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EXPLORING THE PREVALENCE OF DRINKING GAMES AND THEIR IMPACT
ON THE HEALTH OF CLUB SPORT ATHLETES AT
THE UNIVERSITY OF WISCONSIN - LA CROSSE

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EXPLORING THE PREVALENCE OF DRINKING GAMES AND THEIR IMPACT
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By Kevin A. Meier

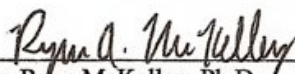
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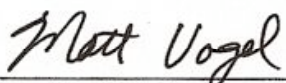
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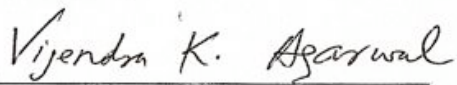
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ABSTRACT

Meier, K.A. Exploring the prevalence of drinking games and their impact on the health of club sport athletes at The University of Wisconsin – La Crosse. MPH in Community Health Education, August 2010, 91pp. (G.D. Gilmore)

The purpose of this study was to first identify which types of drinking games are most prevalent among college club sport athletes at the University of Wisconsin – La Crosse, and second, determine what health consequences are perceived to occur as a result of participation. The study was descriptive in nature and used a self-reported online questionnaire developed by the researcher to collect quantitative data. All 352 club sport athletes at the University of Wisconsin – La Crosse were emailed the survey yielding 105 responses, resulting in a 30% response rate. The results revealed a 39% percent participation rate in drinking games with fellow members of club sport teams, with 17% of all participants being under the age of 21. Respondents reported the major reasons for joining a club team were “to have fun,” “to meet new people/make friends,” and because of a “love of the sport”. The most frequently played type of drinking game was team games (89%). Team games include beer pong and flip cup, in which two teams play against each other. The top reported health consequences suffered from participating in drinking games were vomiting, headache, diarrhea, and blacking out, with 39% reporting no consequences. Gender showed statistically significant influence when compared with participation and consumption amount. Among males, 50% reported playing drinking games with their team compared to 28% of females. Additionally, 58% of males consumed 4 or more drinks when playing drinking games, versus 7% of females. Age, when compared with type of drinking game played, showed statistically significant influence as well. The researcher’s recommendations encompass the ideas of education, raising awareness, and changing the culture that is currently in place. It is recommended that more educational components based around safe alcohol consumption be implemented into club sports, with emphasis on targeting 18-year-old students. It is also recommended that further research be carried out in order to better understand club athlete’s consumption rates both in and outside of the context of drinking games as well as their reasoning behind playing drinking games.

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To all of those who participated in the study, I thank you for donating your time in offering responses to what is an issue of growing concern not only at our University, but at Universities all over the country. I hope you understand that your contributions will help improve the health and well-being of students both near and far.

I would like to offer a final thank you to all of those who were part of this experience for the past 2 years, either directly or indirectly. To my friends and family who put up with my frustrations, you helped more than you know. Without this support, I do not know if any of this would have ever been possible. Most importantly, I hope that everyone who was a part of this work understands that a piece of you will exist in this forever.

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CHAPTER I

INTRODUCTION

The rising popularity of drinking games in the past 20 years has presented the public and student health world with a considerably important issue to address (Borsari, 2004). While heavy drinking and alcohol consumption have long been a part of the college culture, drinking games increase the opportunity for binge drinking levels to occur. The National Institute on Alcohol Abuse and Alcoholism (2004) defines binge drinking as a pattern of drinking that brings blood alcohol concentration (BAC) to .08 grams percent or above. For the typical adult this pattern corresponds to consuming five or more drinks for men and four or more drinks for women in about two hours (National Institute on Alcohol Abuse and Alcoholism, 2004). The combination of rising popularity and increased potential for binge drinking could likely mix to create a cocktail of destruction served straight up to college students of all kinds.

Drinking games come in many different forms and according to Borsari (2004) can be classified into six different categories: Motor skills, verbal skills, gambling games, media games, team games and consumption games. Motor skill games require participants to perform a skill such as bouncing a quarter into a glass, drink from a glass or bottle without using their hands, or perform a series of tasks. The idea behind verbal skill games is to repeat difficult phrases or a series of words. Essentially, the more a person drinks the harder it becomes to remember the order of the words or phrases.

Gambling games are generally played with cards or dice. The amount a person must drink is based on the value assigned to the card or the roll of the dice. Media games can be adapted to any television show, movie or song. Players drink whenever certain phrases or actions occur (Green & Sylvia, 1990).

Team games pit two or more teams against each other and generally create a very wild environment for both players and observers. What has appeared to be the most popular type of game to play, this category includes games such as *Beer Pong* and *Flip Cup*. These games can even become the focal point of a party. Their popularity has even reached the level of holding an annual competition in Las Vegas for the past five years known as the World Series of Beer Pong.

The final type of game is based on the consumption of a certain quantity of alcohol. Consumption games can involve drinking as little as one drink or that of an entire case, be it twenty-four or thirty beers. Consumption games can also take on the characteristics of a team game, especially when larger amounts of alcohol are to be consumed.

Health consequences that result from participating in drinking games can cover a wide range. As is the case with drinking alcohol in any context, a number of factors contribute to the way one individual reacts versus another. Weight, gender, rate of consumption, tolerance, other drug use, food in the stomach, type of drink and state of mind can all contribute to the body's reaction and resulting consequences (The BACCHUS Network, 2010). The two factors that must be addressed with looking at drinking games are amount and time. When playing a drinking game, a person is more apt to consume higher quantities than one would if not participating as well as in a shorter

span of time. Johnson and Sheets (2004) indicated that students playing drinking games at one party were observed consuming around 18 oz. of beer in 15 minutes compared to 6 and 9 oz. for women and men not playing.

Such high levels of consumption will often result in adverse health conditions like vomiting, hangovers, fighting, injury, and alcohol poisoning/overdose (Engs & Hanson, 1993; Johnson, Wendel & Hamilton, 1998). Unwanted sexual experiences can also occur as a result of participating in drinking games, not only targeted towards women, but men too. Johnson and Stahl (2004) note that it is very likely for women who drink more heavily during games to be at an increased risk for victimization than those who do not. Rules of certain games often allow for the creation of a power differential between players making way for possible targeting of specific individuals to have to consume more alcohol. Drinking games might even be a new way of interacting with a person who normally seems unapproachable outside of the game environment.

Drinking games do not discriminate among sub-populations within college. There are many differences in consumption rates that exist among varying groups. These groups can be as basic as dividing men and women, upper classmen and under classmen, looking at individuals who are part of the Greek system, or separating based on their living arrangements.

In the past, men have reportedly played drinking games more than women (Green & Grider, 1990), yet a more recent study has shown participation by women is growing and approaching the same rate as men (Pederson & LaBrie, 2006). Women have also been reporting higher consumption levels when playing drinking games compared to

other drinking episodes, but men still consume more overall (Grossbard, Geisner, Neighbors, Kilmer & Larimer, 2007; Pederson & LaBrie, 2006).

Age differences among students show that as age increases participation goes down. A study conducted at a public university in the Northeast by Sharmer (2005) indicated 69% of 18-year-old students had played drinking games in the past month compared to 30% of 23-year-old students. Similar findings were seen by Borsari et al. (2003) in which students aged 19 years old both played more and consumed more alcohol than their older counterparts.

Among the many sub-populations that exist in the college environment, athletes are often targeted as an at-risk group for high-risk alcohol consumption. College athletics can be subdivided into varsity, club, and intramural levels. The club level however, presents very intriguing characteristics unlike the other two levels, which may have the potential to influence their alcohol consumption behavior differently.

Unlike varsity teams, club sport teams are not sanctioned by the National Collegiate Athletic Association (NCAA), but do provide a more structured and competitive level of play than the intramural level. Members of club teams can range anywhere from those who have competed at a high level of play to individual who have zero experience but are simply interested in the sport. These student-run clubs rely strongly upon the dedication and leadership abilities of their members and generally have advisors rather than paid coaches. While some universities will portion out money to club teams, they often require their members to provide the necessary funds for tournament fees and uniforms and other equipment. Club teams generally travel in a less luxurious manner than that of varsity teams and often find themselves packing as many

members into as few hotel rooms as possible when on the road. Because of the commitment that goes into maintaining a club team, strong bonds and friendships can form among its members.

A study by Grossbard et al. (2007) that focused on student athletes suggests the desire to play drinking games may come from the “game-oriented” drive for competition or the ability to showcase certain skills that athletes possess. Others state that the social aspect that so often becomes a part of these clubs influences the desire to play (Zamboanga, Rodriguez & Horton, 2008). Finally, one study conducted by Grossbard et al. (2007) focusing on college-aged non-athletes, intramural athletes and intercollegiate athletes found a positive correlation between drinking game participation and negative consequences, as well as greater participation among athletes, both intramural and intercollegiate, compared to non-athletes.

Statement of the Problem

Drinking alcohol and being in college have had a long-standing relationship. O’Mally and Johnston (2002) found that approximately 80% of college students report drinking during their lifetime. According to the American College Health Association, results from the *National College Health Assessment* indicate that 30-day prevalence of drinking over the past 3 semesters to be 63.1% Fall 2008, 68.8% Spring 2009, and 59.2% Fall 2009 (American College Health Association, 2009). Additionally, Wechsler et al. (2002) found binge drinking rates among college students have remained near 44% over the past 10-15 years. However, with the rising popularity of drinking games, may we begin to see a rise in binge drinking rates and the health consequences that come with it?

With the determination that student athletes are in fact an at-risk group for the participation in drinking games and various health consequences can result from taking part in such activities, examining this club sport sub-population will be key to furthering the knowledge base that surrounds the impact drinking games have in college health issues.

Purpose of the Study

The purpose of this study was to first identify which types of drinking games are most prevalent among college club sport athletes at the University of Wisconsin – La Crosse and second, determine what health consequences are reported to occur as a result of participation.

Need for the Study

The drinking culture in the United States, particularly that which exists in college, is one that receives criticism from many groups including health professionals, college administrators, and parents. With the way alcohol consumption is viewed by a number of college-aged students, it raises concern for understanding how its abuse or misuse can negatively affect college students' health and well-being. Drinking games in particular allow for fast consumption of alcohol in a short period of time. This in turn can lead to high levels of alcohol consumption and negative health outcomes.

The researcher's own observations of club sport athletes and their participation in drinking games has contributed to the belief that a need exists for a closer look into this area of research. While these observations are only from one of the 17 club teams at the University of Wisconsin – La Crosse, they provide insight into this sub-population, allowing us to see that club athletes are in fact engaging in drinking game participation

and suffering from adverse health outcomes. This subpopulation of college athletes also appears to be somewhat of a “lost group” in the sense that while they make up a large portion of student athletes, the amount of guidance, control, and representation is very limited.

UW-L Club Sports is the largest student-run organization at the University of Wisconsin-La Crosse. Currently over 400 students are members of the 17 club teams (University of Wisconsin – La Crosse, 2010). With such a large number of students making up this group, and athletes considered an at-risk group for participation in drinking games, the potential exists for numerous students to be at risk for health consequences associated with drinking game participation. Hopefully, by understanding the current state of drinking game participation among this large group, further research can be conducted, and educational programming can be created or enhanced to better address the situation at hand, preventing any possible rise in game playing, binge drinking levels, and adverse health effects that result from participation.

Research Questions

The following questions emanated from the literature review:

1. For what reasons do students join a club sport team?
2. What types of drinking games are prevalent among college club sport athletes at the University of Wisconsin – La Crosse?
3. What health consequences are college club sport athletes from the University of Wisconsin – La Crosse perceiving to suffer from due to participating in drinking games?

4. Does the prevalence of drinking game participation vary across different types of club sports teams at the University of Wisconsin – La Crosse?
5. Does age influence participation in drinking games for college club sport athletes at the University of Wisconsin – La Crosse?
6. Does gender influence participation in drinking games for college club sport athletes at the University of Wisconsin – La Crosse?

Assumptions

It is assumed that all participants in this study answered the survey questions honestly and to the best of their ability.

Delimitations

This study focused on the population of college club sport athletes at the University of Wisconsin – La Crosse. Only club sport athletes attending the University of Wisconsin – La Crosse during the 2009-2010 school year who were members of a club sport team for at least one full semester and were not members of intercollegiate teams were invited to take part in this study. The survey was completely voluntary and confidential. Only club sport athletes who chose to participate in this study were included.

This study also focused only on health outcomes specifically of an acute physical nature. This was done because the data were self reported by students and recognizing conditions of this nature could be done much more accurately.

Limitations

Due to the self-reported nature of data collection, this study was limited by the ability of its participants to recall past personal history of drinking episodes that involved the participation in drinking games while being a member of a club sport team.

Definition of Terms

Binge Drinking: A pattern of drinking that brings blood alcohol concentration (BAC) to .08 grams percent or above. For the typical adult, this pattern corresponds to consuming 5 or more drinks for men and 4 or more drinks for women in about 2 hours (National Institute on Alcohol Abuse and Alcoholism, 2004).

Consumption Games: These games do not have much strategy and are based around the consumption of a predetermined amount of alcohol in the shortest amount of time (Borsari, 2004).

Drinking Game(s): Games that consist of a set of rules that specify when and how much participants must drink (Johnson & Sheets, 2004).

Gambling Games: Games that are based on chance, and use cards or dice. The amount a person must drink is based on the value assigned to the card or the roll of the dice (Green & Sylvia, 1990).

Media Games: Games, which are adapted to a television show, movie, or song in which players drink whenever certain phrases or actions occur (Green & Sylvia, 1990).

Media Literacy: The process of understanding and using the mass media in an assertive and non-passive way. This includes an informed and critical understanding of the nature of the media, the techniques used by them and the impact of these techniques (Center for Media Literacy, 2007).

Motor Skill Games: Games that require participants to perform a motor task such as bouncing a quarter into a glass, drink from a glass or bottle without using their hands, or perform a series of tasks. Failure to do the task adequately results in being forced to drink alcohol (Borsari, 2004; Green & Sylvia, 1990).

Social Norms: A person's perceptions of normative expectations (Dartmouth, 2010).

Standard Drink: twelve ounces of beer, five ounces of wine, or 1.5 ounces of 80-proof liquor (National Institute on Alcohol Abuse and Alcoholism, 2005).

Team Games: Games that pit two or more teams against each other with participants drinking when certain actions occur or as a way to progress the game forward (Borsari, 2004).

Verbal Games: Games that require the players to repeat long sequences of nonsense words or difficult phrases, which become more difficult to do so as the individual becomes more intoxicated (Borsari, 2004).

CHAPTER II

REVIEW OF LITERATURE

Introduction

The popularity of drinking games among college students has brought about concern for the health implications they carry with them. While a great deal of research has been conducted on the drinking culture in college, drinking games have emerged as an increasingly significant influence on college alcohol use in the past 20 years (Borsari, 2004). Drinking games can easily bring about binge drinking levels as evidence suggests these games are associated with greater or more rapid consumption of alcohol than would be experienced in other contexts. The National Institute on Alcohol Abuse and Alcoholism (2004) defines binge drinking as a pattern of drinking that brings blood alcohol concentration (BAC) to .08 grams percent or above. For the typical adult this pattern corresponds to consuming five or more drinks for men and four or more drinks for women in about 2 hours (National Institute on Alcohol Abuse and Alcoholism, 2004). Borsari, Bergen-Cico and Carey (2003) note that in a large-scale survey of 1,028 heavy drinkers (binge level drinking), 94% reported playing drinking games in the past 12 months and 66% of 2,802 light-to-moderate drinkers (those who consume three to four drinks in one episode) played drinking games in the same time. Another study showed that 75% of college men and more than half of college women had played drinking games in the previous year (Johnson & Sheets, 2004). A third study indicated 83% of

heavy drinkers played these games and 41% not classified as heavy drinkers participated in drinking games (Sharmer, 2005). These reported rates indicate the intensifying need to understand the appeal of drinking games better so that preventive measures can be implemented to reduce high levels of play.

This review aims to explore what drinking games are, why they appeal to college aged students, the risks that certain groups of individuals are put at by participating in the games, and the consequences that come about from playing. Additionally, it will look at why the games ultimately end. Areas for future research surrounding this issue will also be discussed. This review should help to educate and aid in creating interventions for dangerous drinking habits related to drinking games.

Characteristics of Drinking Games

While participation in drinking games can be for social reasons or as a way to compete with others, the primary goals of drinking games are to either become intoxicated yourself or get another player drunk. Green and Grider (1990) referred to the goal in drinking games as the “reversal of competence” because the longer the game is played, the less adept the players become due to excessive alcohol consumption. It is reported that over 500 drinking games are currently popular on college campuses (Bosari, Bergen-Cico & Carey, 2003). Yet, new drinking games are most likely created every day. Almost any existing game can be turned into a drinking game such as board games, card games, or word games and rules can always be modified to increase or decrease the amount of alcohol consumed. In addition to fostering bingeing, many games may divert a player’s attention from cues of intoxication to which he or she might otherwise attend (Johnson, 2002).

Types of Drinking Games

Drinking games can be classified into six different categories: Motor skills, verbal skills, gambling games, media games, team games and consumption games (Green & Sylvia, 1990). It is important to understand that while these games can usually be categorized by their primary method of play and consumption, a number of games are some type of hybrid in which skill, luck, and consumption amounts combine. Whether one game is more detrimental to an individual's health than another is still up for debate. Much may rest upon the longevity of a game along with the methods in which an individual is deemed the "loser", causing them to consume some quantity of alcohol. Oftentimes the names given to these games, such as *circle of death* or *screw the dealer*, indicate healthy outcomes most likely are not intended to be part of the experience.

Motor Skills

This group of games requires participants to perform a skill such as bouncing a quarter into a glass, drink from a glass or bottle without using their hands, or perform a series of tasks of varying difficulty. Failure to do so results in drinking some amount of alcohol. Games include *Quarters*, *Speed Quarters*, *Indian/Thumper*, and *Cardinal Puff*.

Verbal Skills

The idea behind these games is to repeat difficult phrases or a series of words. Failure to properly recite the words results in drinking. Essentially, the more a person drinks the harder it becomes to remember the order of the words or phrases. Popular games include *Fuzzy Duck* and *Add-a-Word*.

Gambling Games

These games are generally played with cards or dice. The amount a person must drink is based on the value assigned to the card or the roll of the dice. Rules can often change throughout these games giving certain players more power. Examples are *Circle of Death*, *Screw the Dealer*, *Three Man*, and *Spoons*.

Media Games

Media games can be adapted to any television show, movie, or song. All participants play these games at the same time as a collective group. Players have to drink a predetermined amount every time a certain phrase is said. Decorated pint glasses based on popular animated shows including *The Simpsons* and *Family Guy* have been marketed to include the rules for playing drinking games along with watching the show.

Team Games

With the inclusion of such games as *Beer Pong* and *Flip Cup*, this category of games may be among the most popular to play at large parties. These games pit two or more teams against each other and generally create a very wild environment for both players and observers. The popularity of beer pong has allowed for it to go mainstream in more than one way. Now in its fifth year, the World Series of Beer Pong, which takes place in Las Vegas, looks to draw in over 500 teams for the five-day event that boasts a \$50,000 grand prize. The event has already been the focal point of the documentary *Last Cup: Road to the World Series of Beer Pong*. The “sport” has even made its way into the virtual world of video games. With a rating of E for everyone, *Pong Toss* hit the stores for the Nintendo Wii entertainment system in the summer of 2008 (Keegan & Haire, 2008). All references to the use of alcohol however, were removed from the game.

Popular television shows *Greek* and *It's Always Sunny in Philadelphia* have both aired episodes featuring these types of games as well. *Beer Pong* has even gained popularity on *Late Night with Jimmy Fallon*, in which host Jimmy Fallon challenges his guests to an abbreviated version of the game.

Consumption Games

This final category is all about drinking large amounts of alcohol within a certain amount of time. *Power Hours*, *Case Races*, *Keg Stands*, *Shotguns* and *Beer Bongs* make up this group. The winners are those who can drink the most the fastest, generally without vomiting. For example, in a *Power Hour*, participants are expected to consume one standard 1.5-ounce shot of beer every minute for 60 minutes. *Case Races* on the other hand, generally consist of a two to four man team pitted against another with the goal of consuming one 24 or 30 can case of beer in the shortest time possible.

Motives for Playing Drinking Games

Not everyone plays drinking games for the same reasons. While a person's basis may be similar to those for consuming alcohol outside of the game concept, drinking games add the characteristic of excitement and social bonding as well as other concepts. One study focused entirely on sensation seeking as an indicator for playing (Johnson & Cropsy, 2000) while a number of other studies surveyed student's motives in regards to relaxation and disinhibition, fun and celebration, conformity, and sexual manipulation (Borsari, 2004; Durkin 2008; Green & Grider, 1990; Johnson & Cropsy, 2000).

Sensation Seeking

Johnson and Cropsy's (2000) study was based around the Sensation Seeking Scale (SSS), a test measuring the level of sensation seeking a person desires. The test

was administered to 256 college students from psychology classes. The results indicated that students who reported to be drinking game players had significantly higher mean scores than non-players on total SSS score (Johnson & Cropsy, 2000). Johnson and Cropsy declare that these students may be placed at an increased risk for negative consequences with a higher intention of playing to get drunk and/or obtain social or sexual gratification.

Competition

Drinking games offer a different structure of drinking that may appeal to people who don't enjoy the typical drinking atmosphere. The competitive nature of some games may entice a person who enjoys competition to play (Borsari et al., 2003). A game may offer the chance for a person to show off to others and gain respect either by drinking more than the others do or showcasing their ability to perform the tasks the game calls for.

Relaxation and Disinhibition

Alcohol use is often cited as a way to cope with stress or forget about problems a student is encountering in school. Drinking games provide that outlet along with social interaction. These games can also feed other desires like taking risks and gambling with drinks.

The SSS form contained a set of subscales including disinhibition, which measured a person's pursuit of pleasure through such activities as social drinking, parties, gambling and so on. Of four subscales, disinhibition showed significance indicating that higher scores correlated with playing drinking games more frequently (Johnson & Cropsy, 2000).

Fun and Celebration

Playing for the sole purpose of getting drunk or “buzzed” and doing it quickly is often reported as a primary reason to take part in a drinking game (Borsari et al., 2003). Others find these games to be fun to play or as a way to liven up a party. Drinking games may also be used as a form of celebrating a right of passage into a group, be it a fraternity/sorority or a sports club.

Conformity

Pressure from others can be an issue when deciding to take part in a certain behavior or not. With such high rates of students taking part in drinking games, many people might play in order to fit in. College is a time when a lot of people try to find themselves and become part of new groups. In order to fit into a certain group, a person may feel they have to take part in the activities the group does.

Manipulation

Reports have indicated that some people use drinking games as a tool to manipulate others. Johnson and Sheets (2004) indicate that many drinking games include as part of their rules ways to force specific players to drink. This could mean getting a friend drunk for amusement or go as far as targeting a player in order to take advantage of them sexually. Borsari and colleagues (2003) reported manipulation reasons for playing to be true of 21% of individuals.

At Risk Groups

Studies focusing on specific groups of people have been a common practice when exploring drinking games. Certain groups are believed to be more at risk for participating in drinking games because of several factors. While these groups may be

more at risk, it is not to say that anyone not in these groups could be any less susceptible to the consequences associated with playing drinking games.

Men vs. Women

Many studies have reported that men tend to play drinking games more than women (Green & Grider, 1990). However, more recent studies are finding that the rate at which women play is similar if not equal to men (Pederson & LaBrie, 2006). A study conducted at a northeastern university found 54% of females to be taking part in games compared to 56% of male students (Sharmer, 2005). Women also report drinking more during drinking games than during other drinking episodes, yet men still consume more overall during game play (Grossbard, Geisner, Neighbors, Kilmer & Larimer, 2007; Pederson & LaBrie, 2006). Biologically men and women differ in the rate at which they metabolize alcohol. Since women metabolize alcohol slower, but consume more alcohol than usual when they play drinking games, they are potentially put at a significant risk for increasing their blood alcohol concentration to dangerous levels.

Athletes

There are a number of factors believed to draw athletes towards drinking games. Grossbard et al. (2007) suggest the “sport or game-oriented” idea promotes competition and a chance for athletes to demonstrate certain skills. Additionally, it is common for teams to participate in off-the-field social events, which because of the high rates of drinking in the college environment can expose athletes to more opportunities of taking part in drinking (Zamboanga, Rodriguez & Horton, 2008). This study also reported 54% of the respondents playing drinking games during the current season or semester the study was conducted.

Grossbard et al. (2007) conducted a study comparing non-athletes, intramural athletes and intercollegiate athletes. Their findings showed positive correlations between drinking game participation and negative consequences as well as greater participation among athletes, both intramural and intercollegiate, compared to non-athletes. Studies like this support the idea of athletes being a high-risk group for drinking and drinking game participation, and could help in the further investigation of preventing such high rates of involvement in game playing.

On Campus/Off Campus Living Arrangements

A person's environment often influences their behavior. Where a student ends up living can greatly affect the likelihood that they drink and participate in drinking games. Sharmer's (2005) study reported living with two or more students increased the likelihood of playing drinking games compared to those who lived alone or with family. Sharmer (2005) also found that students living on campus in suite-style housing with three or more students were almost ten times more likely than other students to play drinking games. Other living arrangements Sharmer associated with increased drinking game participation included those living in residence hall doubles or with roommates off campus. Residents in both arrangements were shown to be four times as likely to have played drinking games than those living alone in dorms, off campus, or with family.

Freshman vs. Seniors

Often critics of high-risk drinking look at age as a factor to consider. In fact, it has been shown that age does appear to influence rates at which students play drinking games. Sharmer (2005) reported 69% of 18 year olds played drinking games during the previous month compared to 30% of 23 year olds. Sharmer (2005) also found that among

students aged 18-25, 18 and 19 year olds were five times more likely to play drinking games than other students with rates at 23 years old dropping off significantly. Borsari et al. (2003) also reported heavy drinking during games to occur early in college and students under 19 years old played games more and consumed more than older students.

Consequences Associated with Drinking Games

Not everyone reacts to the effects of alcohol the same way. Because of this, one person may suffer a completely different consequence from using alcohol than another person. Weight, gender, amount, time, tolerance, and state of mind can all contribute to how one reacts to alcohol in their system and influence the outcome after use. Causality between drinking games and alcohol-related problems has been hard to establish mainly because of the high number of factors that are involved, especially distinguishing between light-to-moderate and heavy drinkers (Borsari et al., 2003).

With previous studies indicating that drinking games promote increased alcohol consumption, students who play them are more likely to experience hangovers, vomiting, fights, missing class, poor grades, and getting into trouble with the law (Engs et al. (1993); Johnson et al., 1998). Sharmer (2005) found that as grade point averages went up, the percentage of students who played drinking games went down. The numbers reported showed 83% of students with a GPA under 2.0 played drinking games, while 36% with GPA's above 3.5 played.

In the most extreme cases, a person may consume so much alcohol one may suffer from alcohol poisoning. This can result in being taken to the hospital and having your stomach pumped or even death. Many news stories have covered cases like this that involve hazing, students trying to drink their age in shots on their birthday, or those who

simply consume too much alcohol. Stories of this nature that have stood out include that of Sam Spady from Colorado State University, and the hazing incident of Gordie Bailey at the University of Colorado. In both cases each individual died from alcohol poisoning.

Consumption/Intoxication

Drinking games are generally associated with higher levels of alcohol consumption than drinking in other contexts (Johnson & Sheets, 2004). Along with the high levels of consumption, drinking games promote drinking fast and often. The combination of these two factors leads to higher blood alcohol concentration and increased risk for additional consequences. Students playing drinking games at one party were observed consuming around 18 oz. of beer in 15 minutes compared to 6 and 9 oz. for women and men not playing (Johnson & Sheets, 2004).

Johnson (2002) conducted a study focused entirely on why drinking games end. For both men and women the top five reasons for quitting included that of “I got drunk.” Men also reported getting buzzed as a top-five reason for quitting while women had this ranked 6th. Johnson (2002) found that the high positive correlations between excessive consumption consequences of play and excessive consumption reasons for games ending suggests that many players actually do continue to play until they get drunk or sick. These findings help support the assumption that large amounts of alcohol are being consumed during these games.

Sexual Experiences

With a number of students reporting manipulation as a reason to play games, sexual manipulation can be a very serious consequence resulting from drinking game participation. This can range from being “hit on” or kissed by someone all the way to

engaging in sexual intercourse. Men can use the games as a means for targeting women by utilizing the power differential often created by the rules of such games (Johnson & Stahl, 2004). Based on the results of Johnson and Stahl (2004), women may target men as well, while same-sex targeting is also thought to occur, and drinking games may be used as a vehicle to engage in certain acts that are not typically accepted such as women being sexually aggressive and same-sex partnerships. Johnson and Stahl (2004) note that it is very likely for women who drink more heavily during games to be at an increased risk for victimization than those who do not.

Summary

This review covered the basics of what drinking games are, the types of games that exist, the motives behind playing them, what groups appear to be at greater risk of playing, and the consequences that come with playing drinking games. While it provides a good basis to review previous findings, there are still a number of questions surrounding the impact drinking games have on the health of college students. Most importantly is determining whether or not drinking games in fact are causing more harm than drinking in other contexts. Ultimately, continued research on drinking games should help in developing more comprehensive educational programs surrounding alcohol use among college students.

The research that has been conducted clearly shows the popularity these games hold and because of that, reinforces the need to further understand their impact on the health and well-being of college students as well as why drinking games are played and how this issue can be addressed on college campuses. Moreover, research will need to be conducted and analyzed in a number of other areas to assess the impact drinking

games possess compared to other customs of drinking. As long as college students are drinking, drinking games will most likely remain a part of the culture.

CHAPTER III

METHODS

Introduction

Previous investigations into drinking games and college health have yielded a great amount of information from which to work with when developing more focused research. The popularity of drinking games is on the rise, binge drinking rates have remained at a high level for over a decade, and numerous subpopulations in college have been recognized as high-risk groups for participating in drinking games (Borsari, 2004; Wechsler et al., 2002; Green & Grider, 1990; Sharmer, 2005; Grossbard et al., 2007). For these reasons, exploration into this subject matter should prove beneficial to a greater understanding of the factors involved. Therefore, the purpose of this study was to explore the prevalence of different types of drinking games among college club sport teams and the perceived health consequences that result from participating in such activities.

After reviewing the relevant literature related to this study's purpose, the following research questions were developed:

1. For what reasons do students join a club sport team?
2. What types of drinking games are prevalent among college club sport athletes at the University of Wisconsin – La Crosse?

3. What health consequences are college club sport athletes from the University of Wisconsin – La Crosse perceiving to suffer from due to participating in drinking games?
4. How does the prevalence of drinking game participation vary across different types of club sports teams at the University of Wisconsin – La Crosse?
5. How does age influence participation in drinking games for college club sport athletes at the University of Wisconsin – La Crosse?
6. How does gender influence participation in drinking games for college club sport athletes at the University of Wisconsin – La Crosse?

Based on the purpose of this study and the research questions that resulted, the present study was configured to be descriptive and was conducted using a self-reported survey tool. Each step of the research process is detailed below.

Subject Selection/Participants

In place of selecting a sample, and the attempt to have all seventeen club sport teams represented, every current member of each team was sent an invitation to take part in the study. This total number equaled 352 potential respondents. Coordinator of Club Sports, Jim Baker, was contacted April 8, 2010, in order to obtain current rosters of each club team as of Spring 2010 so an up-to-date email list could be created for participant contact. Participants for this study were delimited to current club sport athletes from the University of Wisconsin – La Crosse who had been a member of a club sport team for at least one full semester and were not members of intercollegiate teams as well. This criterion was selected to assure that participants had been exposed to the influences of their team involvement for at least one full semester of participation. Participants were

emailed an invitation to take part in the survey via their student email, which introduced the study, described why they were selected, mentioned the criterion of at least one semester of team involvement, and provided a direct link to access the electronic survey via the free online survey generator Qualtrics offered through the University of Wisconsin – La Crosse.

The reason for selecting participants in this manner was that not all club sport teams are of equal size or consist entirely of members who have participated for at least one full semester. Additionally, it was decided that sending an email to every member and indicating the criteria for participation would be more time efficient than screening for the criteria before sending out emails.

The online survey generator Qualtrics was chosen for a number of reasons. Initially, this was because of its free accessibility through the University and ability to collect the data in a timely manner. It also allowed for the mass emailing needed in order to reach the desired number of subjects asked to participate in the study while providing a way to easily gather, organize, and export the data. Qualtrics also provided a secure format that allowed the researcher to maintain confidentiality of the participants and security of the data collected. Finally, the program was also able to limit participants to answering the survey only once.

Because this study involved human participation, IRB (Institutional Review Board) approval for this survey implementation was attained prior to its administration (see Appendix A). Participants did not require signing of a consent form as the email invitation clearly described the study and its intent, and that completion of the survey would serve as implied consent.

Instrumentation

A survey, called the *Social Activity and Club Sport Assessment (SACSA)*, was developed by the researcher to assess drinking game prevalence among college club sport athletes and the health consequences that result from participating in them (see Appendix B). The majority of this survey was not adapted from any previously used surveys, but created specifically for this study due to the specific questions being asked. Only question #6 which asks subjects to report on their reasoning for joining a club team was adapted from a previous study by Gill, Gross and Huddleston (1983) that looked at participation motivation in youth sports. While not all 30 items were used due to not being applicable to an older population in college club sports, 15 items were taken from the questionnaire. The same 3-level scale was also used to rank the importance of each item from important, somewhat important, to not at all important. The questions posed on the SACSA were created to address the research questions. Respondents were asked to report their gender, age, number of years in college, club team(s) affiliation, how long they have been a member of club sports, reason(s) why they joined a club sport team, if they participated in drinking games, how often they have participated in drinking games in the past 30 days, type of drinking game(s) they participated in, time spent playing games, number of drinks consumed while playing games, and the health consequences that resulted due to participating in drinking games.

The 17 club sport teams at the University of Wisconsin – La Crosse were incorporated as options to select from and include: Aikido, Alpine Ski, Equestrian, Hockey (Women), Lacrosse (Men), Lacrosse (Women), Martial Arts, Rugby (Men), Rugby (Women), Soccer (Men), Trekker Outdoors, Triathlon, Snow Ski & Board,

Ultimate, Volleyball (Men), Volleyball (Women), and Water Ski. All six types of drinking games were incorporated on the survey, which include: motor skills, verbal skills, gambling games, media games, team games, and consumptions games. For each type, a definition and examples of the most common games were given to help guide participants in their answers. For the health consequences section, options pertained specifically to physical health. This was done because attempting to assess mental health impacts might have been subjective, calling for more professional assessment. Finally, the section on why students join a club team included options for athletic, physical fitness, and social reasons.

Procedures

The SACSA was emailed to club sport athletes on May 27th, 2010 and open to participate in until June 9th, 2010. After receiving the email and prompt, participants were asked to complete the SACSA to the best of their ability (see Appendix C). Participants were also given the option to enter into a drawing for free prizes as a thank you for their time spent in completing the survey. Participants were only able to respond once to this survey. Participants were sent one reminder email one week following the initial mailing. The total number of respondents was 105 and represented 16 club sport teams. Only the Aikido club had no members respond to the survey.

Data Analysis

After the survey period was closed, the researcher gathered the data in order to analyze and answer the research questions aligned with this study. The research questions were descriptive in nature, therefore the data analysis focused on descriptive statistics. Descriptive analysis could be conducted using the Qualtrics program. These

descriptive statistics included frequencies, percentages, and cross-tabulations. Pearson's chi-square testing was also conducted to test for significance. All tests used a significance level of $p < 0.05$. This type of test was chosen based on the assumption that the data were not of normal distribution.

CHAPTER IV

RESULTS

Introduction

Before implementing the survey used in this study, the survey went through both content validation and pilot study processes. Each preliminary form of feedback aided in improving the survey instrument. A total of 105 surveys (out of 352) from the University of Wisconsin – La Crosse were completed.

Content Validation

Prior to administering the survey, the Thesis Committee performed a preliminary review of the survey. Following this, a jury of four individuals with experience in alcohol and drug treatment and research, counseling, and statistical analysis reviewed the survey for content validation purposes. A form was emailed to each of the jury members with instructions on how to provide feedback for each survey item on a 5-point scale along with a comment section (see Appendix D). This content validation process was based on a procedure used in a study conducted by Gilmore (1974). Every survey item had an average rating of 3.75 or above, indicating that each item was acceptable and had value in addressing the research questions. Revisions to the survey were made based on the feedback provided. This included the addition of two questions used to compare consumption amounts when not playing drinking games and the health consequences that occur when not playing drinking games. Minor wording changes were also made.

Pilot Study

A pilot phase of the study instrument was conducted using club sport members from a smaller University in La Crosse, Wisconsin. A total of 11 responses were collected. Participants were emailed a link to take the SACSA-PILOT, which included an additional section for feedback at the end where participants could indicate if a need existed for revisions based on clarity or the questions along with comment sections (see Appendix E). No indication was made to revise the questions for clarity and only one suggestion was made to add an item to the survey regarding how often teams practice or how often teams participate in activities together such as eating. This suggestion however was not seen as beneficial to the purpose of the study, and no additional item was added.

Survey Results

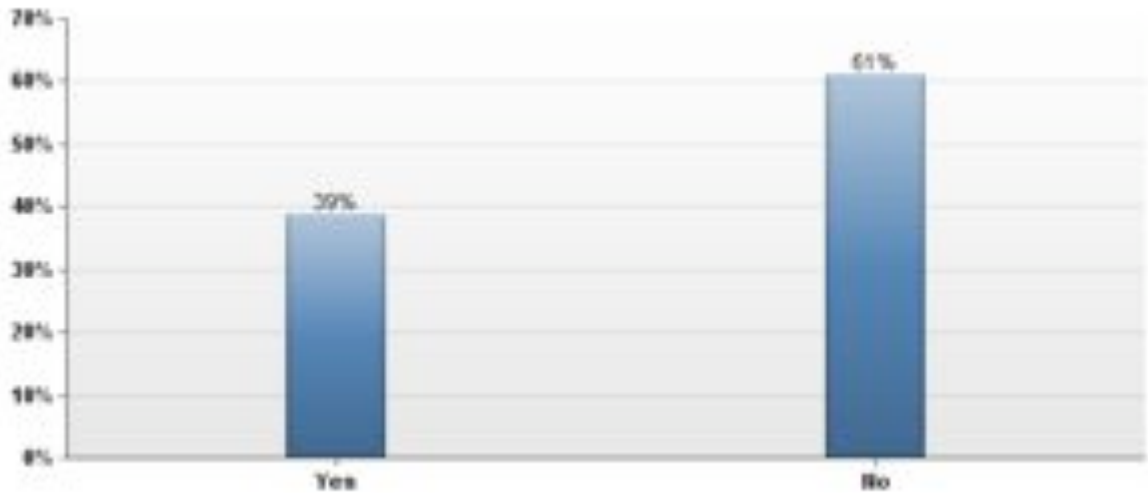
A total of 352 surveys were electronically sent out to every current club sport member at the University of Wisconsin – La Crosse with 105 being completed yielding a response rate of 30 percent. The demographic data are summarized in Table 1. The gender of the respondents was split between 53 males and 52 females. Fifty-three percent of respondents were under the age of 21, 19 years (23%), 20 years (22%) and 18 years (8%). Those 21 years of age and older are represented as follows, 22 years (21%), 21 years (18%), 23 years (4%), 25+ (3%), and 24 years (2%). 30 percent of respondents were in their first year of college followed by second year (22%), fourth year (20%), third year (18%), and fifth or more years (10%). The majority of respondents have been a member of a club sport team for 2 semesters (40%), four semesters (18%), eight or more semesters (12%), six semesters (10%), three semesters (9%), one semester (9%), five

semesters (2%), and no response for seven semesters. All but one club team was represented, that of the Aikido club.

Table 1. Summary: Demographic Information for Responding Club Sport Athletes, UW-La Crosse, Spring, 2010

Demographic	Category	Percent of survey population
Gender	Male	50 percent
	Female	50 percent
Age	18	8 percent
	19	23 percent
	20	22 percent
	21	18 percent
	22	21 percent
	23	4 percent
	24	2 percent
	25+	3 percent
Number of years in college	1	30 percent
	2	22 percent
	3	18 percent
	4	20 percent
	5+	10 percent
Number of semesters on club team	1	9 percent
	2	40 percent
	3	9 percent
	4	18 percent
	5	2 percent
	6	10 percent
	7	0 percent
	8+	12 percent

When asked, since becoming a member of a club sport team at UW-La Crosse, have you participated in drinking games related to your club sport team/members, 61% responded “No” with 39% responding “Yes” (Figure 1).



Since becoming a member of a club sport team, have you participated in drinking games related to your club sport team/members?

Figure 1. Whether or Not UW-La Crosse Club Athletes Participated in Drinking Games With Their Club Team, Spring, 2010

It was of interest to the researcher to know how strong a reason was for a student to join a club sport team. When asked how important a reason was for joining a club team, ranked either as important (1), somewhat important (2), or not important at all (3), the top three answers were to have fun (1.06), love of the sport (1.25) and to meet new people/make friends (1.25). The bottom three responses were to gain status or recognition (2.40), to feel important (2.33), and the opportunity to travel (2.17). The full results are summarized in Table 2.

Table 2. Importance of Reason for Joining a Club Team Among Current Club Sport Athletes at UW-La Crosse, Spring, 2010

Question	Important (1)	Somewhat Important (2)	Not Important At All (3)	Mean
To have fun	93	4	1	1.06
Love of the sport	80	15	5	1.25
To meet people/make friends	77	21	2	1.25
To compete	72	23	4	1.31
To get exercise	74	20	6	1.32
To be part of a club/team	67	27	4	1.36
To be physically fit	68	26	6	1.38
To relieve stress	66	29	5	1.39
To improve skills	63	33	4	1.41
To be with friends on the team	56	31	11	1.54
To play at a higher level	55	33	12	1.57
To have something to do/not be bored	50	32	18	1.68
To try or learn something new	50	24	26	1.76
The opportunity to travel	27	29	44	2.17
To feel important	17	33	50	2.33
To gain status or recognition	15	30	55	2.40

To compare data and test for significance, chi-square testing was conducted. All tests used a significance level of $p < 0.05$. First, gender and age were compared with the importance of each reason for joining a club team. Gender showed significance with “to play at a higher level” ($p = 0.04$) and to be part of a club/team ($p = 0.02$). 62 percent of males rated “to play at a higher level” as important versus 42 percent of females. 77 percent of females rated “to be part of a club/team” as important versus 51 percent of males.

Age was tested to see how age showed significance with “to be part of a club team” ($p = 0.01$), “to meet people/make friends” ($p = 0.00$), to have fun ($p = 0.00$), and

“to have something to do/not be bored” ($p = 0.03$). Among 18 year olds, 100 percent (8 respondents) rated “to be part of a club/team and to meet people/make friends” as important. The younger the respondent, the more likely they were to rate “to have something to do/not be bored” as an important reason for joining a club team, whereas the older the respondent, the more likely they were to rate this reason as somewhat important or not important at all.

To see what types of drinking games are being played by club sport athletes, participants were asked to indicate all types of drinking games played with their team/members of their team. Among respondents who had participated in drinking games with their team/members, the overwhelming majority had played Team Games (86%) followed by Motor Skills (54%), Consumption Games (49%), Gambling Games (46%), Verbal Skills (20%), Media Games (17%), and Other (3%), which was not described (Figure 2). Age and club team were compared with type of drinking games played and both were found to show significance ($p = 0.01$).

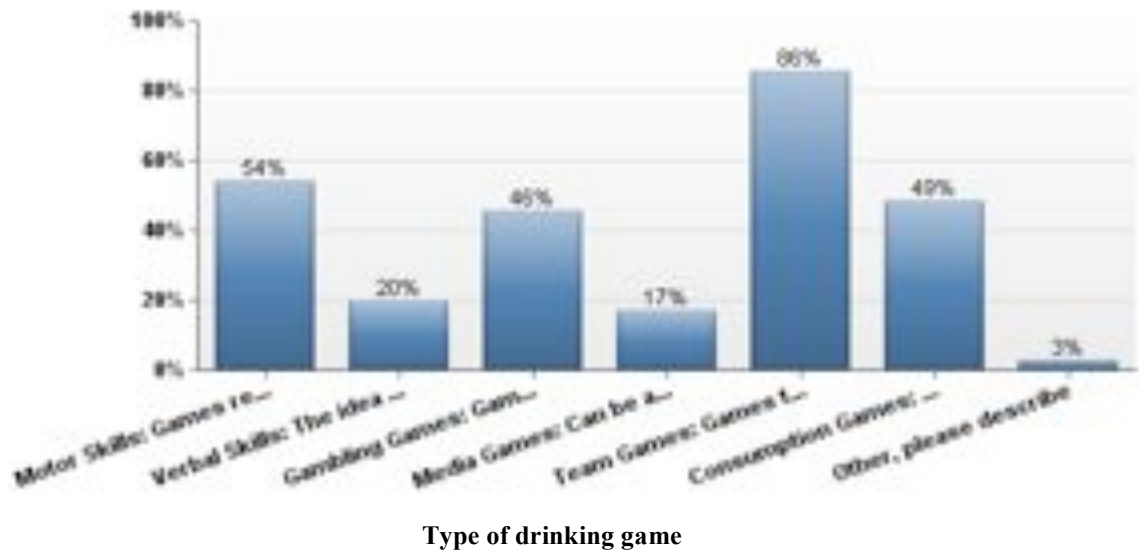


Figure 2. Type(s) of Drinking Game UW-La Crosse Club Athletes Participated in Since Becoming a Member of a Club Team, Spring, 2010

When separated out by gender, males and females varied quite a bit in participation rates for each type of drinking game. Male participation was primarily higher in all types, aside from team games. The gender specific participation rates are summarized in Table 3.

Table 3. Summary: Gender Specific Participation by Type of Drinking Game for Responding Club Sport Athletes, UW-La Crosse, Spring, 2010

Type of Drinking Game	Gender	
	Male	Female
Motor Skills	50%	50%
Verbal Skills	21%	14%
Gambling Games	46%	36%
Media Games	21%	7%
Team Games	75%	86%
Consumption Games	50%	36%

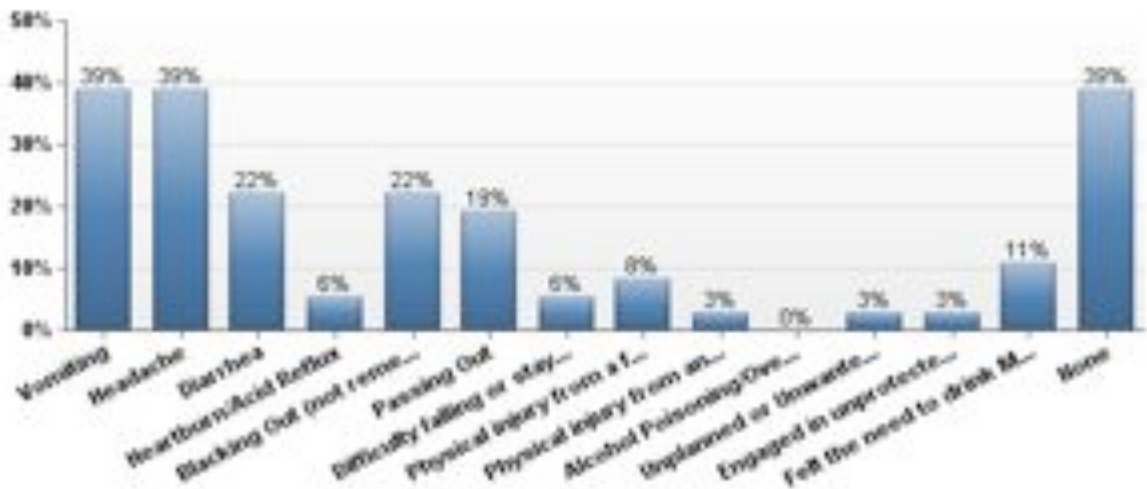
When separated out by age, respondents under the age of 21 varied in participation for each type of drinking game. Respondents over the age of 21 were more likely to report lower rates of participation compared to those under 21 years of age. The age specific participation rates are summarized in Table 4.

Table 4. Summary: Age Specific Participation by Type of Drinking Game for Responding Club Sport Athletes, UW-La Crosse, Spring, 2010

Type of Drinking Game	Age	
	Under 21 Years of Age	21 Years of Age and Older
Motor Skills	47%	53%
Verbal Skills	24%	16%
Gambling Games	41%	47%
Media Games	18%	16%
Team Games	88%	79%
Consumption Games	53%	42%

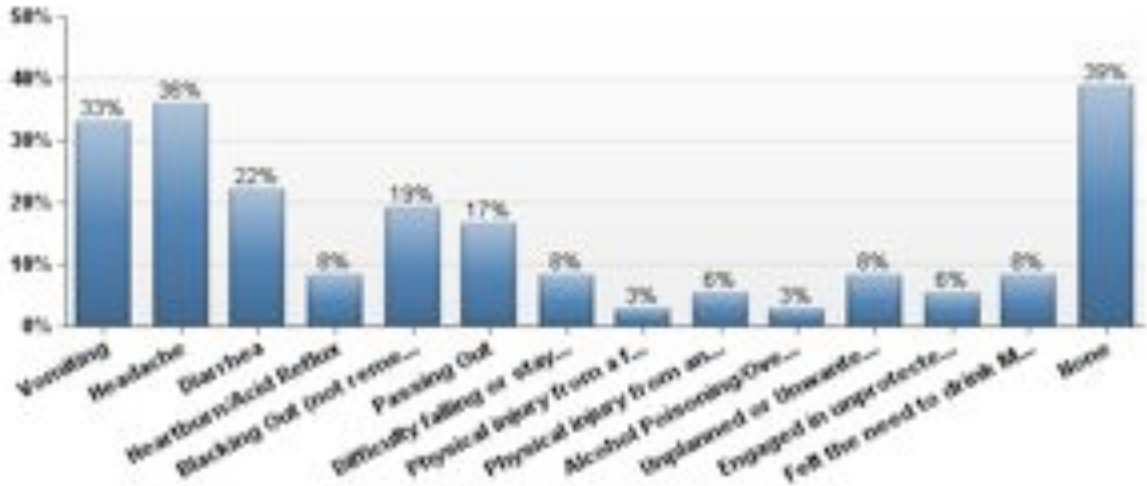
Health consequences among respondents who had participated in drinking games with their team/members, that resulted from participating in drinking games and when not participating in drinking games, but still consuming alcohol were recorded (Figures 3 & 4).

When participating in drinking games, the top three responses (none, vomiting, headache) were all equally reported occurring in 39% of the respondents. These same three responses made up the top three when consuming alcohol, but *not* participating in drinking games. None was selected by 39% of respondents, headache by 36%, and vomiting by 33%.



Health consequences when participating in drinking games

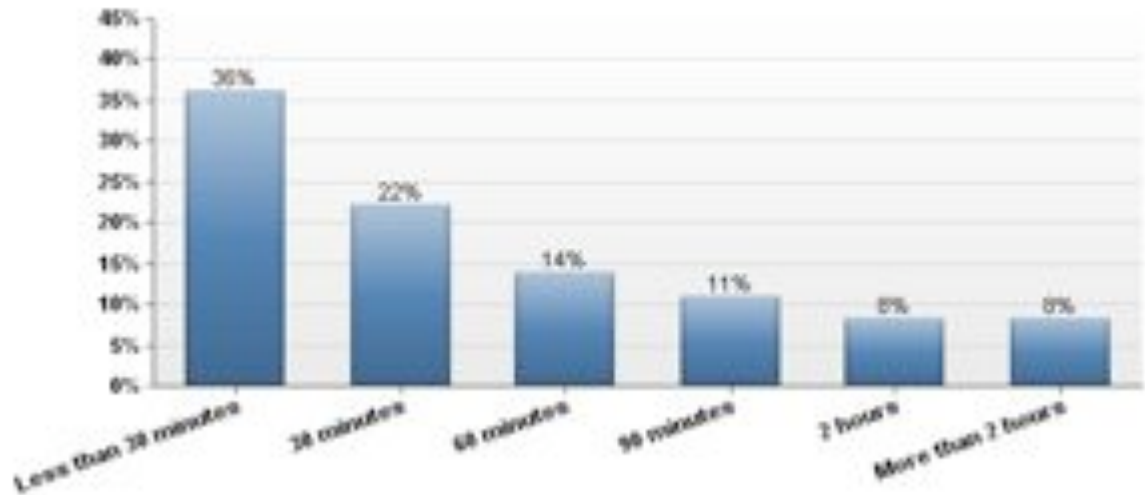
Figure 3. Health Consequences UW-La Crosse Club Athletes Suffered From When Participating in Drinking Games, Spring, 2010



Health consequences when not participating in drinking games

Figure 4. Health Consequences UW-La Crosse Club Athletes Suffered From When Consuming Alcohol, but Not Participating in Drinking Games, Spring, 2010

Other factors that may effect health consequences are time spent playing and amount consumed. Among respondents who had participated in drinking games with their team/members, 58 percent of respondents report on average playing drinking games for 30 minutes or less, less than 30 minutes (36%) and 30 minutes (22%). From there respondent's average time of play decreases as time frame increases, 60 minutes (14%), 90 minutes (11%), 2 hours (8%), and more than 2 hours (8%) (Figure 5).



Average time spent playing drinking games

Figure 5. Average Time UW-La Crosse Club Athletes Spent Playing Drinking Games, Spring, 2010

When separated out by gender, average time spent playing drinking games was reported differently among males and females. On average, males participated in drinking games longer than females. The gender specific time of participation is summarized in Table 5.

Table 5. Summary: Average Time Spent Playing Drinking Games by Gender for Responding Club Sport Athletes, UW-La Crosse, Spring, 2010

Average Time Spent Playing Drinking Games	Gender	
	Male	Female
Less than 30 Minutes	27%	50%
30 Minutes	23%	21%
60 Minutes	9%	21%
90 Minutes	18%	0%
2 Hours	9%	7%
More than 2 Hours	14%	0%

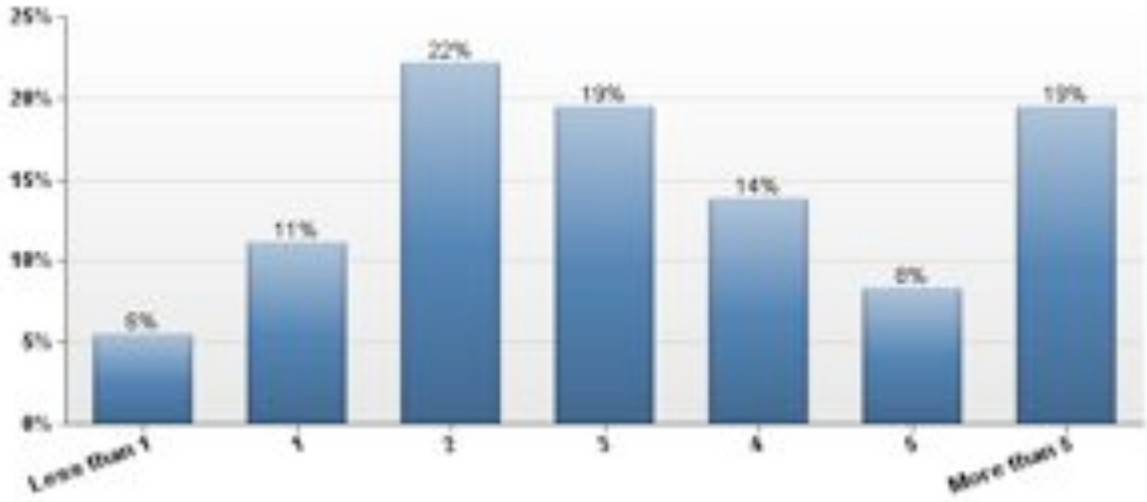
When separated out by age, average time spent playing drinking games was reported differently among respondents under 21 years old and those 21 years of age and

older. Respondents under the age of 21 typically played drinking games for less time than respondents who are 21 year of age and older. The age specific time of participation is summarized in Table 6.

Table 6. Summary: Average Time Spent Playing Drinking Games by Age for Responding Club Sport Athletes, UW-La Crosse, Spring, 2010

Average Time Spent Playing Drinking Games	Age	
	Under 21 Years of Age	21 Years of Age and Older
Less than 30 Minutes	53%	21%
30 Minutes	18%	26%
60 Minutes	6%	21%
90 Minutes	12%	11%
2 Hours	6%	11%
More than 2 Hours	6%	11%

Among respondents who had participated in drinking games with their team/members, the largest percentage of respondents reported drinking an average of two drinks while playing drinking games with 22 percent. Three drinks and more than five drinks both ranked second with 19 percent each. The remaining break down was 4 drinks (14%), one drink (11%), 5 drinks (8%), and less than one drink (6%) (Figure 6).



Average number drinks consumed during drinking game participation

Figure 6. Average Number of Drinks UW-La Crosse Club Athletes Consumed While Participating in Drinking Games, Spring, 2010

When separated out by gender, a clear difference is seen in number of drinks consumed during drinking game participation between males and females. Males consumed a higher average of drinks than females. The gender specific average number of drinks consumed during drinking game play is summarized in Table 7.

Table 7. Summary: Average Number of Drinks Consumed During Drinking Game Play by Gender for Responding Club Sport Athletes, UW-La Crosse, Spring, 2010

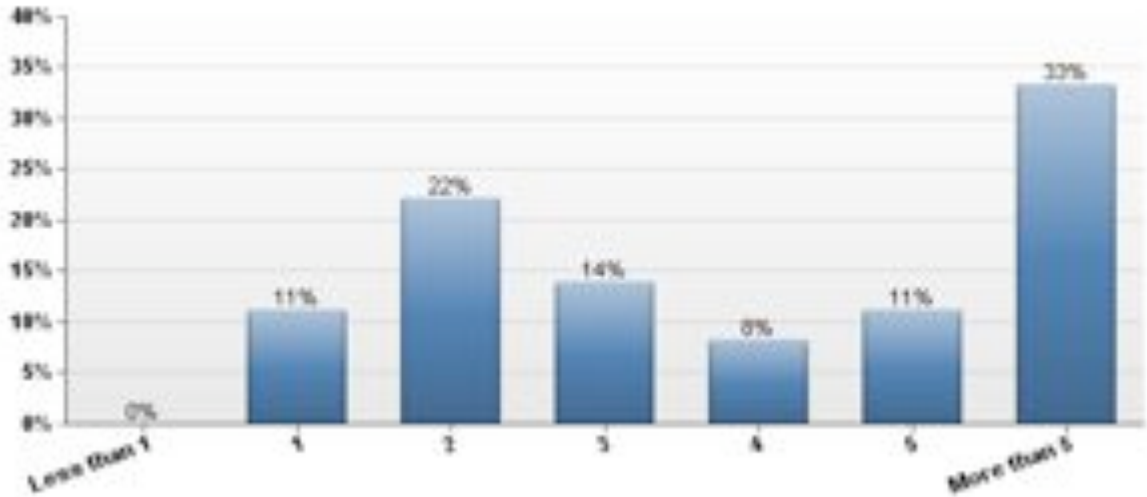
Average Number of Drinks Consumed During Drinking Game Participation	Gender	
	Male	Female
Less Than 1	0%	14%
1	9%	14%
2	18%	29%
3	9%	36%
4	23%	0%
5	9%	7%
More Than 5	32%	0%

When separated out by age, a clear difference is seen in number of drinks consumed during drinking game participation between respondents under 21 years old and those 21 years of age and older. Older respondents reported consuming higher amounts than respondents under 21 years old. The age specific average number of drinks consumed during drinking game play is summarized in Table 8.

Table 8. Summary: Average Number of Drinks Consumed During Drinking Game Play by Age for Responding Club Sport Athletes, UW-La Crosse, Spring, 2010

Average Number of Drinks Consumed During Drinking Game Participation	Age	
	Under 21 Years Old	21 Years of Age and Older
Less Than 1	12%	0%
1	6%	16%
2	29%	16%
3	29%	11%
4	0%	26%
5	6%	11%
More Than 5	18%	21%

When consuming alcohol and *not* playing drinking games, over half of the respondents (52%) reported drinking 4 or more drinks; 4 drinks (8%), 5 drinks (11%), and more than 5 (33%). Two drinks was the second most common response (22%) with the remaining being 3 drinks (14%), 1 drink (11%), and less than 1 drink (0%) (Figure 7).



Average number of drinks consumed when *not* playing drinking games

Figure 7. Average Number of Drinks UW-La Crosse Club Athletes Consumed When Not Playing Drinking Games, Spring, 2010

When separated out by gender, a clear difference between males and females is shown based on average number of drinks consumed when *not* playing drinking games. Overall, males reported a higher average number of drinks consumed than females. The gender specific average number of drinks consumed when *not* playing drinking games is summarized in Table 9.

Table 9. Summary: Average Number of Drinks Consumed When Not Playing Drinking Games by Gender for Responding Club Sport Athletes, UW-La Crosse, Spring, 2010

Average Number of Drinks Consumed when Not Playing Drinking Games	Gender	
	Male	Female
Less Than 1	0%	0%
1	9%	15%
2	13%	38%
3	0%	38%
4	13%	0%
5	17%	0%
More Than 5	48%	8%

When separated out by age, a difference is seen between respondents under 21 years old and those 21 years of age and older when comparing average number of drinks consumed when not playing drinking games. Respondents 21 years of age and older were more likely to report consuming higher amounts of alcohol than those under 21 years old. The age specific average number of drinks consumed when not playing drinking games is summarized in Table 9.

Table 10. Summary: Average Number of Drinks Consumed When Not Playing Drinking Games by Age for Responding Club Sport Athletes, UW-La Crosse, Spring, 2010

Average Number of Drinks Consumed when Not Playing Drinking Games	Age	
	Under 21 Years Old	21 Years of Age and Older
Less Than 1	0%	0%
1	6%	15%
2	31%	15%
3	19%	10%
4	6%	10%
5	13%	10%
More Than 5	25%	40%

Age and club team were compared with health consequences after playing drinking games and found to be significant. Age compared to health consequences after playing drinking games ($p = 0.01$) and club team compared with health consequences after playing drinking games ($p = 0.02$). Age and club team were also compared with health consequences after consuming alcohol, but not playing drinking games, and were found to be significant. Age compared with health consequences after consuming alcohol, but not playing drinking games ($p = 0.00$) and club team compared with health consequences after consuming alcohol, but not playing drinking games ($p = 0.00$). When gender was compared with health consequences, neither scenario showed significance,

gender and health consequences when playing drinking games ($p = 0.56$) and gender and health consequences when consuming alcohol but not playing drinking games ($p = 0.34$). Amount of alcohol consumed was compared with health consequences after playing drinking games and when not playing drinking games. Neither comparison showed significance, ($p = 0.18$) and ($p = 0.86$) respectively.

It was of interest to the researcher to understand if the prevalence of drinking game participation varied across different club teams. Club team and drinking game participation (yes or no) were compared and no significance was found ($p = 0.08$). Club team and participation in the past 30 days was then compared and found to be significant ($p = 0.00$).

In order to better understand the influence age has on drinking game participation, age was compared with participation with team (yes or no), participation in past 30 days, types of games played, time spent playing, and amount consumed when playing drinking games. Among respondents under the age of twenty-one, 31% had played drinking games, while 42% of respondents twenty-one years of age or older had played drinking games. The only comparison to show significance was age and type of game played ($p = 0.01$). Age and participation with team ($p = 0.66$), age and participation in past 30 days ($p = 0.11$), age and time spent playing ($p = 0.38$), and age and amount consumed ($p = 0.14$).

In order to better understand the influence gender has on drinking game participation, gender was compared with participation with team (yes or no), participation in past 30 days, types of games played, time spent playing, and amount consumed when playing drinking games. Gender and participation with team showed significance ($p =$

0.02) as did gender and amount consumed when playing drinking games ($p = 0.02$). Among males, 50% reported playing drinking games with their team compared to 28% of females. Among males, 64% consumed 4 or more drinks when playing drinking games, versus 7% of females. However, when *not* playing drinking games, 78% of males consumed 4 or more drinks, versus 8% of females. No significance was shown for the other comparisons, gender and participation in past 30 days ($p = 0.71$), gender and type of games played ($p = 0.86$), and gender and time spent playing ($p = 0.23$).

Discussion

Participants were first asked to rate the importance of 16 different reasons for joining a club sport team. The top three reasons, based on mean score were: (1) to have fun, (2) love of the sport, and (3) to meet people/make friends. Conversely, the three lowest ranked reasons for joining a club sport team were: (1) to gain status or recognition, (2) to feel important, and (3) the opportunity to travel.

Of the respondents who had participated in drinking games with their team (39%), the top three types of drinking games played were: (1) team games, (2) motor skills, and (3) consumption games. The most common amount of time spent playing drinking games was less than 30 minutes. As time of play increased, participation decreased.

The amount of alcohol club sport athletes, who have played drinking games with their team, consume while playing drinking games differed from the amount consumed when drinking, but not playing games. When playing drinking games, the top three amounts consumed were: (1) 2 drinks, (2) 3 drinks and more than 5 drinks. When drinking, but not participating in drinking games, the top three amounts consumed were: (1) more than 5 drinks, (2) 2 drinks, and (3) 3 drinks.

Respondents also selected which health consequences they had suffered from for both when they had participated in drinking games, and when they had not, but still consumed alcohol. In both cases, 39% reported not suffering any health consequences. The five most frequently occurring health consequences in both cases were headache, vomiting, diarrhea, blacking out, and passing out.

When data were compared, gender showed significance for certain reasons for joining a club team. These reasons include “to play at a higher level” and “to be part of a club/team”. Age was also tested against reason for joining a club team and showed significance with “to be part of a club team”, “to meet people/make friends”, and “to have something to do/not be bored”.

When club team and drinking game participation were compared, no significance was found. Club team and participation in past 30 days, club team and type of drinking game, and age and type of drinking game all showed significance.

Both age and club team showed significance when compared with both health consequence scenarios, yet both gender and amount of alcohol consumed did not show significance with either health consequence scenario. In terms of influence on participation, age only showed significance with type of game played. Gender, on the other hand, was only shown to have significance with participation with team (yes or no).

CHAPTER V

CONCLUSIONS & RECOMMENDATIONS

Summary

The purpose of this study was to first identify which types of drinking games are most prevalent among college club sport athletes at the University of Wisconsin – La Crosse and second, determine what health consequences are perceived to occur as a result of participation. The results of the survey are aligned with the research question. While alcohol consumption patterns across the country at many universities are a problem, it is important to understand the characteristics that exists from one location to another, even focusing more narrowly on specific groups. Directing educational efforts based on local data allows for more appropriate methods to addressing the problems and could improve the likelihood of the desired outcomes. Effective outreach programs geared towards alcohol education on college campuses should understand the importance of catering to target audiences as the college environment consists of many sub-populations that are considered to be at risk for high-risk drinking.

Conclusions

Based on the results of the survey, 39% of club sport athletes at the University of Wisconsin – La Crosse report having participated in drinking games with their team/members of their team. This equates to 137 club sport athletes who play drinking games in relation to their team/members. As for those who are under the legal drinking

age of 21, 17% reported having participated. This shows age is not a factor in whether or not club athletes are participating in drinking games with their teams/members.

However, gender was found to influence whether or not participation occurred. Males were twice as likely to have participated in drinking games with their team than were females.

When looking at reasons for why students join a club team, it was found that the top three reasons were “to have fun”, “love of the sport”, and “to meet people/make friends”. Males showed a significant increase in reason for joining a club team over women for both wanting to play at a higher level (62% to 42%) and to be part of a club/team (77% to 51%). Interestingly, 18 year olds were the only group to have a one-hundred percent response rate for joining a team “to be part of a club” and “to meet people” as being important, perhaps indicating a strong perception of club sports as an ideal place to make new friends and have fun in their first year at college. Additionally, 18 year olds had the highest percentage (88%) for rating “to have something to do/not be bored” as an important reason, with the next closest group being 19 year olds at only 54%. This may indicate that club sports could in fact be a perfect stage in which to present ideal information not only about healthy lifestyle choices, but other information as well to incoming students. If club sports can become a strong influence in a student’s life, they may be more apt to continue practicing healthy behaviors.

No significant difference was found between participation in drinking games since joining a club team and specific club team. Therefore, it would appear that participation in drinking games at any point since joining a club team is not influenced by the individual team. However, which club team an athlete is on does influence

participation in the past 30 days. As a result, certain club athletes might participate in drinking games more or less frequently based on which team they are a part of. Then again, based on when this survey was conducted, certain club teams may have been more or less active at the time, therefore influencing whether or not team based social gatherings were occurring. Administering this survey at various points throughout the school year may help provide a better rate of participation at different points in time.

The number one type of drinking game reported being played was team games (86%), which encompass both beer pong and flip cup. This is not much of a surprise, as beer pong appears to be the most mass marketed drinking game that currently exists. The competitive nature of the game, being that of pitting two teams against each other, may also provide a strong appeal to this population seeing as how only 4% of club sport athletes indicated “to compete” as *not* being an important reason for joining a club team. The only clubs to not report team games as the top type to play were the Alpine Ski and Women’s Hockey clubs, of which both had the most responses for the second highest rated game type (54%), motor skill games. Women also showed an 11% higher rate of participating in team games compared to males. However, this was the only type of game in which women showed higher rates of participation.

When comparisons were made to see what seems to influence health consequences, gender and amount of alcohol consumed did not show any significance. However, age and club team did. This indicates that different club teams may be at a higher risk for drinking to a point where they are more severely intoxicated than others. Additionally, club athletes at different ages may be more susceptible to drinking to a point where they become intoxicated enough to suffer a health consequence.

Only one health consequence was not reported, which was suffering from alcohol poisoning after playing drinking games. In both participating in drinking games and not participating, 39% of club athletes reported to have not suffered from any health consequences. For every other health consequence, reports were very similar between to two scenarios. This is a good indication of showing that regardless of the context of drinking, health consequences appear to occur fairly equally whether playing drinking games or not.

When comparing the findings on health consequences related to drinking game participation in this study and those of Eng & Hanson (1993) and Johnson et al. (1998), vomiting and hangover were seen to be the top health consequences suffered. Fighting, injuries, and unwanted sexual encounters are also seen to be occurring in both populations. Similarities like this show that a consistency exists in the health consequences suffered by students who participate in drinking games. However, there are still a number of health consequences that are unable to be compared due to a lack of reporting the data, or a difference in the way each are defined.

One of the most surprising results was average time spent playing drinking games. The most common response was less than 30 minutes (36%) followed by 30 minutes (22%) indicating that for many respondents drinking games are most likely not the main draw at a social gathering, and perhaps used as a way to quickly consume and feel the effects of alcohol. However, 33% of club athletes reported consuming four or more drinks in two hours or less of playing time. This rate of drinking can equal that of binge drinking levels according to the definition of binge drinking by the National Institute on Alcohol Abuse and Alcoholism (2004). Additionally, 100% (3 respondents)

of club athletes who play games an average of over two hours reported drinking more than five drinks in that time frame. This rate of consumption could also place an individual at a consumption rate equivalent to binge drinking.

Gender appears to have a major influence on the amount of time spent playing drinking games. With 50% of female club athletes reporting playing drinking games for less than 30 minutes and 92% playing for 60 minutes or less, female club athletes play drinking games for far less time than male club athletes. Though 50% of male club athletes reported playing drinking games for 30 minutes or less, 41% played for 90 minutes or more. These percentages appear to indicate that while female participation is present and perhaps increasing, male involvement is still far more severe. When reported out by age, club athletes under 21 years of age do not spend as much time playing drinking games as those over 21 years of age. On average, 72% of those under 21 play for 30 minutes or less, while 54% of those 21 and older play for 60 minutes or more.

Gender also showed variance in terms of amount of alcohol consumed when playing drinking games. With 93% of females consuming 3 or fewer drinks, and 64% of males consuming 4 or more drinks when playing drinking games, the gender gap is quite visible. Age also appears to influence the amount of alcohol consumed when playing drinking games. On average, 76% of club athletes under 21 years of age consume 3 or fewer drinks when playing drinking games, while 58% of club athletes 21 years of age and older consume 4 or more drinks. Why older individuals are consuming more drinks on average is not known, but could be attributed to their higher average time spent playing drinking games compared to club athletes under 21 years old.

Conversely, the amount of alcohol consumed when drinking, but *not* playing drinking games was much higher. The number one response was more than five drinks with 33% of club athletes reporting. In total, 52% of club athletes consume four or more drinks when drinking but *not* playing drinking games. While this may fall into a rate consistent with binge drinking, time frame was not calculated along with consumption amount when not playing drinking games. Regardless of time, with 33% of respondents reporting they consume more than five drinks, club athletes are choosing to consume large amounts of alcohol, which could in turn cause them to suffer health consequences at an increased rate. When broken down by gender, alcohol consumption by males and females varies quite a bit. On average, 78% of males consume 4 or more drinks, while 91% of females consume 3 or fewer drinks. Again, males report consuming vastly larger amounts of alcohol than do females.

When age and type of drinking game played were compared, significance was found. This would indicate that drinking game preference changes for club athletes as they get older. Gender on the other hand proved to show significance when compared to participation with their team/member and amount consumed. In both cases, males were more likely to have participated and consume more alcohol. Males therefore, could be putting themselves at an even higher risk for health consequences related to drinking game participation.

The data that were reported out by club athletes in this survey show signs that participation in drinking games does in fact produce health consequences along with consuming alcohol at binge drinking rates. Whether or not participating in drinking games is any worse than when consuming alcohol and not participating in games is still

up for debate. While club athletes report consuming more on average when not playing games, we do not know the rate at which they are doing so. Finally, it will be important to know whether or not club athletes are both participating in drinking games while also consuming alcohol outside of the game atmosphere, and just how much in each instance.

Recommendations

After conducting and analyzing the results from this study, a number of recommendations can be made in order to better the health and well-being of those students who are choosing to participate in drinking games. These recommendations encompass the ideas of education, raising awareness, and changing the culture that is in place. It is important to understand essentially how all three work together.

Focusing on why students are joining club teams is one of the most important ideas to take away from the study. The data show that 18 year olds are viewing club sports as an opportunity to be part of a club, meet people, and to not be bored. With 18 year olds joining club sports with the mindset of belonging, meeting new people, and curbing boredom, Rec Sports at UW-L has a golden opportunity to instill positive behaviors and ideas into those students. This in turn should begin to build a community rich with positive health behaviors and strong following among future club athletes. If done right, this could be one of the best ways to begin changing the alcohol culture that exists within certain club teams.

Rec Sports should become more actively involved with each club team. If possible, a reward system that may include such things as additional funding or practice time, could be put into place based on merit and academic performance of teams, perhaps encouraging team members to act more responsibly. Faculty club advisors should also

become more involved in their teams, providing more mentoring and guidance along with support for students who may be participating in unhealthy behaviors.

Based on the data, which show that male club athletes are twice as likely to participate in drinking games than female club athletes, specific educational programming that addresses these increased rates of drinking game participation among males could greatly aid in reducing these participation rates. Addressing masculinity's influence on alcohol consumption among male club athletes could be one route to take in uncovering why this increased rate of participation exists, along with reducing it. This may begin with a simple conversation among male club athletes addressing the societal perceptions of what a man is "supposed" to be along with breaking down these stereotypes. However, females are still participating at a rate of 28% and should not be overlooked if changing the culture and improving health practice is desired.

The amount of alcohol being consumed when playing drinking games must be addressed in any educational program. With 33% of club athletes consuming alcohol at near binge drinking levels when playing drinking games, health consequences will continue to occur until this rate begins to decrease. Males especially should be targeted as they are reporting higher consumption rates than females in all cases. Additionally, the education must also focus on reducing consumption levels when these athletes are *not* playing drinking games. This will require providing club athletes with educational material showing consumption rates versus blood alcohol content and what health consequences occur at such levels.

Finally, types of games being played need to be analyzed further. Team games like beer pong and flip cup are the most highly played among club sport athletes.

Educating this population in areas like media literacy and utilizing a social norms campaign could help reduce the amount at which they participate in these games. Perhaps by understanding that the majority of club athletes do *not* participate in drinking games, those who do participate may begin to reduce their participation. Additionally, by having this population begin to question the portrayal of alcohol in the media and the marketing behind selling alcohol to their age group, club athletes may begin to consciously choose to no longer support such behavior.

By educating club athletes about the increased risk for health consequences that high risk drinking practices put them at, along with raising their awareness of underlying reasoning for participating, a change may begin to be seen in the alcohol culture that exists among club athletes. This will no doubt take time and perseverance among those parties necessary to bring about the proper programming. Additionally, it must be understood that no matter how much educational programming and change that occur, alcohol use will more than likely remain a part of the college culture. What *is* important is seeing a decrease in the amount of high risk behavior surrounding alcohol consumption.

Overall, based on the results of this survey, a need exists at the University of Wisconsin – La Crosse to continue to educate the student body about the risks of participation in drinking games and to provide students with the reasoning skills necessary to change the current drinking culture so that rates of high risk drinking and game participation decline. Most importantly, educational programming that is implemented will empower students with the knowledge base needed to question and confront the norms they are subjected to when coming to the University and joining clubs and other organizations that may influence them to take part in unhealthy behaviors. One

of the best ways for a plan such as this to work will mean implementing collaborative efforts across a number of different groups and organizations that comprise the University of Wisconsin – La Crosse and community as a whole.

While this study provides a reasonable start, further exploration into the realm of drinking games and their impact on club athletes will need to be conducted to better understand the issue. More focus must be placed on the reasoning behind joining a club team in the first place, as well as then looking into the reasoning behind participating in drinking games. Pre-gaming or pre-drinking, type of drinking atmosphere, and the role the media is playing, especially with drinking games, will be necessary to research. Movies and video games based on drinking games, and mass marketed drinking games, may be drawing more people into the drinking game culture. Finally, creating a survey instrument that can obtain answers as to why certain types of games are being played and the appeal of each would also be of great benefit in gaining a better understanding of student participation.

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APPENDIX A
IRB APPROVAL FORM

UNIVERSITY of WISCONSIN
LA CROSSE

To: Kevin Meier

From: Bart Van Voorhis, Coordinator
Institutional Review Board (IRB) for the
Protection of Human Subjects

Date: June 1, 2010

Re: **RESEARCH PROTOCOL SUBMITTED TO IRB**

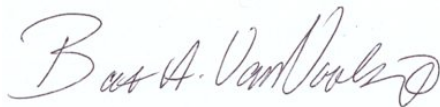
The IRB Executive Committee has reviewed your proposed research project: *“Exploring the Prevalence of Drinking Games and their Impact on the Health of Club Sport Athletes at the University of Wisconsin-La Crosse”*

Because your research protocol will place human subjects at minimal risk, it **has been approved under the expedited review category in accordance with 45CFR46, 46.110(a)(b).**

Since you are not seeking federal funding for this research, the review process is complete and you may proceed with your project. Remember to provide participants a copy of the consent form and to keep a copy for your records. Consent documentation and IRB records should be retained for at least 3 years after completion of the project.

Please note that this approval is for a one year period only, from the date of this letter. If the project continues for more than 12 months, an IRB renewed approval must be requested. This renewal should be applied for at least one month prior to your one year expiration.

Good luck with your project!



cc: IRB File
Gary Gilmore, Faculty Advisor

Graduate Studies and Research & Sponsored Program
220 Morris Hall, University of Wisconsin-La Crosse
1725 State Street, La Crosse, WI 54601
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An affirmative action/equal opportunity employer

APPENDIX B

SOCIAL ACTIVITY AND CLUB SPORT ASSESMENT SURVEY

(SACSA)

Demographics

What is your gender?

- Male
 Female
-

What is your age?

- | | |
|--------------------------|---------------------------|
| <input type="radio"/> 18 | <input type="radio"/> 22 |
| <input type="radio"/> 19 | <input type="radio"/> 23 |
| <input type="radio"/> 20 | <input type="radio"/> 24 |
| <input type="radio"/> 21 | <input type="radio"/> 25+ |
-

How many years have you been in college?

- 1
 2
 3
 4
 5+
-

Club Sport Involvement

What club sport team(s) do you belong to? CHECK ALL THAT APPLY

- | | |
|---|---|
| <input type="checkbox"/> Aikido | <input type="checkbox"/> Soccer (Men) |
| <input type="checkbox"/> Alpine Ski | <input type="checkbox"/> Trekker Outdoors |
| <input type="checkbox"/> Equestrian | <input type="checkbox"/> Triathlon |
| <input type="checkbox"/> Hockey (Women) | <input type="checkbox"/> Snow Ski & Board |
| <input type="checkbox"/> Lacrosse (Men) | <input type="checkbox"/> Ultimate |
| <input type="checkbox"/> Lacrosse (Women) | <input type="checkbox"/> Volleyball (Men) |

- Martial Arts

 Volleyball (Women)
- Rugby (Men)

 Water Ski
- Rugby (Women)

How many FULL semesters have you been a member of a club sport team?

- 1

 5
- 2

 6
- 3

 7
- 4

 8+

How important was each of the following reasons for joining a club sport team?

	Important	Somewhat Important	Not Important At All
Love of the sport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To compete	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To play at a higher level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To be physically fit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To get exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To try or learn something new	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To improve skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To be part of a club/team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To be with friends on the team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To meet people/make friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To have fun	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To relieve stress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To gain status or recognition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To feel important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To have something to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- | | | | |
|--|-----------------------|-----------------------|-----------------------|
| do/not be bored | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The opportunity to travel | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other, please describe
<input type="text"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Game Participation

Since becoming a member of a club sport team at UW-La Crosse, have you participated in drinking games related to your club sport team/members such as before or after a tournament, at a team party, etc.?

- Yes
 No

How many times in the past 30 days have you participated in drinking games?

- 0
 1-3
 4-6
 7-9
 10+

What type(s) of drinking game(s) have you participated in since becoming a member of a club sport team? CHECK ALL THAT APPLY

- Motor Skills: Games require participants to perform a skill such as bouncing a quarter into a glass, drink from a glass or bottle without using their hands, or perform a series of tasks of varying difficulty. ("Quarters", "Chandeliers", "Thumper", "Cardinal Puff", "Drunk Mario Kart", "Sink the Boat")
- Verbal Skills: The idea behind these games is to repeat difficult phrases or a series of words. ("Fuzzy Duck", "Add-a-Word")
- Gambling Games: Games are generally played with cards or dice and the amount a person must drink is based on the value assigned to the card or the roll of the dice. ("Circle of Death", "Irish Poker", "Screw the Dealer", "Asshole", "Ride the Bus", "Between the Sheets")
- Media Games: Can be adapted to any television show, movie, or song. All participants play these games at the same time as a collective group drinking a predetermined amount every time a certain phrase is said.
- Team Games: Games that pit two or more teams against each other but do not focus on alcohol consumption as the key factor in winning. ("Beer Pong", "Flip Cup")
- Consumption Games: Games based around the consumptions of alcohol. While teams may be involved,

the winning team is that which finishes a predetermined amount of alcohol first. ("Power Hour", "Case Race", "Disc Race", "Edward 40-Hands", "Keg Stand", "Shotgun", "Beer Bong")

Other, please describe

On average, when playing drinking games, how much time do you spend playing these games?

- Less than 30 minutes
- 30 minutes
- 60 minutes
- 90 minutes
- 2 hours
- More than 2 hours

On average, how many standard alcoholic drinks do you consume during the entire time you are playing drinking games? (One standard drink = 12 ounces of beer, 5 ounces of wine, or 1.5 ounces of 80-proof liquor)

- Less than 1
- 1
- 2
- 3
- 4
- 5
- More than 5

Health Consequences

What consequences have you experienced during, immediately after, or up to one day after participating in drinking games? CHECK ALL THAT APPLY

- | | |
|--|---|
| <input type="checkbox"/> Vomiting | <input type="checkbox"/> Physical injury from a fight |
| <input type="checkbox"/> Headache | <input type="checkbox"/> Physical injury from an accident |
| <input type="checkbox"/> Diarrhea | <input type="checkbox"/> Alcohol Poisoning/Overdose |
| <input type="checkbox"/> Heartburn/Acid Reflux | <input type="checkbox"/> Unplanned or Unwanted Sexual Encounter |
| <input type="checkbox"/> Blacking Out (not remembering parts of the event) | <input type="checkbox"/> Engaged in unprotected sex |

- Passing Out
- Felt the need to drink MORE than you used to in order to get the same effect
- Difficulty falling or staying asleep
- None

Non-game play habits

On average, how many standard alcoholic drinks do you consume during a typical drinking session when NOT playing drinking games? (One standard drink = 12 ounces of beer, 5 ounces of wine, or 1.5 ounces of 80-proof liquor)

- Less than 1
- 1
- 2
- 3
- 4
- 5
- More than 5

What consequences have you experienced during, immediately after, or up to one day after consuming alcohol when NOT playing drinking games? **CHECK ALL THAT APPLY**

- Vomiting
- Physical injury from a fight
- Headache
- Physical injury from an accident
- Diarrhea
- Alcohol Poisoning/Overdose
- Heartburn/Acid Reflux
- Unplanned or Unwanted Sexual Encounter
- Blacking Out (not remembering parts of the event)
- Engaged in unprotected sex
- Passing Out
- Felt the need to drink MORE than you used to in order to get the same effect
- Difficulty falling or staying asleep
- None

APPENDIX C

COVER LETTER/INFORMED CONSENT FORM

Dear Club Sport Member,

I would like to invite you to take part in a survey that will explore social activity and the health consequences that result among college club sport athletes. You have been sent this invitation because you are currently listed as a member of a club sport team at the University of Wisconsin – La Crosse.

This survey will only take a few minutes to complete and is entirely voluntary and confidential. By following the provided link below and completing the survey, you are consenting to take part in this study. **PLEASE ONLY COMPLETE THIS SURVEY IF YOU HAVE BEEN A MEMBER OF A CLUB SPORT FOR AT LEAST ONE FULL SEMESTER AND ARE NOT A MEMBER OF INTERCOLEGIATE SPORTS AS WELL.**

To access the survey, please follow this link:

If you have questions pertaining to this study, you may contact me, Kevin at meier.kevi@students.uwlax.edu, or my faculty advisor, Dr. Gary Gilmore at gilmore.gary@uwlax.edu.

Additionally, if you have questions or concerns about alcohol related issues; you may contact Matt Vogel and the Wellness Resource Center at vogel.matt@uwlax.edu or 608-785-8977.

As a thank you for participating, after completing the survey you will have the option to enter into a raffle for a prize.

Thank you for taking the time to complete this survey.

Sincerely,

Kevin Meier
Masters of Public Health Candidate
University of Wisconsin – La Crosse

APPENDIX D
JURIFICATION FORM

Dear Jury Member:

I would like to express my thanks and appreciation for your participation in serving as a jury member to review my study instrument. Attached you will find the Inventory Rating Scale for Jury Review which will outline the directions and scale values for you, followed immediately with survey instrument. You will not have to provide a rating for the demographic data section (Questions 1-5). Please make sure to save the document with your feedback before emailing the form back.

If you have any questions or concerns, please do not hesitate to contact me at meier.kevi@students.uwlax.edu or 630-336-2469.

Again, I would like to thank you for your help in reviewing my study instrument. I look forward to your feedback, as it will help improve the validity of my study findings.

Sincerely,

Kevin Meier
Master of Public Health Candidate
University of Wisconsin – La Crosse

Inventory Rating Scale: Jury Review

Directions: Enclosed is a list of questions aimed at gathering descriptive data regarding the perceptions of college club sport athletes and their involvement in drinking games, the health consequences that result, and reasoning for joining a club team. Please read each question and use the 5-point scale described below to indicate its acceptability, based upon the degree to which the statement contributes to assessing a test subject's perception of one's involvement in drinking games, resulting health consequences, and reasoning for joining a club team (test subjects who will eventually respond to this survey will be answering a series of forced response and open-ended questions). In this manner, you will be judging the content validity of these questions with respect to perception of involvement and outcomes. The concept of drinking games for this study has been defined as games that consist of a set of rules that specify when and how much participants must drink. Likewise, binge drinking has been defined as a pattern of drinking that brings blood alcohol concentration (BAC) to .08 grams percent or above. For the typical adult, this pattern corresponds to consuming 5 or more drinks for men and 4 or more drinks for women in about 2 hours.

The scale values are defined as follows:

1. NOT ACCEPTABLE: The item has no value assessing a test subject's perception of their involvement in drinking games, the health consequences that result, and reasoning for joining a club team.
2. SOMEWHAT ACCEPTABLE: The item has some value assessing a test subject's perception of their involvement in drinking games, the health consequences that result, and reasoning for joining a club team.
3. ACCEPTABLE: The item is valuable for assessing a test subject's perception of their involvement in drinking games, the health consequences that result, and reasoning for joining a club team.
4. VERY ACCEPTABLE: The item is very valuable for assessing a test subject's perception of their involvement in drinking games, the health consequences that result, and reasoning for joining a club team.
5. INDESPENSIBLE: The item is absolutely necessary for assessing a test subject's perception of their involvement in drinking games, the health consequences that result, and reasoning for joining a club team.

Adapted from: Gilmore, G.D. (1974) The development, implementation, and evaluation of a family health education program incorporating the concept of prevention. Knoxville: The University of Tennessee. 232pp. *Dissertation Abstracts International*, 35:2864-B, 1974.

Demographic Information 1-5: Comments Only

1. What is your gender?

- Male
- Female

Comment:

2. What is your age?

- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25+

Comment:

3. How many years have you been in college?

- 1
- 2
- 3
- 4
- 5+

Comment:

4. What club sport team(s) do you belong to?

- Aikido
- Alpine Ski
- Equestrian
- Hockey (Women)
- Lacrosse (Men)
- Lacrosse (Women)
- Martial Arts
- Rugby (Men)
- Rugby (Women)
- Soccer (Men)
- Trekker Outdoors
- Triathlon

- Snow Ski & Board
- Ultimate
- Volleyball (Men)
- Volleyball (Women)
- Water Ski

Comment:

5. How many FULL semesters have you been a member of a club sport team?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8+

Comment:

Not Acceptable	Somewhat Acceptable	Acceptable	Very Acceptable	Indispensable
1	2	3	4	5

Please select ONLY ONE scale value box. You may also provide comments in addition to your scale value as you see necessary. SAVE your feedback before returning the form

6. How important was each of the following reasons for joining a club sport team?

	Important	Somewhat Important	Not Important
Love of the sport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To compete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To play at a higher level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To be physically fit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To get exercise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To try or learn something new	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To improve skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To be part of a club/team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To be with friends on the team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To meet people/make friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To have fun	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To relieve stress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- | | | | |
|--------------------------------|--------------------------|--------------------------|--------------------------|
| To gain status or recognition | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| To feel important | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| To have something to do | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| The opportunity to travel | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other (please describe): _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

1 2 3 4 5

Comment:

7. Since becoming a member of a club sport team at UW-La Crosse, have you participated in drinking games related to your club sport team/members?

- Yes
No

1 2 3 4 5

Comment:

8. How many times in the past 30 days have you participated in drinking games?

- 0
1-3
4-6
7-9
10+

1 2 3 4 5

Comment:

9. What type(s) of drinking game(s) have you participated in since becoming a member of a club sport team? **Check all that apply.**

- Motor Skills:** Games require participants to perform a skill such as bouncing a quarter into a glass, drink from a glass or bottle without using their hands, or perform a series of tasks of varying difficulty. (“Quarters”, “Chandeliers”, “Thumper”, “Cardinal Puff”, “Drunk Mario Kart”, “Sink the Boat”)
- Verbal Skills:** The idea behind these games is to repeat difficult phrases or a series of words. (“Fuzzy Duck”, “Add-a-Word”)
- Gambling Games:** Games are generally played with cards or dice and the amount a person must drink is based on the value assigned to the card or the roll of the dice. (“Circle of Death”, “Irish Poker”, “Screw the Dealer”, “Asshole”, “Ride the Bus”, “Between the Sheets”)
- Media Games:** Can be adapted to any television show, movie, or song. All participants play these games at the same time as a collective group drinking a predetermined amount every time a certain phrase is said.

Team Games: Games that pit two or more teams against each other but do not focus on alcohol consumption as the key factor in winning. (“Beer Pong”, “Flip Cup”)

Consumption Games: Games based around the consumptions of alcohol. While teams may be involved, the winning team is that which finishes a predetermined amount of alcohol first. (“Power Hour”, “Case Race”, “Disc Race”, “Edward 40-Hands”, “Keg Stand”, “Shotgun”, “Beer Bong”)

Other (please identify and describe): _____

1 2 3 4 5

Comment:

10. On average, when playing drinking games, how much time do you spend playing these games?

- Less than 30 minutes
- 30 minutes
- 60 minutes
- 90 minutes
- 2 hours
- More than 2 hours

1 2 3 4 5

Comment:

11. On average, how many standard alcoholic drinks do you consume during the entire time you are playing drinking games? (One standard drink = 12 ounces of beer, 5 ounces of wine, or 1.5 ounces of 80-proof liquor)

- Less than 1
- 1
- 2
- 3
- 4
- 5
- More than 5

1 2 3 4 5

Comment:

12. What consequences have you experienced during, immediately after, or up to one day after participating in drinking games? **Check all that apply.**

- Vomiting
- Headache
- Diarrhea
- Heartburn/Acid Reflux
- Blacking out (not remembering parts of the event)
- Passing out
- Difficulty falling or staying asleep
- Physical injury from a fight
- Physical injury from an accident
- Alcohol Poisoning/Overdose
- Unplanned or Unwanted Sexual Encounter
- Engaged in unprotected sex
- Felt the need to drink MORE than you used to in order to get the same effect
- None

1 2 3 4 5

Comment:

SAVE your feedback before returning the form

APPENDIX E
PILOT STUDY FORM

Dear Participant:

You have been selected to take part in the pilot phase of a Graduate Thesis survey because of your involvement in club sports. While the survey is geared towards students at UW-La Crosse, and the questions read as such, read them as though they pertain to your school.

Thank you for taking the time to respond to this survey and also providing your feedback after taking the survey. I want to assure you that your responses are completely anonymous and the data will be collected through a secure site. **The purpose of this pilot phase is to make certain that the questions are clear and that the response options are complete.** Take note of any concerns/suggestions you may have while proceeding through the survey as you will have an opportunity to provide your feedback at the very end.

If you have any questions whatsoever, I can be reached at meier.kevi@students.uwlax.edu.

Thank you again for your help,

Kevin Meier
Master of Public Health Candidate
University of Wisconsin – La Crosse

Feedback

Were all of the questions clear and understandable?

- Yes
 - No
-

Which questions were not clear and how could they be improved?

Regarding the focus of the survey, did you feel that there were any items that were missing?

- Yes
 - No
-

Please provide your suggested item(s) here:

Are there any additional comments you have?

*Feedback portion of Pilot Study