approach and how it was appropriate for this study, followed by a detailed explanation of the sample selection, instrument design, the procedure for data collection, and the technique for analyzing data collected.

Qualitative Approach

The majority of studies regarding student-athlete alcohol use have been empirical in nature (Cadigan, Littlefield, Martens, & Sher, 2013; Leichter et al., 1998; Martens, Dams-O'Connor, & Duffy-Paiement, 2006; Tomon & Ting, 2010; Wechsler et al., 1997), highlighting the need for a qualitative methods approach. It is particularly important to give voice to intercollegiate athletes and allow participants to provide exclusive narratives, thus gaining an insight into attitudes and experiences of student-athlete heavy drinking that is missing in quantitative data (Mahoney, 2009).

Qualitative research is often applied in social sciences (Marshall & Rossman, 2010), and is prevalent in health communication research (Lindlof & Taylor, 2002). Qualitative research delivers accounts and explanations of a social experience and allows for an evaluation of the experience. The research also supports future strategies and tactics for improvements within a given environment (Ritchie & Lewis, 2003). According to Patton (1980), qualitative research studies deal with “nuance, with detail, with the subtle and unique things that make a difference beyond the points on a standardized scale” (p. 74). Wong (2008) provides the paramount description of qualitative research by stating “qualitative methods is a result of failure of quantitative methods to provide insight into in-depth information about the attitudes, beliefs,

motives, or behaviors of people, for example in understanding the emotions, perceptions and actions of people” (p. 14).

There are a plethora of methodologies within the qualitative research domain. The researcher chose a phenomenological approach because it best fit the purpose of the current study. According to Creswell (1998), “a phenomenological study describes the meaning of the lived experience for several individuals about a concept or phenomenon” (p. 51). He later goes on to write that phenomenology researchers “search for essentials, invariant structure (or essence) or the central underlying meaning of the experience and emphasize the intentionality of consciousness where experiences contain both the outward appearance and inward consciousness based on memory, image and meaning” (p.52).

In spite of importance of a phenomenological approach in research, limited studies that focus on college athletes and alcohol consumption have failed to utilize this approach. One study (Diacin, Parks, & Allison, 2003), gave voice to intercollegiate athletes regarding drug use and drug testing. The researchers conducted interviews in order for student-athletes to voice their opinion concerning drug use and testing as part of their athletic identity. However, few researchers have applied this approach to athletes and drinking. Therefore, it is necessary to employ qualitative methodologies in the understanding of athletes drinking behaviors to gain a deeper understanding rather than to gather and analyze the prevalence rate of alcohol use and its negative consequences or predictive contributing factors (Martens, 2012; Denzin & Lincoln, 2005)

Data Instrument

To gain the most insight and provide an opportunity for student-athletes to provide their own narrative, a combination of structured open-ended and closed-ended questions was the instrument used in the current study. The questionnaire was based on the Theory of Planned Behavior (Ajzen, 1991). Open ended questions and close-ended questions were adopted and amended from the Alcohol Expectancy Questionnaire (AEQ; Brown, Goldman, Inn, & Anderson, 1980), the Core Alcohol and Drug Survey (CADS; Presley, Meilman, & Leichter, 1998), the Student-Athlete Team Climate and Substance Use Survey (SATCSUS; Tomon & Ting, 2010), and the NCAA National Study of Substance Use Trends Among NCAA College Student-Athletes (2012).

The data instrument included a purpose of study, procedures, discomforts and risks, including a statement informing respondents that most questions deal with alcohol use and its related effects on their behavior. Informed consent at the beginning of the questionnaire also includes statements about benefits, freedom to withdrawal, and contact information. Since the questionnaire was disseminated online through e-mail and did not seek to understand personal demographics other than gender, and ethnicity; student-athletes remained anonymous.

The first three close-ended questions on the instrument measured the respondent's typical alcohol consumption and preferred setting. Based on the theory of planned behavior's subjective norm construct, question four sought to understand which social groups most influence the student-athletes' drinking behavior. Question numbers six and eight were based on the attitude and perceived behavioral control constructs of the theory of planned behavior. Individuals were asked to indicate on a 5-point likert scale whether they "strongly disagree" (scored as a 1) or "strongly agree" (scored as a 5) with the survey items.

Questions five and seven were open-ended questions in which the respondents are asked to respond via text entry to questions about personal alcohol consumption. Respondents were asked to provide exclusive narratives of past experiences or personal beliefs on the issue. Questions nine through 11 consisted of two open-ended questions concerning their recollection and attitudes towards the NCAA's effort in reducing alcohol use among student-athletes and one close-ended question asking the respondents to rate, via letter-grade, the NCAA on their current alcohol intervention and prevention strategies that are being taught to student-athletes. Question 12 displays certain NCAA alcohol education requirements and student-athletes were asked whether or not they have engaged in those activities since the beginning of the previous academic year. In the last open-ended question before personal demographics (race, sex, athletic team), respondents were asked to brainstorm types of strategies that they believe would work best to reduce alcohol consumption among student-athletes.

In the case that a respondent selects 'zero drinks' in one sitting, they were skipped to question number nine regarding NCAA alcohol prevention and interventions and completed the questionnaire from there, since they do not consume alcohol. Also, in the case that a respondent declined the electronic consent, they were automatically exited from the questionnaire.

Study Sample

The sample used in this study was drawn from current college students across the United States that participate in a NCAA sanctioned university sport. The questionnaire was sent via e-mail to every coach at a major Midwestern athletic conference—one for each sport at each university—159 total, requesting that their athletes partake in the questionnaire. According to Lindlof and Taylor (2002), studies that explore sensitive topics, like alcohol use and abuse, may carry the risk of creating discomforts, harming reputations, and revealing confidential information with the participants. Therefore, recruitment through an intermediary—in this case—coaches (Bloor, Frankland, Thomas, & Stewart, 2001) was utilized, so that participants' identities are anonymous, even to the researcher (Denzin, 2001; Perrin, 2012).

Data Collection Procedure

The data collection method for this study was a questionnaire with open-ended and closed-ended questions that was created and administered online using the software *Qualtrics*. Since the subjects are spread across the United States, this online data collection method was deemed the most efficient. Upon attainment of the coaches' e-mail addresses—which are publicly available on college and university athletic websites—the researcher disseminated an e-mail explicating the study's purpose and procedure and requesting coaches allow their student-athletes to participate. The e-mail contained a URL from which athletes could access the online, anonymous, self-administered questionnaire created on *Qualtrics*. Coaches were asked to forward the e-mail to their team members asking again for permission for athletes to participate (Perrin, 2012).

According to Evans and Mathur (2005), a strength of a controlled open-ended questionnaire distributed online is that “online surveys can be administered in a time-efficient manner, minimizing the period it takes to get a survey into the field and for data collection” (p. 198). Similarly, the open-ended structured questions disseminated online will allow respondents ample time to reflect and provide a well thought-out response, and prevent errors in the transcription process (Easton, McComish, & Greenberg, 2000).

The details and understandings that result from this phenomenological study can enhance the understanding of the student-athlete experience with heavy drinking. Survey questions focused on the athlete's (a) personal background, (b) attitudes towards heavy drinking, (c)

perspectives on the subjective norms that make student-athletes more vulnerable to heavy drinking, and the (d) behavioral factors that facilitate heavy drinking among student-athletes.

Data collection began after ethics approval by the Institutional Review Board (IRB; #6436) committee for research involving human subjects. After IRB approval, 159 e-mails were sent to all 159 coaches (one e-mail for each sport at each institution). Once the questionnaire was sent to the coaches and requested that it be forwarded on to the student-athletes, each of the participants were given approximately three weeks to finish the interview questions.

Of the over 3,000 student-athletes that potentially could have been surveyed, a total of 34 questionnaires were completed—an estimated 1.13% response rate. The questionnaire was available for 20 days, with the first questionnaire received on February 20, 2014. Coaches, the intermediary to student-athletes receiving the questionnaire, received two reminder e-mails on February 27, 2014 and March 6, 2014 again requesting they forward the questionnaire to their student-athletes.

Responses to the questionnaire were collected in *Qualtrics* as they are written by the participants. Unlike a face-to-face interview, this method maintains the integrity of raw data—by using respondents' words—and prevents the researcher from having to change from a recorded to a written transcription, in which errors may occur (Gordon, Petocz, & Reid, 2008; Savenye & Robinson, 2003).

Data Analysis

In examining qualitative data, portions of reflective thinking, ideas, and theories frequently emerge as the researcher reads through the data (Wong, 2008). Analysis of the interview data consisted of a three-streamed process of reducing data, displaying it, and drawing conclusions (Denzin, & Lincoln, 2005). Data reduction involves looking for patterns, links, and relationships within the responses. The researcher will begin to scan recorded data and to develop groupings of responses, these groupings are called codes (Savenye & Robinson, 2003). Coding the transcripts was the first step in reducing the data. Coding was performed using the qualitative data analysis software Nvivo. This allowed the researcher to manage data by labeling and sorting themes from each of the interview questions (Dutta & Basu, 2007).

Codes were then be organized into themes as they relate back to the research questions and the theory of planned behavior and its constructs (attitudes, subjective norms, and perceived

behavioral control). Since seeking the meaning in data is made easier by displaying data visually (Savenye & Robinson, 2003), within each theoretical construct, frequencies, responses, and direct quotes were displayed for emerging themes. Each theme is supported by descriptives (frequency, mean and standard deviation) and direct quotes made by student-athletes from the questionnaire.

Conclusion drawing involves considering what the analyzed data mean and to assess their implications for the research questions (Patton, 1980). Therefore, conclusions drawn from this study will provide the researcher with in depth analysis that allows meaningful conclusions to be drawn that will guide future interventions in intercollegiate athlete alcohol use and abuse (Kreps, 2008).

Chapter 4 - Findings

The purpose of this study is to understand alcohol use among college students participating in a sanctioned university sport, and why NCAA anti-drinking campaigns targeting student-athletes are failing to reduce heavy alcohol consumption. Specifically, the study examined current NCAA Division I student-athletes' attitudes, subjective norms, and perceived behavioral control as determinants to their behavioral intention. This chapter presents the key findings gathered from the online, self-administered questionnaire distributed among current NCAA Division I student-athletes in an athletic conference in the Midwest. The results are organized by each research question and emerging themes that were based on direct statements made by student-athletes from the questionnaire as well as by observational data gathered through closed-ended questions.

Demographic Information

Student-athletes were asked to provide their gender, race, and team association from a drop box at the conclusion of the questionnaire. The results show that 59% of student-athletes described themselves as White or Caucasian, while 15% reported that they were either African-American or Hispanic. However, there were zero respondents that described themselves as Native American, and just one respondent that reported of being of Pacific Islander decent. Additionally, 6% described themselves as Asian, while 3% were designated as other. Of the student-athletes in the current study, 59% reported their gender as male, while 41% stated that they were female.

The majority (35%) of respondents were varsity student-athlete members of Swimming and Diving, 9% were members of Soccer, followed by Women's Basketball, Football, Golf, Softball, and Volleyball which each comprised 6% of the responses. The remaining 27% of athletic squads (Baseball, Men's Basketball, Cross Country, Equestrian, Gymnastics, Rowing, Tennis, Track & Field, and Wrestling) each contributed 3% of student-athletes surveyed.

Of the student-athletes that described themselves as being White or Caucasian, 45% were a member of Swimming and Diving, while the respondents who described themselves as African American were student-athlete members of Men's Basketball, Women's Basketball, Football, Rowing, and Soccer. Of the 15% of student-athletes that reported being of Hispanic descent, they

described themselves as team members of Swimming and Diving, Soccer, Gymnastics, and Volleyball.

Drinking Behavior

In order to understand student-athletes drinking behavior, participants were asked to describe their drinking behavior in regards to drinks in one-sitting, preferred drinking location, and drinking frequency per week. Overall, there was a high prevalence rate of alcohol consumption among student-athletes. Nearly half (49%) of student-athletes reported drinking five or more drinks in one-sitting (M=3.17, SD=1.02, scale: 1=0 drinks, 4=5 or more drinks) with the majority of alcohol consumption occurring 1-2 times per week (M=1.47, SD=.65, scale: 1=1-2 times, 3=5 or more times). While only 12% of athletes surveyed do not consume any alcohol whatsoever, a fewer number of student-athletes (7%) consumed 1-2 drinks in one sitting. Almost one-third (32%) of student-athletes surveyed drink 3-4 drinks in one sitting, and 31% drink alcohol 3-4 times a week.

Of the 49% of student-athletes that drink five or more alcoholic drinks in one sitting, 76% described themselves as being White or Caucasian and 18% described themselves as Black or African-American (see figure 3). Almost 30% of Swimming and Diving team members drank the most in one sitting followed by Soccer (12%) and Women’s Basketball (12%). Only Football and Gymnastics had team members who reported being abstinent from alcohol.

Figure 3 Drinks in One-Sitting as it Relates to Gender and Race

		Gender			Race							Total
		Male	Female	Total	Native American	Black	Hispanic	White	Pacific Islander	Asian	Other	
Drinks in one-sitting	0 drinks	2 66.67%	1 33.33%	3 100.00%	0 0.00%	1 33.33%	1 33.33%	1 33.33%	0 0.00%	0 0.00%	0 0.00%	3 100.00%
	1-2 drinks	1 50.00%	1 50.00%	2 100.00%	0 0.00%	0 0.00%	0 0.00%	2 100.00%	0 0.00%	0 0.00%	0 0.00%	2 100.00%
	3-4 drinks	7 58.33%	5 41.67%	12 100.00%	0 0.00%	1 8.33%	4 33.33%	4 33.33%	0 0.00%	2 16.67%	1 8.33%	12 100.00%
	5 or more drinks	10 58.82%	7 41.18%	17 100.00%	0 0.00%	3 17.65%	0 0.00%	13 76.47%	1 5.88%	0 0.00%	0 0.00%	17 100.00%
Total		20 58.82%	14 41.18%	34 100.00%	0 0.00%	5 14.71%	5 14.71%	20 58.82%	1 2.94%	2 5.88%	1 2.94%	34 100.00%

Preferred Drinking Location

Although there are many locations where student-athletes consume alcohol, exactly half (50%) of the college athlete's surveyed prefer to consume alcohol at parties, while one-quarter (25%) favor drinking at commercial settings (bars, clubs, etc.). About 17% of student-athletes prefer drinking at home with friends or family, while the remaining athletes either drink at home alone (5%), or at a strip club (3%). Several student-athletes expressed that they avoid drinking in public commercial settings, this is evidenced by the following statements:

“Usually it is at a house party because we don't want to have pictures of us being put on the Internet by regular people of us being at the bar soon people make a fuss about it so we try to stay out of public places when we drink.”

“There is an alcohol drinking festival in my town and we can't really show our faces downtown because everyone know who we are so we have to skip house party to house party to have fun which is tough because people always want to take photos with us and it is hard to have fun and if we get too messed up and do something stupid that photo is on the internet the next day and the whole university gets in trouble.”

Drinking Frequency Per Week

When asked about the frequency of drinking occasions per week, the majority (61%) of student-athletes reported drinking only 1-2 times per week. An emerging theme among the population is that student-athletes are risky drinkers, sometimes reaching dangerous levels, this was demonstrated by statements which included:

“It was a nice day we were playing yard games-started drinking right after Saturday morning practice and it was bad. I blacked out around 2 p.m.”

“After meet party out in California we got hammered, I blacked out -don't remember even puking all over the taxi cab. My teammates were there with me luckily to save me.”

“Got blackout drunk the other night and passed out with my shoes, an unwritten rule that people are allowed to draw marker on me. Forgot to mention we had athletic orientation the next morning, man was that a miserable rush to get all that marker erased and be on time.”

“Eventually our week of drinking ended when we decided that our urine shouldn't be that particular color of brown. We then continued to drink water in order to recover from our poor diet consisting solely of McDonalds and liquor.”

Competitiveness While Drinking

Achieving success in college athletics generally requires a certain amount of competitiveness, which may be transferred over to one's drinking behavior. This is evidenced by statements made in the questionnaire when asked about to elaborate on experiences that they have had in the recent months while intoxicated, which included:

“Usually there are competitions to see who can drink the most without throwing up. This is a good indication who the "non-bitch" is on the team and to find out who should be drinking wine coolers instead of beer or hard liquor.”

“Lots of athletes get into fights when drunk just part of their competitive nature I guess.”

“Several things happened under the influence of alcohol. We started an illegal poker ring, held knife throwing competitions usually at someone's bedroom, bare-knuckle boxing, and several other similar activities.”

Student-Athlete's Attitudes Towards Heavy Drinking

The first research question sought to understand student-athletes attitudes towards heavy drinking. Student-athletes were asked to respond via likert scale (scale: 1=strongly disagree, 5=strongly agree) to statements regarding attitudes and alcohol outcome expectancies i.e. what they hope to gain from drinking. Student-athletes' attitudes towards heavy drinking and alcohol outcome expectancies demonstrated two themes: sexual outcome expectancies, and athletic training justification.

Sexual Outcome Expectancies

First, almost 81% of student-athletes believe that they are more likely to take risks that they wouldn't when sober (M=4.06, SD=.88, scale: 1=strongly disagree, 5=strongly agree). Student-athlete risk taking mentality when intoxicated is mostly associated with sexual outcome expectancies. As one respondent said, “often my teammates and I would have ‘no standard nights’ while drinking. We would see who could sleep with the ugliest girl.” Other student-athletes expressed their desire for sexual outcomes by stating:

“We get messed up on the weekends with other athletes that are underage usually go to the frat houses because we won’t get in trouble and they got a lot of hot slutty girls there.”

“I have had several nights where I blacked out, was puking naked, but I recovered and was back on the prowl for chicks the next night.”

“We get drunk on the weekends try to hook up with as many girls as possible makes for better stories on Sunday mornings.”

“I hooked up with a girl on my team in the locker room when drunk. Heard stories of a girl having sex on the logo on the basketball court with the starting point guard.”

“I was drinking heavily and got so drunk in a short time I blacked out hard. Like I only remember 2 hours of my night—I’m sexy and yummy. All the bitches love me—that is all I remember a girl telling me before she passed out on my lap.”

Work Hard, Play Hard Mindset

The second major theme discovered in student-athletes attitudes and outcome expectancies when intoxicated is the ‘work hard, play hard’ mindset that many athletes endorse. Approximately 72% student-athletes believe the harder they train during the week, the more acceptable it is to consume alcohol on the weekend ($M=3.75$, $SD=1.34$, scale: 1=strongly disagree, 5=strongly agree). In fact, of the 49% of student-athletes that report consuming five or more drinks in one-sitting, 82% of those athletes are more likely to believe that the harder they train during the week, the most more they drink. This was evidenced by their statements that included: “during the week it is all business, but on Saturday nights it’s pretty crazy--no rules, no cops,” and “whoever receives the hard worker of the week gets a free six-pack from the captains.”

Additionally, 76% of binge drinkers believe that alcohol affects them differently because they are in better athletic shape than those that are non-student-athletes ($M=3.34$, $SD=1.45$). Student-athletes’ validated this by saying, “my friend doesn’t work out as much as I do—he was pretty messed up after five beers,” and “I can drink upward of 10 beers pretty easily, but my friend who doesn’t work out can’t handle his liquor like me.”

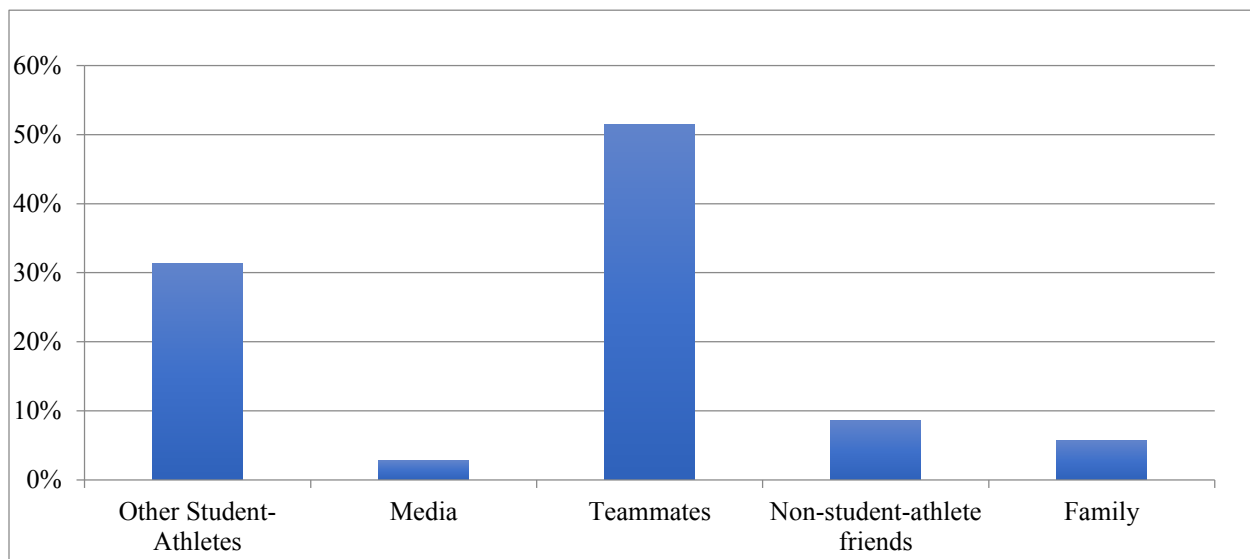
Subjective Norms Leading to Alcohol Consumption

The second research question of this study sought to examine the social pressures that make student-athletes susceptible to heavy drinking. There are many emerging themes that appear to be influencing student-athletes to drink including peer pressure from teammates and other student-athletes, drinking in order to develop team unity, lack of law enforcement, and an athletic drinking cultural norm.

Greatest Social Influencer on Student-Athlete Drinking Behavior

Respondents were asked to rank in order from one (most) to five (least) the social groups (teammates, student-athletes from other teams, non-student-athlete friends, family, or media) that most influence their drinking behavior. The results are presented on the next page in *Figure 4*, which displays the percentage of social groups which were voted on as having the most influence on student-athlete's drinking behavior.

Figure 4 #1 Influence on Alcohol Consumption



Nearly 83% of student-athletes report that their drinking behavior is influenced by college athletes—either their teammates ($M=1.91$, $SD=1.12$, scale: 1=most influential, 5= least influential) or athletes from other sports teams at their institution ($M=2.09$, $SD=1.01$). Only 3% of student-athletes reported that the media was their number one influencer on their drinking

behavior, while 6% stated that their family was the number one influencer of their drinking behavior.

Development of Team Unity

Consuming alcohol in an effort to develop team unity is a major theme discovered among student-athletes and their drinking behavior. Student-athletes were asked via likert scale (scale: 1=strongly disagree, 5=strongly agree) to what extent they agree that consuming alcohol helps develop team unity. Of 35% of student-athletes that 'strongly agreed' that they drink alcohol in order to develop team unity, 73% of those reported as being both male and White or Caucasian. Of 49% of student-athletes reported drinking five or more drinks in one-sitting, just over 70% report that they drink alcohol with their teammates because it helps develop team unity. Their statements also indicate the role of alcohol consumption in development of closer relationships and team unity. Some of their statements to support that theme included:

“My team uses alcohol as team bonding. Often we do stupid things when drinking which make for great stories to tell new prospective teammates.”

“My teammates drink a lot more than I do especially my captains which is weird because you expect them to be the leaders and lead by example but I guess not.”

“The guys team would all party together after conference, we would wake up at around 10:00 a.m, drink throughout the day, and all the way until 2:00 in the morning.”

Drinking With Other Student-Athletes

When asked to describe their team's alcohol-drinking relationship with other student-athletes at their institution, 60% of respondents expressed that they only drink with other student-athletes at their institution, this is reflected in their statements, which included:

“Usually just the athletes that all party together no ‘muggles’ (non-athletes) are allowed for the most part because they don’t know how to party like us.”

“Student athletes at this school mostly drink on weekends with members of their own team, usually there are members of other teams there as well.”

“Student athletes often attend one another's parties, certain teams are known for their parties and how much they drink. We often party, hook up and date one another.”

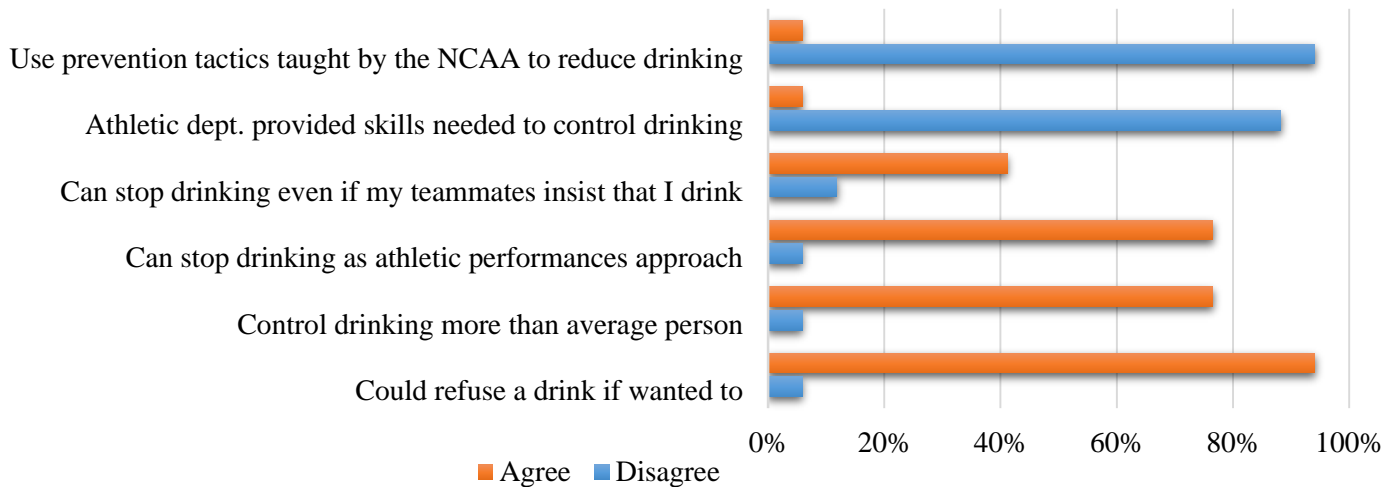
“Myself and the majority of my team love to drink with several other sports teams. When we get together we drink very heavily and enjoy ourselves a lot.”

“I have witnessed on more than 1 night friends from other teams jump out of a second story window. So I’d say drinking with other teams is the SHIT!”

Perceived Behavioral Control

The third research question of this study sought to understand student-athletes self-efficacy, or to what extent student-athletes believe that they can control their drinking behavior. Ajzen (1991) defined the theory of planned behavior’s perceived behavioral control concept as “the perceived ease or difficulty of performing the behavior,” based on one’s “past experience and anticipated impediments and obstacles” (p. 132). Student-athletes were asked via likert scale (scale: 1=strongly disagree, 5=strongly agree) how much they believe that they can control their alcohol consumption and what skills or tools they use to do so. As shown in *Figure 5* below, student-athletes were asked to what extent they agree or disagree with the following statements about self-efficacy and the confidence they have to prevent alcohol use.

Figure 5 Perceived Behavioral Control



Although almost half (49%) of student-athletes report drinking five or more drinking in one sitting, 94% of all student-athletes studied are confident they could refuse a drink if they wanted to (M=4.35, SD=.84), especially as athletic performances approach (M=4.48, SD=.93). Nearly 58% student-athletes say they can stop drinking even when their teammate insists that they drink (M=3.58, SD=1.03), however the majority of those that endorsed this belief were male (72% males vs. 28% females). While it is encouraging that most student-athletes believe

that they can control their drinking, only 13% of student-athletes use alcohol prevention skills and tools taught by the NCAA ($M=1.61$, $SD=1.02$) or their athletic department to reduce alcohol consumption ($M=2.13$, $SD=1.36$).

Student-athletes appear to have a contrasting perceived control of their drinking based upon their competition schedule. This is evidenced by their self-reported statements which included:

“For spring break one year, after we had completed our conference championship, me and several of my teammates drank straight for a week, we don’t drink in-season so got to make up for it then.”

“A couple of our freshman teammates snuck into the bars on Saturday night and drank illegally. Couldn't believe it, just 10 days before the biggest event of the season, they got in serious trouble because the number one rule on the team is not to let your behavior be detrimental to the team’s success—we were supposed to be in dry season, they could have cost us the championship.”

“Got really messed up a few days ago after a tournament and I am still hurting from that. I am not going to drink for a while, I hate the hangover feeling too much.”

Perceptions of NCAA Alcohol Prevention Programming

The final research question sought to understand what perceptions student-athletes have about current NCAA alcohol prevention and intervention programming tailored for them. NCAA bylaws require that student-athletes are adequately educated about drugs and alcohol, including counseling or treatment options the NCAA provides. Emerging themes found that student-athletes have difficulty recalling such educational programming or treatment options, and furthermore believe that the NCAA is not doing enough to reduce alcohol use among student-athletes.

NCAA Alcohol Educational Programing

To measure the frequency of student-athletes that recall having participated in NCAA mandated alcohol, tobacco and other drug education programming, student-athletes were asked whether or not they attended or were informed of certain NCAA alcohol education programming (see *figure 6*).

Figure 6 NCAA Alcohol Education Results

Certain NCAA Alcohol Guidelines	Yes	No
Shown a NCAA drug and alcohol educational video	26.40%	73.53%
Provided with a brochure detailing the effect alcohol has on athletic performance	23.53%	76.47%
Given a copy of institutions written alcohol polices	35.29%	64.71%
Informed by coach of team rules and consequences regarding alcohol use	79.41%	20.59%
Informed of the counseling or alcohol treatment options that the NCAA provides	14.71%	85.29%
Attended special presentations conducted by athletic dept. in which speakers discussed alcohol	52.94%	47.06%
Noticed display posters or other NCAA educational materials in and around athletic facility	50.00%	50.00%

Only approximately 26% of student-athletes surveyed viewed a NCAA drug and alcohol educational video or read a brochure detailing the effect alcohol has on athletic performance. Furthermore, 85% of student-athletes reported that they were not informed of the counseling or alcohol treatment options that the NCAA provides. Student-athletes used relegating phrases to describe current NCAA alcohol education programming, such as: “it is stupid—just have to sign a compliance form,” “all the athletes fall asleep during those anyway,” and “no one told me about treatment options.”

In fact, only four varsity athletic teams reported being informed of the treatment or alcohol counseling options that the NCAA provides—Baseball, Football, Soccer, and Swimming and Diving. Similarly, since the beginning of the academic year, only four varsity athletic teams were reportedly given a written copy of their institution’s policy—Golf, Softball, Swimming and Diving, and Track and Field.

Current Assessment of NCAA Alcohol Preventions

When asked to elaborate on which NCAA tactics they use to reduce their alcohol consumption, almost 66% student-athletes struggled to recall NCAA alcohol prevention programs with which they are familiar. The remaining 34% of student-athletes listed either

Champs/Life Skills programming conducted by their athletic department or meeting with their sports psychologist as alcohol programs with which they are familiar.

They described the knowledge of NCAA alcohol reduction programs with statements like, “I am captain on the team and a liaison with the athletic department, and I don't even know what NCAA alcohol prevention programs exist,” and “I even googled NCAA alcohol prevention programs and I can't find any that I am familiar with.” There also is a belief among respondents that the NCAA is unconcerned about alcohol use among college athletes. As four student-athletes stated:

“NCAA really doesn't care I believe, they are ties to the alcohol industry, heck bud light sponsors in NCAA men's basketball tournament.”

“They have them, but I don't think they care too much about it/ don't invest a lot of money in it.”

“They care more about making money off student athletes and have they rules as a safeguard to protect themselves but I think they really don't care as long as we perform well in the classroom and on the field.”

“I never see anything from the NCAA about alcohol I don't think they care about alcohol prevention as much as they do about preventing performance enhancing drugs.”

Evaluation of Current NCAA Alcohol Programming

The NCAA has implemented alcohol prevention and intervention tactics for student-athletes, but limited studies have asked current intercollegiate athletes to evaluate the material that they are receiving from the NCAA. The current study sought to access student-athletes evaluations of current education-only alcohol interventions that are tailored for them. Student-athletes were asked to provide a letter-grade on a scale of one (F) to 13 (A+), to grade current NCAA alcohol prevention and intervention programming. The results are presented in *Figure 7* on the following page.

Figure 7 Evaluation of Current NCAA Alcohol Programming

Letter Grade		%
F		57%
D-		6%
D		9%
D+		0%
C-		6%
C		9%
C+		0%
B-		6%
B		9%
B+		0%
A-		0%
A		0%
A+		0%

The belief among student-athletes that the NCAA is not doing enough to reduce alcohol use among student-athletes is exemplified by the fact that the majority (57%) of intercollegiate athletes gave the NCAA a F letter-grade for their current alcohol intervention and prevention strategies that are being taught to student-athletes. Student-athletes that provided the highest letter-grade were females belonging to either Volleyball or Equestrian athletic programs.

After being asked to provide a letter-grade, student-athletes were asked a follow-up question that asked them—based on the letter grade they provided—to elaborate on what their current assessment of NCAA alcohol preventions is. Much in line with the letter-grades provided, student-athletes did not have many kind words for current programming, in fact, none of respondents had a positive assessment of NCAA programming. Of the student-athletes that gave an F letter-grade score, they degraded the NCAA with assessments such as:

“These programs aren’t going to help, the NCAA doesn’t care.”

“They suck—the NCAA, the attempt to stop bad behavior, it is not working—the NCAA has some of the dumbest rules out there”

“I provided the worst letter-grade possible because, as I stated before, I was not aware of any alcohol prevention programs by the NCAA.”

“They only thing we had to do was sign a compliance form—well that is dumb because if you don’t sign the form then you cannot compete, so everyone just signs these forms without listening to what is going on.”

Prevention Programming Brainstormed by Student-Athletes

Finally, student-athletes were asked to provide strategies that they personally believe would work best to reduce alcohol consumption of student-athletes. A few of student-athletes brainstormed constructive ideas that they believed would reduce alcohol consumption, while others believed nothing can reduce the alcohol consumption rate. Several of the student-athletes they used phrases like, “athletes will drink no matter what,” “can’t do much to stop it,” and “honestly don’t know what is going to work.” Even the student-athletes that responded with constructive strategies acknowledged that few student-athletes would reduce their drinking behavior based on new rules. This is evidenced by their statements, which included:

“Harsher penalties, but that basically takes away our rights since it is legal and all unless you ban alcohol by testing it or having an admin with the athletes at all times, not sure if it will have an effect.”

“Not sure. Drinking in college and drinking on Saturday nights is something that I swear all the athletes do here, so unless you find cool things to do on Saturday nights that replaces partying I don’t see it changing anything.”

“Maybe banning it a week before competition but that would just cause more binge drinking when they are free.”

A few of student-athletes did provide constructive ideas that the NCAA should consider in order to be successful to reduce alcohol consumption among student-athletes. Many student-athletes believe prevention tactics need to be personalized, satisfy needs gained from alcohol use, or shown to outline the effect alcohol has on performance. This is evidenced by the following statements:

“Personalized peer counseling—show the effect of it on your performance. Show examples of what can happen to you when intoxicated and what are the consequences.”

“Creating social events for student-athletes on and off campus so that student-athletes can meet each other and spend more time interacting with one another outside of the party environment.”

“NCAA has to create something safe and alcohol free that satisfies our social needs and competitiveness—like late night bowling lock-ins at the union.”

“I know that not all athletic departments have sports psychologists but the NCAA should provide one for each university—they will not get you in trouble for breaking rules—they just want to help you get better.”

Chapter 5 - Discussion, Conclusion, and Recommendations

The aim of this study was to examine the effect of various determinants on alcohol consumption among student-athletes and to understand why anti-drinking campaigns targeting student-athletes are failing to reduce heavy alcohol consumption. Specifically, the study examined current NCAA Division I student-athletes' attitudes, subjective norms, and perceived behavioral control as determinants of their intent to engage in alcohol consumption. This chapter includes a detailed discussion of each research question, based upon findings from this study and previous literature. Furthermore, the chapter provides theoretical contributions for the theory of planned behavior, recommendations for the NCAA and health communication practitioners, as well as limitations of the current study.

Intercollegiate Athlete Alcohol Consumption

The current study found that overall, both male and female student-athletes equally reported heavy drinking with a total of 49% consuming five or more drinks in one-sitting. This study's findings are consistent with NCAA (2012) findings that roughly 49% of student-athletes reported heavy episodic drinking on one or more occasions in the recent months. The NCAA (2012) also reported that the majority of student-athletes consumed alcohol in the last year on average of two or fewer times per week, which parallels the current study's finding that the bulk (61%) of student-athletes drink one to two times per week.

Competitiveness among student-athletes was identified as one of the contributing factors to excessive drinking. Much like their competitiveness on the field, many student-athletes reported being highly competitive when drinking. While this study did not measure levels of competitiveness and binge drinking, other studies (Grossbard et al., 2007; Zamboanga et al., 2006) concluded competitiveness was related to alcohol use in student-athletes because they are more likely to compete in alcoholic drinking games and mimic athletic competition through these drinking games.

Since most athletes have fewer opportunities to drink as a result of practice or competition schedules, it is the researcher's opinion that student-athletes are making up for lost time and are consuming excessive amounts of alcohol when such opportunities do arise. Other studies have supported this belief (Martens, Dams-O'Connor, & Beck, 2006; Wilson et al.,

2004), stating that athletes tend to drink on the weekends and consume heavy amounts of alcohol when doing so.

Student-Athlete's Attitudes Towards Heavy Drinking

Based on the first research question that explored student-athletes attitudes toward heavy drinking, results indicate that current student-athletes' attitudes towards heavy drinking and alcohol outcome expectancies are apparent. Specifically, student-athletes responses showed a strong emphasis on sexual risk taking. This implies that when they drink they are more likely to engage in sexual risks. As one questionnaire respondent said, "often my teammates and I would have 'no standard nights' while drinking. We would see who could sleep with the ugliest girl." This current findings is similar to four studies (Leichliter et al., 1998; 2003; Nattiv & Puffer, 1991; Nelson & Wechsler, 2001) that found that student-athletes are more likely to engage in high-risk sexual behaviors when intoxicated.

Based on the results of the study, the researcher believes that some student-athletes are engaging in risky sexual behavior because it may increase the chances that top-level recruits attend their university. As one student-athlete said, "often we do stupid things when drinking which make for great stories to tell new prospective teammates." In showing prospective student-athletes that they can "get with anybody," it is believed, according to the statements, that recruits will be more likely to attend and have a positive college experience. This type of sexual behavior may be one of the reasons student-athletes are more likely than non-athletes to be diagnosed with sexually transmitted diseases (Leichliter et al., 2003).

Another emerging theme in student-athletes attitudes towards heavy drinking showed that some current student-athletes have adopted the "work hard, play hard" approach, believing that the harder they work on the field during the week, the more they can encourage excessive consumption on the weekends. Similarly, the current study found that 72% of student-athletes believe that they the harder they train during the week, the more acceptable it is to consume alcohol on the weekend.

Consistent with previous literature (Leichliter et al., 1998) it appears that student-athletes believe they need to consume higher levels of alcohol in order to experience the effect of alcohol because they believe their exercise regimen creates a higher tolerance towards alcohol. This

excessive drinking may lead to a series of serious consequences including drinking and driving, academic problems, relationship problems, and criminal behavior.

Effect of Social Norms on Intercollegiate Alcohol Consumption

The second research question explored the contributing factors that may make student-athletes more susceptible to heavy drinking. Results indicate that there are many emerging themes that appear to influence student-athletes to drink, including: peer pressure from teammates and other student-athletes, drinking in order to develop team unity, consuming heavy amount of alcohol due to a lack of law enforcement, and an attempting to live up to an athletic drinking social norm.

The current study found that nearly 83% of student-athletes report that their drinking behavior is influenced by college athletes—either their teammates or athletes from other sports teams at their institution. Student-athlete drinking behavior with other athletes may also be contributing to the perception that “all the athletes party together,” which in turn leads to the perception of an athletic drinking culture that exists. Statements from current student-athletes indicate that there is an athletic drinking social norm and that student-athletes may be protected from the law and discipline at certain institutions.

According to their statements, it appears that student-athletes are consuming heavy amounts of alcohol without fear of the consequences, especially during their competitive off-season. Although only a few student-athletes believe that sports fans and professional athletes may also influence student-athlete’s drinking behavior, it is the researcher’s belief that these influences impact their drinking behavior as they attempt to live up to an athletic drinking cultural standard. For example, Heisman Trophy winner and potential first-round draft pick Johnny Manziel was arrested as a freshman on the three misdemeanor charges including underage drinking. Similarly, during the 2012 NFL off-season, 39 players, including former all-star and Super Bowl champion, Marshawn Lynch, were arrested on alcohol or drug related charges including intoxication manslaughter (Fox Sports, 2012). Many student-athletes grow up idolizing these professional athletes and want to be just like them on and off the field, unfortunately many professional athletes are not conducting themselves in a professional manner off the field and, like many college athletes, are behaving without fear of consequence.

Athletic Drinking Culture

When asked to elaborate on their team's alcohol-drinking relationship with other student-athletes at their institution, a theme of an athletic drinking culture emerged from the findings. This is evidenced by phrases like “All the athletes party together,” “I bet 95% of the athletes here drink and drink a lot,” “seems like all the athletes drink,” “all the athletes at my school drink on the weekends,” “drinking on Saturday nights is something that I swear all the athletes do here,” and “alcohol and athletics is part of being an athlete.”

A few student-athletes believe that sports fans and professional athletes may also influence student-athlete's drinking behavior. This is evidenced by the following phrases; “fans get drunk at their games, what do they expect their student-athletes are going to do?,” “all the athletes are drinking and all of the professional athletes drink as well so why would I not want to stop drinking to celebrate?,” and “professional baseball players are chewing tobacco during the games and drinking after, (I) might as well join the fun.”

Double Standard of Law Enforcement

A factor that may enhance this drinking culture is the apparent double standard of law enforcement or punishment handed out by authorities. Student-athletes may be consuming vast amounts of alcohol without the fear of the consequences. When asked to elaborate on experiences that they have had in the recent months when intoxicated, four student-athletes expressed disappointment of a double-standard of law enforcement with revenue-making athletic squads:

“The football and basketball guys never get in trouble and it is stupid because most of them smoke weed and get drunk all the time but since they make the money for the university they get protected from the media and the law.”

“Athletes are some of the cockiest people you will ever meet, yea they work but a lot of it gets handed to them. Same thing when drinking they know they are not going to get in trouble so why not go all out on Saturday nights?”

“I usually party with the revenue making sports because they never get in trouble.”

“Our school isn't known for partying, in fact there is a zero tolerance policy on campus, but if an athlete gets caught drinking or drugs they don't get in trouble. Such a double-Standard.”

Effect of Perceived Behavioral Control on Alcohol Consumption

Results from the third research question indicate a high perceived behavioral control with about 94% of all student-athletes studied are confident they could refuse a drink if they wanted to, especially as athletic performances approach (87%). The results show that student-athletes know that alcohol can affect their short-term performance, however their drinking behavior suggests that they are unfamiliar with how the heavy use of alcohol will affect their long-term health. This finding is similar to four other studies (Evans et al., 1992; Martin, 1998; NCAA, 2001; Nelson & Wechsler, 2001) that concluded that student-athletes limit alcohol consumption as they near athletic performances.

While it is encouraging that most student-athletes believe that they can control their drinking, student-athletes appear to gain most of their knowledge about alcohol consumption, as well as how to reduce consumption, from their coaches, rather than the NCAA or their athletic department. Coaches and team leaders should acknowledge this issue and create special team rules tailored for their student-athletes that takes into consideration performance control factors both on and off the field (i.e showing how alcohol use can be detrimental to academic and athletic performance).

Perceptions of NCAA Alcohol Prevention Programming

The fourth and final research question explored the perceptions that student-athletes have about current alcohol prevention interventions tailored for them. Results indicate that although the NCAA has several alcohol education programs, most student-athletes struggle with remembering any NCAA alcohol prevention programs with which they are familiar.

According to the results, many student-athletes are appalled by the number of tedious NCAA rules that control their everyday lives and in general have a negative connotation towards the NCAA's governance. At the beginning of each academic year, student-athletes are required to sit through a three-hour long NCAA rules presentation covering everything from amateurism to social media policies. In order to participate in an athletic season, student-athletes must sign a NCAA compliance form that confirms that they understand and will adhere to these rules. As some student-athletes point out, many athletes fall asleep during these presentations or just sign the forms and do not pay attention. This could be a reason that some student-athletes are failing to recall certain NCAA programming.

One NCAA requirement includes watching an educational video. Participants in the current study however found that few student-athletes remember watching an educational video. Furthermore, the majority of student-athletes reported that they were not informed of the counseling or alcohol treatment options that the NCAA provides. This could be why many student-athletes believe that the NCAA is unconcerned about alcohol use among college athletes. This disconcertment was exemplified by the fact that the majority (57%) gave the NCAA an F letter-grade for their current alcohol intervention and prevention strategies that are being taught to student-athletes. The results also indicate that student-athletes want the NCAA to acknowledge that there is a problem instead of hiding behind all their rules.

Theoretical Implications

According to the theory of planned behavior, the more favorable the attitude and subjective norm, and the greater the perceived control, the stronger should be the person's intention to perform the behavior in question (Ajzen, 2001). The current study showed that intention, made up of attitudes, subjective norms, and perceived behavioral control, was a solid predictor of alcohol use. Other studies have indicated similar findings (Norman et al., 1998; Oei & Morawska, 2004).

Overall, the results of this study suggest that attitudes towards heavy drinking and alcohol outcome expectancies do contribute to intercollegiate athletes' overall perception of alcohol consumption as student-athletes believe they will take sexual risks when drinking and endorse a work hard, play hard approach.

Armitage and Conner's (2001) meta-analysis of 185 articles points to the subjective norm concept as the weakest predictor in the theory of planned behavior. However, in the current study, the results suggest that influence from teammates in combination with an athletic drinking social norm holds the majority of influence on their drinking behavior.

According to the theory of planned behavior, if an individual believes that they have the resources to control a behavior, and encounter few obstacles, they should experience a higher level of perceived behavioral control. While results from this research question show that student-athletes have a high perceived behavioral control, their drinking behavior contradicted this perception as many student-athletes had low response efficacy demonstrated by the fact that majority binge drink on a regular basis.

Although the theory of planned behavior is generally not used to predict cognitive perceptions that individuals have toward a certain topic as the fourth research question sought to understand, it can be used to inform interventions as they relate to the target audience's attitudes, subjective norms, and perceived behavioral control. According to Albert Bandura (1986), a researcher whose work influenced the theory of planned behavior, argued that self-efficacy is the most important precondition for behavioral change. Considering that belief, the best way to increase self-efficacy over heavy drinking is through cognitive-behavioral skills-based interventions, or programs that challenge alcohol expectancies and provide brief motivational feedback (Larimer and Cronce, 2002). Thus, the researcher provides the following recommendations for the NCAA.

Recommendations for the NCAA

Given that the percentage of intercollegiate athletes that have consumed alcohol has significantly increased over the past 12 years, including an increase of 5.8 percentage points for females and 5.5 percentage points for males from 2005 to 2009 (NCAA, 2012) it is obvious that the current mandated NCAA education-only approach to deal with alcohol use among intercollegiate athletes is generally ineffective. Additionally, the majority of student-athletes from the current study believe that the NCAA is not doing enough to reduce alcohol use among student-athletes. Based on results from the current study and previous literature, it is recommended by the researcher that the NCAA adjust its education-only approach to alcohol consumption among student-athletes and mandate personalized motivational feedback (PDF) programming to help reduce alcohol consumption in every athletic division.

In PDF interventions, student-athletes receive motivational feedback that is tailored to be exclusively pertinent to college athletes (social norms were specific to college athletes, athlete-specific negative alcohol-related consequences, potential impact on athletic performance of heavy drinking episodes, and potential injury risk associated with alcohol use; Donohue et al., 2013). A sports psychologist should deliver these interventions to each athletic team at the beginning of each semester to maximize efficacy of the material.

Also, the NCAA needs to simplify the rules surrounding alcohol use among student-athletes. According to one student-athlete, her institution has a rule that no student-athlete should consume alcohol 24 hours prior to and 12 hours after any team related competition and recruiting

visits by prospective student-athletes. This is a fair assessment of the situation and is recommended by the researcher that the NCAA implements this tactic to all institutions.

Recommendations for Practitioners in Health Communication

This study provides valuable recommendations for practitioners in the health communication field. If a PDF campaign is to be successful in reducing alcohol abuse among intercollegiate athletes, health communication practitioners must gain support from and involve the entire athletic department (coaches, administrators, trainers, etc.). Their input will be vital when creating an intervention campaign for student-athletes since student-athletes are often overreliant on the athletic department for both social support and social activity (Ferrante et al., 1996; Parham, 1993; Martens, Dams-O'Connor, & Beck, 2006).

According to the results of this survey, it may be conceivable for health practitioners to promote alcohol-free social events on weekends for student-athletes that satisfy the competitive drive manifested in most athletes. It may be valuable for campaigns to involve peer motivation from team leaders (Sloane & Zimmer, 2010), and since the results of this study indicate that teammates are valuable influencers on behavior.

For example, health communication practitioners creating a campaign for the NCAA should brainstorm with team captains of each athletic squad about creative alcohol-free activities that satisfy social and competitive aspects of a student-athletes psyche. Monthly late-night lock-ins, bowling competitions, and alcohol-free dance parties were all ideas brainstormed by student-athletes from the current study. Participation in these alternative activities may help reduce alcohol consumption.

Limitations

This study was not without limitations. First, this study explored a sensitive topic—alcohol use and abuse—which carried the risk of creating discomforts, harming reputations, and revealing confidential information with student-athletes. Since the recruitment method was facilitated through coaches, they were the determining factor to student-athletes receiving the questionnaire. Given the response rate of approximately 1.13% (another limitation to the study), it appears many coaches may have been reluctant to forward on the study to their student-athletes either because they were skeptical of an outside researcher exploring their team's drinking

behavior or because they know of their team's drinking behavior and did not want it to be exposed in a published document.

The second limitation of this study could be viewed with both a positive and negative connotation. The fact that the researcher is a former student-athlete could lead some to believe that a research bias may have existed. However, since the data analysis method displayed the text directly as the participants wrote it, bias was largely avoided. On the other hand, since the researcher has recently experienced the research paradigm first-hand, he was able to provide a deeper understanding of the data that feasibly a non-student-athlete could not.

Another limitation of this study is the time of year that the study was conducted. During the late stages of February and early March, many athletic programs are still in the midst of competition. For example, Basketball, Baseball, Golf, Equestrian, Track & Field, and Wrestling were all still competing in-season. This may have led coaches to not comply with the researcher's requests either because of time constraints or wanting their student-athletes to stay focused on competing.

The fourth and final limitation to this study was it is an exploratory research study on the subject of intercollegiate athletes from one particular athletic conference in the Midwest. For instance, it would be interesting to compare how each athletic department conducts its own alcohol prevention and intervention education to their student-athletes and how that differs from other institutions. Also, since the study does not focus on grade-level or in-season vs. off-season drinking behavior it would be interesting to analyze to what extent those variables impact drinking behavior. Future research studies are encouraged to utilize other methodologies such as an experiment to determine the long-term impact that PDF interventions have on reducing student-athletes' alcohol use.

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