

SELF-ESTEEM, ALCOHOL CONSUMPTION, AND
RISKY SEXUAL BEHAVIORS IN
COLLEGE FRATERNITY MALES

By

JENNIFER RADINE (FERGUSON) MCATEE

Bachelor of Science in Health Promotion

Oklahoma State University

Stillwater, Oklahoma

2010

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
MASTER OF SCIENCE
July, 2012

SELF-ESTEEM, ALCOHOL CONSUMPTION, AND
RISKY SEXUAL BEHAVIORS IN
COLLEGE FRATERNITY MALES

Thesis Approved:

Dr. Bridget Miller

Thesis Adviser

Dr. Mwarumba Mwavita

Dr. Julie Croff

Dr. Sheryl A. Tucker

Dean of the Graduate College

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.....	1
Statement of the Problem.....	1
Background.....	1
Significance of the Study.....	5
Methods.....	6
Hypotheses.....	6
Limitations.....	6
Delimitations.....	7
Definition of Terms.....	7
II. REVIEW OF LITERATURE.....	11
Risk Taking Behaviors and Young Adults.....	11
Alcohol Use and Abuse.....	17
Causes of Alcohol Use and Abuse.....	19
Risky Sexual Behavior.....	20
Causes of Risky Sexual Behavior.....	22
Self-Esteem.....	23
Self-Esteem and College Students.....	26
Greek Life.....	26
III. METHODOLOGY.....	34
Participants.....	34
Measures.....	34
Design and Procedure.....	36

Chapter	Page
IV. RESULTS	40
Demographics	40
Self-Esteem	45
Alcohol Consumption	48
Sexual Risk	54
V. DISCUSSION	65
Findings.....	65
Limitations	67
Analysis.....	70
Areas for Future Research	72
Conclusion	72
REFERENCES	73
APPENDICES	108

LIST OF TABLES

Table	Page
1 Demographic Characteristics of Participants.....	43
2 Demographic Characteristics of University.....	44
3 Rosenberg Self-Esteem Survey Participant Responses.....	46
4 Standard Deviation and Mean for Self-Esteem Survey.....	47
5 Participant Responses to Question 31.....	50
6 Participant Responses to Question	51
7 Participant Responses to Question 33.....	52
8 Alcohol Consequences of Participants.....	53
9 Sexual Risk Survey Participant Responses Questions 44-47.....	58
10 Sexual Risk Survey Participant Responses Questions 48-51.....	59
11 Sexual Risk Survey Participant Responses Questions 52-55.....	60
12 Sexual Risk Survey Participant Responses Questions 56-59.....	61
13 Sexual Risk Survey Participant Responses Questions 60-63.....	62
14 Sexual Risk Survey Participant Response Questions 64-66.....	63
15 Descriptive Responses for Sexual Risk Survey.....	64

CHAPTER I

INTRODUCTION

Statement of the Problem

According to the Centers for Disease Control and Prevention (CDC), sexually active adolescents aged 15–19 years and young adults aged 20–24 years are at an increased risk for contracting Sexually Transmitted Diseases (STDs), including Human Immunodeficiency Virus (HIV). This is due to a combination of various behavioral, biological, and cultural reasons. Rates of STDs in adolescents and young adults continue to increase, and although individuals aged 15–24 only account for approximately 25% of the sexually experienced population, they account for nearly half of all new STD transmissions (CDC, 2009). A report by the CDC stated that the “epicenter of the HIV/AIDS epidemic is college students” (CDC, 2002). Although the CDC statistics do not provide data that is specific to the college student population, research done by Gayle et al., (1990) has estimated that in the U.S. alone, 1 in 500 college students are infected with HIV. Given the absence of more recent analyses on HIV in college students, and the known increase in rates within the adolescent age group, it can be assumed that the rates of infection in college students have increased accordingly. Because they have never been tested, many students are unaware of their positive HIV status and continue engaging in risky sexual behaviors, unknowingly infecting their partners in the process.

Background

Alcohol abuse on college campuses in the U.S. is an ongoing public health problem with detrimental consequences (Cyders et al, 2009; Hingson et al, 2005; Iwamoto et al., 2011).

Numerous studies have shown that many college students attend wild parties, join a fraternity or sorority, experiment with drugs, abuse alcohol, have multiple sex partners, and engage in unprotected sex (Arnold et al., 2002; Gullette & Lyons, 2005; Gullette and Lyons, 2006; Kalichman et al., 1994; Parent & Newman, 1999).

Individuals who engage in these activities are at a higher risk for social, emotional, and personal consequences. Self-reported consequences of alcohol abuse include missing class or work, poor academic performance, sexual harassment or assault, sexually transmitted diseases, pregnancy, verbal or physical altercations, bodily injury, property damage, driving while intoxicated (DWI), driving under the influence (DUI), public intoxication (PI) charges, legal ramifications, and negative physical effects such as nausea, vomiting, and memory loss. Research shows that greater than 1 in 10 college students aged 18 to 24 are heavy drinkers, while as many as 2 in 5 are binge drinkers. Binge drinking is defined separately for men and women; with men having 5 or more drinks in one setting and women having 4 or more drinks in one setting (Certain et al, 2004). In the US, alcohol-related personal and social problems are higher among college men than college women (Caetano & Cunradi, 2002; Korcuska & Thombs, 2003), demonstrating the need for research and intervention within this higher risk population. Hingson et al. (2005) estimated that due to intoxication a reported 700,000 college students are violently assaulted, 97,000 are the victim of sexual assault, and more than 100,000 reported being too intoxicated to recall whether they consented to sex (Hingson et al, 2002). College parties expose students to a number of dangers, including risk of sexual assault and rape (Ward, et al., 1991). It can be assumed that, during sexual assault and in instances where memory loss affects the ability to recall whether sexual encounters were consensual, there were either minimal or no steps taken to minimize the transference of sexually transmitted diseases. This

data demonstrates the detrimental impact that alcohol abuse can have on increasing the rates of sexually transmitted diseases in college campuses across the nation.

Excessive alcohol consumption has been linked to an increase in risky sexual behavior (Randolph et al., 2009; Gullette & Lyons, 2006). Intoxication contributes to unplanned and unprotected sexual encounters (Clapp & McDonnell, 2000; Gullette & Lyons, 2006; Hingson et al., 2002; Hingson & Howland, 2002; O'Malley & Johnston, 2002; Presley et al., 2002). While students are uninhibited due to intoxication, they will often assume sexual partners and risks that they would not have otherwise assumed. Males 15-24 years of age are at a greater risk than women for sexually transmitted diseases (ABC's of STD's, 1995; Courtenay, 1998). One of the most important determinants of health behavior is gender (Courtenay, 1998; Ratner et al., 1994), and studies indicate that college males score much lower than females in regard to measurement of health-promoting behaviors (Courtenay, 1998; Lonnquist et al., 1992; Oleckno et al., 1990).

Alcohol abuse and risky sexual behavior can introduce a series of consequences that can impact an individual's health and quality of life (QOL). Donovan et al. (2005) examined the relationship between alcohol dependence and QOL measures. This review showed that alcohol-dependent patients typically have lower QOL scores when compared with the scores of the general population (Daepfen et al., 1998; Morgan et al., 2003) and other medical patients (Foster et al., 1997; Volk et al., 1997). Alcohol abuse has been linked to many health issues. Type II diabetes (Barlow et al., 2003; Wannamethee et al., 2002), coronary artery disease, cardiac arrhythmias, and stroke (Puddley et al, 1999) are a few of the possible outcomes. Morbidity and mortality rates also increase due to the risk of accidents while intoxicated (Hingson & Howland, 1993).

Factors such as ethnicity (Nyaronga et al., 2009), gender (Herd & Grube, 1993), lack of supervision (Wells et al., 2005) living arrangements (Gfroerer et al., 1997; Lewis et al., 2011; Valliant & Scanlan, 1996; Ward & Gryczynski, 2009), enhancing a positive mood (Cooper et al., 2000; Cyders et al, 2009), social anxiety, low self-concept (Lewis & O'Neill, 2000; O'Hare, 1990; Parish & Parish, 1991), low self-esteem, (Gullette & Lyons, 2006; Sterk et al, 2004), temperament dimensions (Sher et al., 1999), and a decrease in religiosity (Sinhea et al., 2007) have all been associated with excessive alcohol consumption. Factors such as the belief that condoms were unavailable at the time of intercourse, the belief that hormone-based birth control and oral sex decreased risk of disease transmission, the belief that their partner was free of sexually transmitted diseases, the belief that their relationship was monogamous (Goodenow et al., 2002; Gullette & Lyons, 2005; Gullette & Turner, 2003; Jadack et al., 1995; Rolison, 2002; Sadovsky et al., 2002), having multiple sex partners, engaging in unprotected sex, having high-risk partners (Eng & Butler, 1997), a lack of social support (Basen-Engquist, 1992; Certain et al., 2009), mental health problems such as depression and low self-esteem (Stiffman et al., 1992; Joffe & Radius, 1993; Shrier et al., 1996; Seal et al., 1997; Pao et al., 2000), and a decrease in religiosity (Shina et al., 2007) have all been associated with risky sexual behaviors.

Members of fraternities and sororities have consistently been documented as being one of the populations at highest risk for alcohol abuse and the resulting negative consequences (Park et al., 2006; Wechsler et al., 1995). Due to the large number of social events sponsored by the Greek community, the opportunities for social interaction are many. Paired with the likelihood that alcohol will be consumed either prior to or at the event, the opportunities for negative social interactions increase, as do the resulting consequences. Risks are typically higher and gender specific at fraternity parties due to binge drinking and sexual discrimination (Boeringer, 1999; Cashin et al, 1998; Menning, 2009; Stombler, 1994). Several studies of the

Greek System have found evidence of gender inequality. Kalof and Cargill (1991) found that “fraternity members are more likely to support male dominant and female submissive attitudes that women and non-fraternity men on campus.” In addition, fraternity men were more likely to view women as objects of sexual gratification (Workman, 2001) and are more likely to endorse rape-supportive beliefs (Boeringer, 1999).

In a study examining the feelings of safety of undergraduate students on campus, Nasar and Fisher (1992) reported that many considered areas near fraternity houses to be dangerous because of the parties at or near them. Given past literature on the subject, Boswell and Spade (1996) found that in general, fraternities create an environment that increases the risk for sexual assault and rape. In a separate study, fraternity members were more likely to report using drugs or alcohol for sexual coercion and more likely to believe their friends would not disapprove of them getting a woman drunk to have sex. In addition, they were also more likely to report that their friends had used drugs or alcohol for sexual coercion, and they were more likely to believe that their friends would approve of engaging in sexual aggression (Boeringer et al., 1991; Menning, 2009).

Significance of the Study

The purpose of this study is to examine the relationship between self-esteem, alcohol consumption, and risky sexual behaviors that could result in contracting a sexually transmitted disease. Given the amount of binge drinking and risky sexual behavior on college campuses, it is plausible to think that low self esteem may be a contributing factor. A vast amount of research on self-esteem and sexual risk has been done with women and adolescents. This study will focus on men to gain an understanding and begin to fill the gaps in research. The study will focus on

college fraternity males, a population that can be difficult to gain access to, resulting in limited past research done with fraternities.

Methods

Fraternity members at a large Midwestern university will be surveyed on one occasion; measuring demographics, levels of self-esteem, patterns of alcohol consumption, and risky sexual behavior.

Hypotheses

Ho1

There will be no relationship between level of self-esteem and binge drinking in college fraternity males.

Ho2

There will be no relationship between self-esteem and risky sexual behavior in college fraternity males.

Limitations

1. The sample is a convenience sample and not a random selection.
2. The surveys are self-report and may be affected by recall bias.
3. The participants' responses may be affected by social desirability bias.
4. The data will be collected on one occasion.

Delimitations

1. The participants must be males 18 years of age or older
2. The participants must be fully matriculated college students
3. The participants must be a member of a fraternity recognized by the Interfraternity Council
4. All steps of this study were completed between the months of January 2012 and April 2012

Definition of Terms

Anabolic Androgenic Steroids (AAS) are a family of drugs that includes the male hormone, testosterone, together with its synthetic derivatives (Kanayama et al., 2010). Taken in supraphysiologic doses, AAS permit users to greatly increase their muscle mass, often well beyond natural limits (Kouri et al., 1995).

Attention-Deficit/Hyperactivity Disorder (ADHD) is a diagnosis applied to children and adults who consistently display certain characteristic behaviors over a period of time: inattention, hyperactivity, and impulsivity (SAMHSA, 2009).

Anorexia Nervosa is a serious, potentially life-threatening eating disorder characterized by self-starvation and excessive weight loss (NEDA, 2012).

Binge Drinking is defined separately for men and women; with men having 5 or more drinks in one setting and women having 4 or more drinks in one setting (Certain et al, 2004).

Bulimia Nervosa is a serious, potentially life-threatening eating disorder characterized by a cycle of bingeing and compensatory behaviors such as self-induced vomiting designed to undo or compensate for the effects of binge eating (NEDA, 2012).

Drinking Games represent a social context consisting of a set of guidelines that facilitate heavy alcohol use (Zamboanga et al., 2007). The guidelines state that as participants start losing, they are forced to drink more as a penalty, further diminishing their skill and exacerbating the consumption cycle (Polizzotto et al., 2007; Zamboanga et al., 2006, 2010).

Energy Drinks are beverages that contain legal stimulants and large doses of caffeine ranging from 50mg to 505mg per container (Reissig et al., 2009).

Fraternity is a group of men who join together to offer fellowship, academic support, leadership training, participation in campus activities, service to the community and University, and preparation for future careers (CSUF, 2003).

Greek Life is the fraternity and sorority community on campus. They are referred to as Greek chapters because they are named according to the ancient Greek alphabet (CSUF 2003),

Human Immunodeficiency Virus (HIV) is a sexually transmitted disease. It can also be spread by contact with infected blood, or from mother to child during pregnancy, childbirth or breast-feeding. It can take years before HIV weakens your immune system to the point that you have Acquired Immunodeficiency Syndrome (AIDS), which is a chronic, potentially life-threatening condition caused by HIV. By damaging your immune system, HIV interferes with your body's ability to fight the organisms that cause disease (Mayo Clinic, 2012).

Hooking Up is an encounter in which the participants are strangers, or brief acquaintances, who participate in sexual activity with little or no expectation of a future relationship, beyond the current encounter (Young et al, 2010).

Muscle Dysmorphia (MD) is a proposed clinical subtype of body dysmorphic disorder (BDD) (Pope et al., 1997). Unlike other forms of BDD where the source of preoccupation is a specific

body part (Phillips et al., 1993, 1995), MD is characterized by preoccupation with the appearance of muscularity (Pope et al., 1997).

Secondhand Smoke (SHS) is a mixture of 2 forms of smoke that come from burning tobacco: Sidestream smoke, which is the smoke that comes from the end of a lighted cigarette, pipe, or cigar and Mainstream smoke which is the smoke that is exhaled by a smoker. SHS is classified as a “known human carcinogen” or cancer-causing agent (American Cancer Society, 2011).

Self-Esteem is totality of the individual's thoughts and feelings with reference to himself as an object (Rosenberg, 1989).

Sensation Seeking is the need for varied, novel, and complex situations and experiences and the willingness to take physical and social risks for the sake of the experiences (Zuckerman, 1983 p. 35).

Sexual compulsivity is the inability to control sexual behaviors, and is characterized by a persistent and unwanted desire to perform specific sexual acts (Quadland, 1985).

Sexually Transmitted Diseases (STD's) are infections generally acquired by sexual contact. The organisms that cause sexually transmitted diseases may pass from person to person in blood, semen, or vaginal and other bodily fluids (Mayo Clinic, 2012).

Social Desirability Bias is presupposing that there are clear social norms regarding a given behavior or attitude; answers reporting behaviors or attitudes that conform to the norms are deemed socially desirable, and those that report deviations from the norms are considered socially undesirable (Tourangeau, 2007).

Sorority is a group of women who join together to offer fellowship, academic support, leadership training, participation in campus activities, service to the community and University, and preparation for future careers (CSUF, 2003).

CHAPTER II

REVIEW OF LITERATURE

Risk Taking Behaviors and Young Adults

College is a time for students to gain independence and freedom from parental obligations. During this time of exploration and self-identity, it is not uncommon for students to engage in behaviors or activities that put them at risk for negative health consequences. Most traditional college students range in age from 18-22 years. According to Erik Erikson's Stages of Development (1950), these students will fall within the Adolescence or Young Adult stage. This theory states that during Adolescence individuals are searching to answer the question, "Who am I?" and forming an identity that will direct them into adulthood. During this stage the adolescent may experiment with minor delinquency or rebellion, or be filled with self-doubt. Successful completion of the stage will leave the individual feeling self-certain. The theory states that during Young Adulthood individuals will be able to experience true intimacy for the first time. They will be able to develop friendships that are genuine and enduring, and relationships built off of trust and intimacy. In this section we will examine psychological disorders, rebellion, delinquencies, and prevalent risky health behaviors that are common to college students across the nation to examine how each can negatively affect health status.

Adolescence and young adulthood are developmental periods that are often associated with weight gain (Laska et al, 2011; Nelson et al., 2008). Studies have indicated that obesity is on the rise within the general college student population as a result of physical inactivity and poor dietary habits (Nelson et al., 2008). Adoption of poor dietary habits such as skipping meals, underestimating serving sizes, consuming high-fat foods or calories laden drinks (including alcohol), bingeing, purging, and turning to fad diets to lose weight all increase the risk for negative health consequences such as obesity, type II diabetes, cardiovascular disease, and bone or joint complications (CDC, 2012). Faced with the challenges of the social bias toward weight gain and the media's portrayal of rail-thin female models and lean, muscular male models, many young women and men feel unsatisfied with their own body image and go to drastic measures to alter it. Disordered eating is common on college campuses (Kelly-Weeder, 2010; Shisslak et al., 1995; Stice et al., 1998), and can lead to clinically defined eating disorders such as anorexia nervosa, bulimia nervosa, and muscle dysmorphia. Studies have indicated that individuals who suffer from disordered eating are more likely to engage in excessive exercise, where the need to exercise becomes a compulsion that can have a negative impact on day-to-day functioning (Guidi et al., 2007; Thome & Espelage, 2004).

In addition to the dangers of disordered eating and excessive exercise, many individuals choose to utilize tanning beds despite the fact that skin cancer is the most common type of cancer in the U.S (CDC, 2002; American Cancer Society, 2006). There are many theories as to why, despite the known risks, tanning beds are so popular with adolescents. Studies have shown that societal emphasis on physical appearance (Bagdasarov et al., 2008; Murry & Turner, 2004) and a belief that tanning enhances sex appeal (Bagdasarov et al., 2008; Green & Brinn, 2003; Hillhouse et al., 2000) are key reasons why individuals put themselves at risk. Both males and females have reported becoming concerned with body image in early adolescence (Eisenberg et

al., 2004; Kelley-Weeder, 2010; Konstanski et al., 2004; O'Dea & Abraham, 2002), escalating their risk for engaging in prevalent risky health behaviors, such as tanning, to increase levels of personal and perceived social acceptance relating to their body image.

Although the prevalence of cigarette smoking has been declining in the U.S., within the college student population the number of people who smoke intermittently and those who smoke less than 10 cigarettes a day is growing (Berg et al., 2009; CDC, 2007; Halperin et al., 2010; Husten et al., 1998; SAMHSA-OAS, 2003; Wetter et al., 2004). Many college students report smoking only while drinking or in social settings and do not consider themselves to be smokers, however, studies have revealed that more than a quarter (28%) of college students smoke cigarettes (SAMHSA, 2007). Several studies have shown a relationship between tobacco use in college students and other behavior risk factors such as substance abuse and depression (Dierker et al., 2006; Halperin et al., 2010; Kenney & Holahan, 2008; Reed et al., 2007; Rigotti et al., 2000).

Recreational drug use has always been an issue on campuses, but recently the use of stimulant medications for non-medical reasons has become popular. Studies have shown that students use ADHD medications for both academic and recreational purposes (Teter et al., 2005, 2006) and cited reasons such as helping with concentration, helping to study, increasing alertness, and obtaining a high. DeSantis et al. (2010) found that first time use almost always took place during extreme academic stress, such as finals week, where students are desperate to stay alert and focused to study and will risk compromising their health to do so. Another emerging trend is the use of anabolic androgenic steroids (AAS) in non-athlete college students. A recent study of 500 AAS users showed that almost 80% used it for cosmetic purposes (Parkinson & Evans, 2006). Developing and maintaining athleticism as well as a lean, muscular

physique is the goal of many men who take AAS (Parkinson & Evans, 2006; Evans, 1997, 2004). “These findings also signal the inauguration of an alarming trend, given the nation’s preoccupation with youth and beauty” (Berning et al., 2008). As mentioned earlier, the societal pressures on adolescents and young adults to meet the media’s criteria for ideal body image is quite damaging to an individual’s perception self. These external pressures cause individuals to engage in prevalent health risks while striving for unrealistic and often unattainable results, despite the possible consequences to their health. In addition to the assumed health risks from substance utilization, substance users are more likely to engage in other high-risk behaviors, such as unprotected sex, as a result of the influence of the substances on their cognitive functioning (Adefuye et al., 2009; Leigh & Stall, 1993).

A report by the National Highway Transportation Safety Administration (NHTSA) states that utilizing a seatbelt could reduce deaths and disabilities from motor vehicle accidents by nearly 50%. This information is crucial to the safety and survival of drivers and passengers. The report showed that the fatality rate for college-aged students was more than twice the rate for all other age groups, and 62% were killed while riding in a vehicle and not wearing their seatbelt (Khallad, 2010; NHTSA, 2004). Based on a review of literature (Courtenay, 1998), data suggests that college students, particularly males, have a greater likelihood of engaging in unsafe driving practices. These include, but are not limited to, reckless driving, vehicular speeding, and tailgating. A university study conducted by Pinch et al. (1986) found that nearly 50% of men had operated a vehicle while under the influence of alcohol and 61% reported riding with someone under the influence. Across the nation, college males were 2 to 2.5 times more likely to drive after consuming 5 or more alcoholic beverages and 62% of the men reported being frequent binge drinkers and driving after drinking (Wechsler et al., 1994). The effects that alcohol has on impairing judgment are vehemently supported from this data, demonstrating that despite the

staggering statistics on death and disability, college men are likely to engage in high-risk vehicular practices.

The transition from high school to college life can be a difficult adjustment for many individuals. Some of the challenges faced during the transition period include: a reduction in parental supervision, new living arrangements and development of time management skills to handle a college class schedule, difficult studies, social opportunities, and employment. Studies have shown that approximately 57% of college students work either full or part time jobs throughout their educational experience (Hawkins et al., 2005). This transition period can be quite challenging and can lead to inconsistent sleep patterns and sleep deprivation. The recommended sleep duration for adolescents is 8 hours and 30 minutes to 9 hours and 15 minutes (National Sleep Foundation, 2009), however, most students report only getting 7 hours of sleep per night (Lund et al., 2010). Sleep deprivation can lead to a decline in academic performance (Tsai & Li, 2004), depression (Taub, 1978), and motor vehicle accidents (Roth et al., 1994). In a recent study, college students reported chronically restricted sleep, low sleep quantity, and poor sleep quality. Individuals reporting poor sleep quality also reported negative moods, an increase in physical illness, use of prescription or over-the-counter stimulants to help keep them awake, and increased alcohol consumption to induce sleep (Lund et al., 2010).

One of the most common stimulants used on college campuses is energy drinks. Energy drinks are beverages that contain legal stimulants and large doses of caffeine, ranging from 50-500 mg of caffeine per container (Reissig, 2009). Energy drinks have been found to improve alertness and reaction times in some studies, however, the side effects can cause negative health consequences. The stimulants work together to increase heart rate and blood pressure and may cause nervousness, headache, dehydration, tachycardia, seizures, and insomnia

(Astorino & Roberson, 2010; Attila & Cakir, 2011; Clauson et al., 2008; Iyadurai & Chung, 2007; Reissig et al., 2009; Waring et al., 2003). A survey of college students found that students cited the following reasons for energy drink utilization: sleep deprivation, increased energy levels, improved focus while studying, heightened alertness while driving long distances, and drinking mixed with alcohol while partying (Howard & Marczynski, 2010; Malinauskas et al., 2007). The high levels of sugar found in many popular energy drinks could also be a contributing factor in the obesity epidemic.

In addition to mixing alcohol with energy drinks to increase the sensation of intoxication, an increasing number of college students are playing drinking games to facilitate intoxication. Drinking games are played in a social setting and have established guidelines that result in large quantities of alcohol consumed (Zamboanga et al., 2007, 2010). As participants' game performance decreases, they are penalized by being forced to drink more. As intoxication increases, their game performance will continue to decrease and they will be further penalized by alcohol consumption. Given the guidelines, it is likely for players to become extremely intoxicated (Polizzoto et al., 2007; Zamboanga et al., 2006, 2010) and be at an increased risk for negative health consequences (Borsari, 2004, Zamboanga et al., 2010). Another phenomenon on college campuses is often referred to as "21 for 21." It involves an individual on their 21st birthday drinking 21 drinks or taking 21 shots (Rutledge et al., 2008) as friends cheer them on. Social consequences, legal repercussions, medical emergencies, and even death are possible when alcohol is consumed in this quantity. Inebriation resulting in complete loss of cognitive functioning leaves the individual vulnerable to unwanted, unplanned, and unprotected sexual encounters.

Alcohol Use and Abuse

Alcohol abuse is a serious and costly health issue for college administrators around the country (Glassman et al., 2007; Walters & Bennett, 2000). For the vast majority of students, college is a time where they are introduced to alcohol and the effects of consumption on socialization patterns. Societal pressures to conform, hazing, and low levels of self-esteem can increase the risks of excess consumption, and low tolerance for alcohol increases the likelihood of hangovers, alcohol poisoning, or even worse, death. Excessive alcohol use is the third leading cause of preventable death in the U.S. (CDC, 2011). Research shows that greater than 1 in 10 college students aged 18 to 24 are heavy drinkers, while as many as 2 in 5 are binge drinkers. In the US, alcohol-related personal and social problems are higher among college men than college women (Caetano & Cunradi, 2002; Korcusk & Thombs, 2003). Gullette and Lyons (2006) reported that “men consumed significantly more alcohol and had more social problems associated with alcohol than women.” Longitudinal studies of adolescent males have shown a strong association between alcohol consumption, delinquency, and violence (Abbey et al., 2009; Moffitt et al., 2002; Welte et al., 2005). The data shows that men are at a higher risk for negative alcohol-related consequences, warranting further research into the matter.

In numerous studies, alcohol use has been associated with an increase in risky sexual behavior (Randolph et al., 2009; Gullette & Lyons, 2006). Being under the influence of alcohol or illegal drugs contributes to unplanned and unprotected sexual encounters (Clapp & McDonnell, 2000; Gullette & Lyons, 2006; Hingson et al., 2002; Hingson & Howland, 2002; O’Malley & Johnston, 2002; Presley et al., 2002). Individuals may engage in high-risk sexual activities with partners they wouldn’t otherwise select while inhibitions are lowered due to intoxication. Individuals under the influence may not attempt to give or receive consent prior to sexual

advances, and others may be too intoxicated to recall whether they in fact gave or received consent at all, impacting whether or not sexual crimes are reported or charges are filed. Studies have indicated that nearly half of all crimes occur when the perpetrator is under the influence of alcohol, including sexual assault (Abbey et al., 2004, 2009; Martin & Bryant, 2001; Pernanen, 1991; Testa, 2002). Aside from the risk of unwanted, unplanned, and unprotected sexual encounters, alcohol abuse has been linked to numerous health problems, including but not limited to: increased risk for Type II diabetes (Barlow et al., 2003; Wannamethee et al., 2002), coronary artery disease, cardiac arrhythmias, and stroke (Puddley et al, 1999). Alcohol abuse also increases morbidity and mortality rates due to the increased risk of accidents while impaired (Hingson & Howland, 1993).

Hingson et al. (2005) reported the following alcohol-related estimates based on a national survey of college students: 599,000 students experience alcohol related unintentional injuries; 1,700 students die each year from these unintentional injuries; 700,000 are violently assaulted; 97,000 are sexually assaulted or raped; over 100,000 report being too inebriated to be aware of providing consent for sex (Hingson et al., 2002); approximately 25% reported a decline in academic performance (Wechsler et al., 2002; Engs et al., 1994; Presley et al., 1998; Presley et al., 1996); more than 150,000 developed alcohol-related health issues (Hingson et al., 2002); and 1.2-1.5% report attempting suicide due to substance abuse (Preseley et al.,1998). Many students report vandalism, illegal activities (Wechsler et al., 2002), and unwanted sexual intercourse (Del Boca et al., 2004). An estimated 55% of non-drinking students reported that they had experienced negative second-hand effects as a result of the alcohol abuse by their peers (Del Boca et al., 2004; Wechsler et al., 2000). Empirical evidence demonstrates that there are grave consequences when students abuse alcohol, impacting their physical, social, and emotional well being.

Causes of Alcohol Use and Abuse

From the research, it is obvious that there are many well-known, negative consequences stemming from alcohol abuse. It is important to consider why individuals, knowing the risks involved, would continue to consume large quantities of alcohol and repeatedly put themselves at risk. Factors such as ethnicity (Nyaronga et al., 2009), gender (Herd & Grube, 1993), lack of supervision (Wells et al., 2005) and living arrangements (Gfroerer et al., 1997; Lewis et al., 2011; Valliant & Scanlan, 1996; Ward & Gryczynski, 2009) are associated with patterns of heavy alcohol consumption in college students. The absence of parental supervision combined with the experience of living within a group setting may give students free reign to experiment with alcohol for the first time. Studies have demonstrated that college students may engage in heavy drinking to enhance a positive mood (Cooper et al., 2000; Cyders et al, 2009). Athletic events, birthday parties, holidays, and beginning or end-of-semester parties are times when alcohol may be used to enhance a positive mood and encourage a celebratory environment. Studies have also shown that consuming alcohol in unpleasant situations and to lessen negative moods or emotions may be the link between social anxiety and negative drinking consequences (Buckner et al., 2006; Lewis et al., 2008; Norberg et al., 2010; Stewart et al., 2006).

Research has also indicated that individuals who struggle with social anxiety and low self-concepts are more likely to place higher expectations on the use of alcohol to facilitate socialization (Lewis & O'Neill, 2000; O'Hare, 1990; Parish & Parish, 1991). Low levels of self-esteem can also be a predictor of heavy alcohol consumption (Gullette & Lyons, 2006; Sterk et al, 2004). This is crucial because individuals with low self-esteem, when thrust into forced social events, may use alcohol to reduce social anxieties and lower inhibitions. As discussed earlier, the negative ramifications from alcohol abuse are many and can lead to unwanted, unplanned,

and unprotected sexual encounters, which will increase the opportunities for transference of sexually transmitted diseases. Additional research has suggested that temperament dimensions related to lack of behavioral inhibition (such as novelty seeking and impulsivity) play a huge role in predicting alcohol abuse patterns (Sher et al., 1999). Sinhea et al. (2007) found that 'perceived importance of religion' and participation in religious activities' to be associated with a decreased likelihood of college students engaging in behaviors such as drinking, smoking, drug use, and sexual intercourse. It can be assumed, given the literature on the difficult transition period to college life, due to time constraints and new social experiences students' participation in religiosity may decline and increase the tendency for risky behavior.

Risky Sexual Behavior

Based on the information gleaned regarding alcohol abuse and its impact on risky sexual behaviors, it is important to define what constitutes a sexual risk behavior. Although a few STD's are transmitted with infected skin-to-skin contact, the risk of transmission increases when the eyes, ears, nose, mouth, penis, anus, or an open wound comes into contact with semen, vaginal secretions, blood, or breast milk. Approximately 80-90% of college students are sexually active, and many put themselves at risk for contracting sexually transmitted diseases by engaging in high-risk activities such as having multiple sexual partners and not consistently utilizing condoms (ACHA-NCHA, 2007; Certain et al., 2009; Douglas et al., 1997). Even if an individual only has one sex partner, it can still be classified as high-risk if their partner has multiple sexual partners and does not consistently utilize condoms. Estimates show that a large number of new HIV cases in the US occur in individuals under the age of 29, with approximately 35% occurring in males and 32% occurring in females (Adyfuye et al., 2009; CDC, 2008). Individuals under 25 years of age account for nearly half of the diagnosed sexually transmitted

diseases each year (Certain et al., 2009; Weinstock et al., 2004). The CDC's STD Surveillance 2009 shows that nearly 25% of females aged 15-19 years and 45% of females aged 20-24 years had a human papillomavirus infection during 2003-2004. The CDC data also shows that 1 million adolescents and young adults ranging from ages 10-24 were reported to have chlamydia, gonorrhea, or syphilis in 2006.

An increasing number of college students are engaging in a casual sexual act known as "hooking-up," where two individuals who may be strangers or acquaintances participate in sexual activities without any expectations of a relationship (Glenn & Marquardt, 2001; Lambert et al., 2003; Paul & Hayes, 2002; Penhollow et al., 2007; Young et al., 2010). Of college students surveyed, 50-75% indicated hooking up in the past year (Glenn & Marquardt, 2001; Owen et al., 2008; Paul et al., 2000). Numerous studies have shown that hooking up is associated with negative mental and physical risk factors, such as depressive symptoms and sexually transmitted diseases (Grello et al., 2006; LaBrie et al., 2005; Owen et al., 2008; Paul et al., 2000). Because these encounters often take place under the influence of alcohol, there is a decreased likelihood that condom utilization will occur. Because the individuals have no prior knowledge of each others sexual history and likely have multiple partners, the risks for transmitting sexually transmitted diseases are high.

In a study that focused on sexual health disparities between black and white college students in the United States, Buhi et al. (2010) found that among both races 75.1% reported having ever engaged in oral, vaginal, or anal sex. The most commonly reported sexual behavior was oral sex, and based on the undergraduate students who responded 72% reported ever engaging in oral sex. This is disturbing given the fact that of the students who responded, only 4.3% reported using a condom during oral sex, 31.4% reported using a condom while engaging

in anal sex, and 58% reported using a condom at last vaginal intercourse. This data indicates an increased risk of disease transmission, as well as a greater risk for oropharyngeal cancers as a result of the human papillomavirus.

As discussed previously, a number of studies have shown that individual who binge drink are more likely to engage in unplanned and unprotected sex (Gullette & Lyons, 2005; Hillman et al., 2002; Hingson et al., 2002; Wechsler et al., 1995). College students engaging in sexual activities while under the influence of drugs or alcohol usually do not use condoms, or they are used inconsistently and improperly (Gullette & Lyons, 2005; Gullette & Lyons, 2006; Jones, 2004; Parsons et al., 2000; Wagner, 2001). Males typically report higher levels of sexual activity than do females, such as a greater number of lifetime sexual partners and more sexual partners within the year (LaBrie et al., 2002; Randolph et al., 2009). Males are also more likely than females to engage in casual sex (Cubbins & Tanfer, 2000; Netting & Burnette, 2004; Randolph et al., 2009). It is important to devote additional resources toward investigating the gender risk imbalance. Because males often report more sexual partners and more casual sex encounters, it is imperative to determine causation and develop appropriate interventions to reduce risk in this population.

Causes of Risky Sexual Behavior

It is common knowledge that many parasites, infections, and viruses can be transmitted via sexual contact. If individuals are aware of the transmission method, then why are rates of such still on the rise? Studies have indicated that many students engage in unprotected sex due to the following reasons: they believed condoms were unavailable at the time of intercourse, they believe that hormone-based birth control and oral sex decreased risk of disease transmission, they believed they were involved in a monogamous relationship, and they

believed their partner to be free of sexually transmitted diseases (Goodenow et al., 2002; Gullette & Lyons, 2005; Gullette & Turner, 2003; Jadack et al., 1995; Rolison, 2002; Sadovsky et al., 2002). Bandura's (1992, 1997) social-cognitive theory has been applied to explain college students' condom-use behaviors. Numerous studies have shown that if individuals feel a high level of self-efficacy with condom use then they will be more likely to use condoms (Abbey et al., 2007; Baele et al., 2001; Dilorio et al., 2000; Wulfurt & Wan, 1993). This includes feeling confident about partners' acceptance of condom use, feeling confident in ones ability to be assertive and express desire to use a condom (Yesmont, 1992; Zamboni et al., 2000), and feeling confident in proper application and removal of condoms while both sober and intoxicated (Brien et al., 1994). In addition, a lack of social support for an individual has been associated with risky sexual behaviors (Basen-Engquist, 1992; Certain et al., 2009). Furrow & Wagener (2000) suggested a positive association between religiosity and health protective behaviors. Shina et al. (2007) expanded on that assumption and showed that religiosity decreased the tendency to engage in sexual intercourse. Considering the extensive literature over the challenges of transitioning to college life, it can be assumed that students' experience a decline in religiosity due to restrictions in free time and social engagements, increasing the likelihood of sexual activity.

Self-Esteem

The steady increase in rates of sexually transmitted diseases among adolescents and young adults is very concerning. Researchers have tried to understand what motivates these individuals to take such risks. To gain an understanding of an individual's willingness to engage in high-risk behaviors it is important to consider self-esteem (D'Zurilla et al., 2003; Gullette & Lyons, 2005). Rosenberg (1989) defines self-esteem as "the totality of the individual's thoughts

and feelings with reference to himself as an object.” An individual’s level of self-esteem plays an important role in developing friends and social interactions, and can impact their decision to consume alcohol and engage in sexual intercourse (Gullette & Lyons, 2006). Low levels of self-esteem have been associated with anger, aggression, impulsiveness, violence, drug abuse, alcohol abuse, a decline in grades, poor problem solving skills, increased sexual risk behaviors (Gullette & Lyons, 2006; Sterk et al, 2004), depression, and suicide (Wilburn & Smith, 2005).

Another conceivable explanation is related to the personality traits associated with *sensation seeking* (Certain et al., 2009; Hoyle et al., 2000; Justus et al., 2000), which was first defined by Zuckerman (1983) as “the need for varied, novel, and complex situations and experiences and the willingness to take physical and social risks for the sake of the experiences” (p. 35). A person with a sensation seeking personality is known for high risk-taking behaviors (Arnold et al, 2002; Gullette & Lyons, 2005) such as binge drinking, unprotected sex (Justus et al., 2000; Kalichman et al., 1996), and abuse of both prescription and illegal drugs (Low & Gendaszek, 2002). Men are more likely to be high sensation seekers than women are (Wagner, 2001), further increasing their risk for engaging in prevalent health-risk behaviors. Studies examining students have repeatedly shown that college men score higher on sensation seeking, have more sexual partners, and consume more alcohol than college women (Arnold et al., 2002; Gullette & Lyons, 2005; Rolison, 2002).

The term *sexual compulsivity*, as defined by Quadland (1985), is another explanation to be considered. As a sex therapist, Quadland found that gay men described their physical desires as being “sexually compulsive.” It is defined as the inability to control sexual behaviors, and is characterized by a persistent and unwanted desire to perform specific sexual acts. Sexual compulsivity has been associated with low levels of self-esteem and an individual’s refusal to

attempt behavior modification strategies to reduce risk. It does not appear to be motivated by pleasure-seeking or impulsivity. (Gullette & Lyons, 2005; Kalichman & Rompa, 1995; McCoul & Haslam, 2001; Quadland & Shattles, 1987).

Yet another potential elucidation is the presence of depression. Numerous studies have documented a relationship between low self-esteem and depression (Kernis et al., 1998; Tennen & Herzberger, 1987). In the US, approximately 10% of college students have been diagnosed with or treated for depression in the past 12 months (ACHA 2009; Berry, 2011). However, when examining worldwide data, less than one quarter of the individuals suffering from depression will receive treatment (Berry, 2011; WHO, 2010). A depressive state has been associated with drug and alcohol abuse and risky sexual behaviors (Certain et al., 2009; DiClemente et al., 2001; Sullivan et al., 2005; Tolou-Shams et al., 2008). Studies have also shown that individuals who struggle with social anxiety and low self-concepts are more likely to place higher expectations on the use of alcohol to facilitate socialization (Lewis & O'Neill, 2000; O'Hare, 1990; Parish & Parish, 1991). According to the American Foundation for Suicide Prevention, suicide is the second leading cause of death among college students and the third leading cause of death among all youth 15–24 years old. Over 90 % of these individuals suffer from a psychiatric disorder, with the most common being depression, substance abuse, and conduct disorders (AFSP, 2012). Considering the drastic changes that take place when transitioning from high school to college, it is not inconceivable that students will experience bouts of depression and utilize substances such as alcohol in an attempt to increase socialization and temporarily decrease depressive symptoms. Based on empirical evidence and due to the co-morbidity of depression and low self-esteem, students with low levels of self-concept are at an increased risk for depression, alcohol abuse, and sexual risk behaviors.

Self-Esteem and College Students

Studies of college students have reported that men consistently score higher than women on sensation seeking, having a higher number of sexual partners, and consuming more alcohol (Arnold et al., 2002; Gullette & Lyons, 2005; Gullette & Lyons, 2006; Rolison, 2002). First-year college students were more likely to exhibit problematic behaviors if they had relatively low levels of self-esteem (Brand & Dodd, 1998; Thombs, 1995). Lewis & O'Neill (2000) reported that students who identified with being a problem drinker also reported lower levels of self-esteem and increased levels of social anxiety than non-problem drinkers. The data consistently portrays that, independently, factors such as gender risk imbalance, low self-esteem, alcohol abuse, and sexual risk behaviors are a major public health concern. The combination of any or all of these factors can create a public health concern of epic proportion.

Greek Life

A population where a combination of any or all of the previously mentioned factors can be found is within the Greek system, or "Greek Life." Greek Life pertains to fraternity and sorority affairs on campus, and a significant risk factor for heavy drinking and the resulting consequences within the college student population is involvement in a fraternity or sorority. Membership in a Greek organization has been linked to increased substance abuse (Bartholow et al., 2003; Gullette & Lyons, 2006; Sher et al., 2001). It is well documented that members of Greek Life drink more heavily and more frequently, therefore experiencing more alcohol-related problems than non-Greek students (Alva, 1998; Bartholow et al., 2003; Borsari & Carey, 1999; Cashin et al., 1998). This may be due, in part, to the obligatory mixed-gender socialization events between fraternities and sororities where students drink to decrease social anxieties. Scott-Sheldon et al. (2008) showed that Greek members, when compared to non-Greek

students, reported a higher number of sexual partners in the past year and in the past 3 months. As mentioned previously, many individuals experience lowered inhibitions from alcohol consumption, which increases the likelihood of sexual encounters. There appears to be a positive correlation between the Greek population's patterns of alcohol consumption and number of sexual partners when compared to the non-Greek population. They also found that Greek members "expressed less confidence that friends would approve of condom use, revealing a weaker set of protective norms in the Greek community than among non-Greek students." The mixture of factors such as gender risk imbalance, low self-esteem, and alcohol abuse alone are enough to increase sexual risk behaviors. Coupled with low self-efficacy for condom use and the belief that friends would not approve of condom use, it is improbable to anticipate that condom utilization will take place during high-risk sexual behaviors. This data vehemently indicates a greater chance for disease transmission among the Greek population.

A study investigating fraternity men and the use of non-medical prescription stimulants found that there was a high level of use among members. Overall, 55% of fraternity members reported using ADHD stimulants. Those that used the stimulants were more likely to be upperclassman and live off campus. Students who were more likely to use these stimulants were also more likely to use other recreational drugs (DeSantis et al., 2009). As previously mentioned, individuals who abuse substances such as drugs and alcohol are more likely to engage in high-risk behaviors such as unprotected sex (Leigh & Stall, 1993). According to the data, over half of the fraternity members reported using ADHD stimulants, which is staggering considering the negative health and legal ramifications of non-medical prescription stimulants. The increased risk for recreational drug use, alcohol abuse, and resulting risky sexual behaviors stemming from the use of non-medical prescription stimulants is a growing concern for college administrators and public health officials.

There has been conflicting research on the direction of causality between alcohol utilization and Greek Life. Several studies have found that individuals who were heavy drinkers in high school were more likely to join a fraternity than their peers (Baer et al., 1995; Schall et al., 1992; Wechsler et al., 1996). This research indicates that self-selection into fraternities shows the correlation between Greek Life and heavy drinking patterns, which further indicates that, even if fraternities did not exist, students would likely still be heavy drinkers and seek out peers who share these high-risk behavioral tendencies (DeSimone, 2007).

However, research by Borsari and Carey (1999) is in opposition to the self-selection theory. They indicated that “fraternity membership increases alcohol utilization by applying social pressure to drink in order to gain acceptance among fellow members, elevating perceptions of peer drinking norms, and providing an environment that makes alcohol readily available and is insulated from students less tolerant of binge drinking.” (p.952- 953).

Research has shown this is due to the belief that Greek life is centered around the use of alcohol and that alcohol will be readily accessible to members whether they are of legal drinking age or not (Fairlie et al., 2010, McCabe et al., 2005; Read et al., 2002). A study conducted by Fabian et al. (2008) indicated that college students under the legal drinking age of 21 reported that alcohol is readily available to them and it could be obtained within a few hours. Sources were cited as legal-age friends, friends with fake identification, acquaintances, siblings, and even parents. It was also reported that drinking is readily accepted and available at Greek parties, and that Resident Advisors (RA's) within residence halls and dormitories often “turn their head,” choosing to ignore the fact that students are consuming alcohol while under their supervision. Individuals with a membership in a fraternity or sorority tend to drink greater quantities of

alcohol and suffer from more personal and social alcohol-related consequences than do other students (Fairlie et al., 2010; Borsari & Carey, 1999; Cashin et al., 1998; Larimer et al., 2004; McCabe et al., 2005; Sher et al., 2001; Wechsler & Nelson, 2008). Members who live in their fraternity or sorority chapter house are more frequently found to be binge drinkers when compared to members living out-of-house and other students (Fairlie et al., 2010; Wechsler et al., 2002). Research examining trends in alcohol consumption found that Greek houses were associated with the highest frequency of risky drinking (Park et al., 2009) and highest blood alcohol content (BAC) (Glindemann & Gellar, 2003). Both fraternity and sorority members as well as non-fraternity and non-sorority students exhibit higher BAC at Greek parties than non-Greek parties (Glindemann & Gellar, 2003). Lo and Globetti (1995) found that students who do not previously binge drink are three times more likely to start doing so if they join a fraternity. The data suggests that the Greek environment causes individuals, regardless of whether they have Greek affiliation, to consume larger quantities of alcohol than in other social settings.

Scott-Shelton et al. (2008) showed that fraternity and sorority members, when compared to non-Greek students, drank more alcoholic beverages on a typical drinking day and had more binge drinking episodes in the past 30 days. This is not surprising given the number of social events that are an integral part of fraternity and sorority life. They also showed that when comparing the two groups, Greek members had more episodes of sex under the influence of alcohol or drugs and perceived themselves to be at increased risk for HIV infection. Considering past references to the effects of intoxication on judgment, if members of Greek Life are consuming more alcoholic beverages on a typical drinking day and have a history of more binge drinking episodes, then it is logical to assume that they would self-report more episodes of risky sexual behaviors while under the influence, placing themselves at risk for all sexually transmitted diseases, including HIV.

When considering alcohol consumption patterns and Greek Life, it is important to consider a variety of variables. Studies have indicated that temperament dimensions related to lack of behavioral inhibition (such as novelty seeking and impulsivity) play a huge role in predicting alcohol abuse patterns. Having an extrovert personality indicates a need for socialization (Sher et al., 1999) and within Greek life that often includes heavy drinking. Greeks report that alcohol and alcohol-related experiences are a major theme of the socialization practices and the overall climate of many fraternities and sororities (Bartholow, 2003; Borsari & Carey, 1999; Carter & Kahnweiler, 2000; Dorsey et al., 1999). Research shows that Greeks hold biased beliefs concerning peers drinking levels (Baer, 1994; Bartholow et al., 2003; Borsari & Carey, 1999; Carter & Kahnweiler, 2000; Larimer et al., 1997), and often misperceive the rate at which their peers drink, believing that their drinking is nearly equal to or greater than that of their peers (Baer & Carney, 1993; Baer et al., 1991; Borsari & Carey, 2001, 2003; Fabiano et al., 1993, 1996; Jackson, 2008; Larimer et al., 2004; & Miller, 1993; Wood & Miller, 1992). This misperception can lead to alcohol abuse and high risk behaviors such as unprotected sexual encounters. Gender theorists believe that masculine norms play a role in the issue of alcohol abuse in men (Courtenay, 2000; Lemle & Mishkind, 1989; Mahalik et al., 2003). Masculine norms are socially constructed beliefs and expectations of what it means to be a man (Mahalik et al., 2003). These beliefs and expectations often influence the decisions and behavior of men as they strive to demonstrate “manliness” by following unwritten societal rules. Approximately 68% of male college students attributed their ability to consume and tolerate large quantities of alcohol without adverse consequences as being characteristic of masculine behavior (Peralta, 2007). In contrast, the inability to consume and tolerate large quantities of alcohol without adverse consequences was perceived as a sign of weakness, homosexuality, or femininity (Gough &

Edwards, 1998). The implications of this are unfortunate, because it indicates that in order to create effective interventions, societal views of masculinity must be challenged.

Social support plays an important role in binge drinking behaviors. If the social network promotes alcohol use, as the literature has shown that fraternities often do, then there will often be an increase in alcohol abuse. However, if the social network does not promote alcohol use and views it as a negative influence then there will be a decrease in alcohol abuse (Baer, 1994). Theories such as social learning theory (Bandura, 1986), social comparison theory (Festinger, 1954) and problem behavior theory (Donovan et al., 1983) suggest that an individual's behavior is directly impacted by observation and perceptions of the behaviors they see within their own social network (Larimer et al., 2004). New fraternity members entering the social network will often follow the behavioral patterns modeled by the older members and alumni. Cashin, Presely and Meilman (1998) reported that members of Greek organizations were more likely to engage in binge drinking to facilitate socialization and unplanned sexual encounters. Using alcohol as a social lubricant, the members drink until their inhibitions are lowered. This can lead to unplanned sexual encounters, previously referred to as "hooking up." These unplanned encounters are frequently unprotected, increasing the opportunity for disease transmission. Often based on observation and perceptions of the behaviors modeled within the social network (Larimer et al., 2004), students also showed a greater likelihood of driving under the influence and using illegal drugs (Cashin et al., 1998; Bartholow et al., 2003; Canterbury et al., 1991; Gullette & Lyons, 2006; Sher et al., 2001).

Belonging to a fraternity or a sorority is one way for college students to boost their self-esteem. This takes place through the development of friendships and socialization (Gullette & Lyons, 2006), as well as being a part of a system that offers a "brotherhood" or "sisterhood" that

encourages the social, civic, and personal development of their members (Brand & Dodd, 1998). Brand and Dodd (1998) reported that levels of self-esteem fluctuate based on classification, or year-in-college. Gullette and Lyons (2006) reported that, “students who had a higher self-esteem scored higher on self-efficacy for using a condom and reported fewer problems associated with alcohol use.” This demonstrates that students with higher levels of self-esteem are more confident in expressing their desire to use a condom and more confident in the application and removal of condoms whether sober or intoxicated. It further demonstrates that individuals with higher levels of self-esteem are less likely to rely on alcohol to facilitate socialization and sexual encounters. These students were less likely to have high-sensation seeking personality traits. Gullette & Lyons (2006) also reported that, “students who scored lower on self-esteem reported more problems when using alcohol and less self-efficacy for using a condom with their partners.” These results support previous findings and demonstrate that students who have lower levels of self-esteem are less likely to express their desire to use a condom and are less confident in the application and removal of condoms whether sober or intoxicated. It further demonstrates that individuals with lower levels of self-esteem are more likely to rely on alcohol to facilitate socialization and sexual encounters. Their findings showed that men scored higher than women on sensation seeking and had more social problems as a result of alcohol use. Contrary to previous studies (Gullette & Lyons, 2005; Low & Gendaszek, 2002) Gullette and Lyons (2006) found that both male and female members of Greek organizations had relatively high levels of self-esteem.

A study of fraternity and sorority members examining whether heavy drinking during college indicated heavy drinking patterns later in life was conducted by Sher et al. (2001). They showed that although Greeks drank more heavily and more frequently during college, their Greek status did not necessarily predict heavy drinking patterns after college. They interpreted

the findings to indicate that the social environment is a crucial factor in determining patterns of heavy drinking among Greeks.

The amalgamation of empirical evidence gleaned from research and supported by data indicates a troubling trend on US campuses. Research has documented that one of the strong predictors of alcohol abuse is having low self-esteem. Individuals with low self-esteem often utilize alcohol to facilitate socialization and sexual encounters. The gender risk imbalance indicates that men are more likely to abuse alcohol and suffer from alcohol-related consequences. This risk is magnified when men become involved in a fraternity, due to the environment and social network that promotes alcohol use. Fraternity men must attend many obligatory mixed-gender social events, where they may attempt use alcohol to lower inhibitions and increase socialization. However, a reduction in inhibitions is parallel with a decrease in cognitive functioning, leading to an increased risk of engaging in prevalent health risk behaviors. Intoxication, lack of condom self-efficacy, and belief that friends may not approve of condom utilization can all lead to engaging in unprotected sex, which increases the risk of transference of sexually transmitted diseases and HIV. Due to a low perception of risk, lack of symptoms, and associated negative social stigmas, individuals may be reluctant to seek HIV/STD testing. Maintaining high risk behaviors that lead to unprotected sex ensures that, although unintentionally, infected students will continue to infect uninfected students, and the pandemic will continue to spread like wildfire and ravage lives. This research is invaluable to fill in the gaps in existing literature, focusing on fraternity men, a high-risk but often protected population, and how levels of self-esteem, alcohol consumption, and high sexual risk behaviors affect their sexual health. Filling in these gaps will allow for increased awareness, education, and implementation of risk-reduction techniques within the Greek system, reducing the number of lives that are impacted or destroyed by sexually transmitted diseases.

CHAPTER III

METHODOLOGY

Participants

College students from a large 4-year university located in the Midwestern United States who are members of a Fraternity were recruited to participate. In 2011 the Greek system at this university reported a total of 1409 members among the 18 fraternity houses that were surveyed. Individuals had to be at least 18 years of age in order to participate. Eligible participants had to be present at their chapter house at the pre-selected appointment time when data collection was held. There were 1500 surveys available for distribution; however, not all members were present for data collection. A total of 526 individuals participated in this study.

Measures

Demographics

A 20-item demographic questionnaire will be completed by participants in order to collect relevant personal information such as: age, gender, race, ethnicity, academic classification, Greek status, relationship status, sexual orientation, residential status, religious affiliation, and information regarding STD's (See Appendix V, Questions 1-20).

Self-Esteem

The Rosenberg Self-Esteem scale is widely used in social science research and is a global measure of self-esteem. It consists of 10 items answered on a 4-point scale ranging from

'strongly agree' to 'strongly disagree.' When the scale was originally created it was scored as a Guttman scale but is now commonly scored as a Likert Scale. The scale has demonstrated validity and generally has a high reliability. Test-retest correlations typically range from .82 to .88 and Cronbach's alpha typically range from .77 to .88 (Blascovich & Tomaka, 1993; Rosenberg, 1986, 1989; UMD, 2012). Various studies have demonstrated that the scale has both a unidimensional and a two-factor structure of self-confidence and self-deprecation (UMD, 2012). (See Appendix V, Questions 21-30).

Alcohol Consumption

The Brief Young Adult Alcohol Consequences Questionnaire (B-YAACQ) is a 24-item survey that was developed for use within the college student population using item response modeling to measure consequences of alcohol consumption over the past year (Kahler et al., 2005). For this study, the survey was adjusted to 13-items measuring binge drinking, frequency, as well as the resulting consequences. Previous findings demonstrate that the questionnaire is internally consistent, unidimensional, shows minimum item redundancy, and is valid and reliable (Kahler et al., 2008). (See Appendix V, Questions 31-43).

Sexual Risk

The Sexual Risk Survey (SRS) is a 23-item self-report scale that assesses the frequency of sexual risk behaviors and the number of partners that they engaged in such behaviors with over the past 6 months (Turchik & Garske, 2009). This scale was designed specifically for college students, with or without sexual experience. Participants were provided with a Glossary of Terms that are used within the survey for terminology that is unfamiliar. Participants were also be provided with a calendar identifying significant University events over the last 6-months to increase accurate recall of their sexual experiences over this time period. The SRS has shown

convergent and discriminate validity, along with good internal consistency and test-retest reliability (Turchik & Garske, 2008). (See Appendix V, Questions 44-68).

Design and Procedure

1) Approval for this study was sought by the Primary Investigator (PI), Jennifer (Ferguson) McAtee, and received from the Institutional Review Board (IRB).

2) Approval for this study was sought by the PI and received from the Interfraternity Council (IFC).

3) At a meeting the week prior to data collection, IFC representatives from each chapter signed up for a specific scheduled time that researchers could come and administer survey instruments.

4) The PI recruited 22 volunteers to assist with data collection. Eight Primary Assistants (PA) were graduate students who had completed the Collaborative Institutional Training Initiative (CITI) that is required to work with human subjects. Ten Secondary Assistants (SA) were both graduate and undergraduate volunteers, and 4 were not affiliated with the university.

5) A central building on campus served as the central location for data collection efforts. An hour prior to the start of data collection the PI met with all assistants at to hold an instructional meeting and provide documents. Each assistant was given a packet containing a) a map of the campus b) a map of the Greek community on campus c) a survey administration assistant schedule d) a copy of a script to be read by the PA and e) a copy of the survey instrument to review. Both maps were highlighted to indicate which houses and buildings on campus were to be visited in order to meet with all fraternities at the time they elected. The assistants' names

had been highlighted on their schedule so that they could quickly determine where they were supposed to be for each 30-minute segment.

6) Bags were used to hold and transport the surveys, and the outside of each bag was marked with the name of the fraternity it was designated for. Each bag contained a pre-determined number of surveys based on how many members were reported. A SA remained at Willard Hall to ensure that the teams selected the appropriate bag to take to their scheduled fraternity house.

7) The following process was repeated at each fraternity house until all scheduled data collections were accomplished:

a) A set of one PA and one SA were paired to go meet each fraternity. They retrieved the labeled bag of surveys from Willard Hall and using the maps provided they walked to the meeting place of their first appointment.

b) Upon being let into the meeting place the PA and SA introduced themselves. The PA then read to the members from a prepared script and passed out the survey instruments. The members were asked to read an informed consent form stating that they had read and fully comprehended the details and purpose of the study, and that they choose to participate freely and voluntarily.

c) Each member who opted to participate completed an assessment that included the following instruments:

- demographic survey

- Rosenberg Self-Esteem Scale

- revised B-YAACQ,

- SRS

To ensure the anonymity of the participants and their survey responses, no identifiers or signed consent forms were required. Their completion of the survey instrument indicated their consent to participate.

d) In order to visit all 18 fraternity houses on a single Monday evening during their regularly scheduled chapter meeting, the PI or PA left after reading the script and passing out the surveys and headed to the next appointment. The SA remained behind and collected the completed anonymous surveys, placed them back into the bag, sealed the bag, and removed the identifying label from the bag before leaving the premises.

e) The SA returned to Willard Hall to drop off the completed surveys and then left to go to their next scheduled appointment.

8) Once the bags containing the completed surveys from all 18 houses were returned to Willard Hall the PI opened each bag and shuffled the surveys into the same stack, rendering it impossible to differentiate between responses from various chapter houses.

9) The surveys were kept in a locked filing cabinet in the office of the PI's advisor Dr. Bridget Miller awaiting coding and analysis.

10) A master copy of the survey was created with each question numbered and response coded.

11) A Microsoft Excel spreadsheet was created based off the coding on the master copy. The first row of cells contained the appropriate heading for the column. Because of this, data entry began on row 2.

- 12) To assist with data entry, the spreadsheet was color-coded based on the 4 separate questionnaires it included.
- 13) The exact verbal and numerical responses for a total of 526 surveys were entered into the spreadsheet.
- 14) For portions of the survey with numerical responses, if a range was given the mean was taken and recorded.
- 15) For portions of the survey where verbal responses were given in place of numeric responses the response was recorded numerically. For example; NO, NONE, and NEVER were recorded as the number 0.
- 16) When verbal responses were given that could not be associated with a specific numeric value the response was entered in a red font color. For example; A LOT, SOME, A FEW, A COUPLE, TOO MANY.
- 17) When a response was left blank or there was an X or – in the response box indicating refusal to answer 9999 was entered.
- 18) Data was copied from the spreadsheet into SPSS and analyzed by the PI's committee member and statistical research consultant Dr. Mwarumba Mwavita.
- 19) Upon completion of coding and analysis, all original copies of the anonymous survey instruments were shredded.

CHAPTER IV

RESULTS

Demographics

A total of 526 survey instruments were submitted by participants and included in the results for this study. This survey was self-report, and participants had the option to leave questions unanswered if they did not feel comfortable answering them. Questions that were unanswered were omitted from analysis, affecting the sample size of some demographic and survey questions. For this reason, the sample size will be given for each segment. Demographic data for the participants can be found in Table 1. As a frame of reference, demographic data for the university can be found in Table 2.

Gender (n=522)

In the sample population for this study, 100% of responding participants reported their gender as male. There were 4 participants who did not respond to this question and were omitted from analysis.

Age (n=522)

Inclusion criteria mandated that the participants were at least 18 years of age to participate in the study. The age range was 18-25 (mean age, 21.5) with the majority of the respondents aged 19 (36.7%) to 20 (31.4%). The lowest percentages of respondents were aged 23-25 (1.7%). It is worth noting that 77.3% of members who participated in this study are below

the legal drinking age. There were 4 participants who did not respond to this question and were omitted from analysis.

Race (n=522)

The sample was predominately White/Caucasian (88.3%), with the fewest reporting Asian/Pacific Islander (1.1%) and Black/African American (2.2%). This study examined 18 of the largest fraternities that are housed on campus, and was not inclusive of all fraternities at the university. Inclusion of the additional fraternity houses on campus would likely increase racial diversity. There were 4 participants who did not respond to this question and were omitted from analysis.

Ethnicity (n=494)

The majority of participants reported their ethnicity as Non-Hispanic (95.5%). However, there were 32 participants who did not respond to this question and were omitted from analysis.

Academic Standing (n=523)

The largest percentage of participants reported their academic standing as either freshman (39.8%) or sophomore (35.4%). Only 5.39% reported being classified as a senior or above. There were 3 participants who did not respond to this question and were omitted from analysis.

Relationship Status (n=521)

Most participants responded they were single and not in a committed relationship (70.4%). There were 5 participants who did not respond to this question and were omitted from analysis.

Sexual Orientation (n=519)

A greater number of respondents indicated heterosexual orientation (91.1%), with the remaining distributed between homosexual (1.4%) and bi-sexual (1.5%). There were 7 participants who did not respond to this question and were omitted from analysis.

Frequency of Church Attendance (n=514)

Over two-thirds of participants reported that they attend church at least monthly (68%). There were 12 participants who did not respond to this question and were omitted from analysis.

Religious Affiliation (n=481)

The majority of participants responded they were Christian (50.9%), Catholic (17.0%), or Baptist (10.0%). There were 45 participants who did not respond to this question and were omitted from analysis.

Table 1					
Demographic Characteristics of Participants					
Characteristic	<i>n</i>	%	Characteristic	<i>n</i>	%
Age	522		Frequency of Church Attendance	514	
18	48	9.2	Daily	6	1.2
19	192	36.7	Weekly	187	36.4
20	164	31.4	Monthly	156	30.4
21	88	17.0	More than twice a year	109	21.2
22	21	4.0	Never	56	10.8
23	7	1.3	Religious Affiliation	481	
24	0	0	Christian	245	50.9
25+	2	.4	Catholic	81	17.0
Gender	522		Baptist	48	10.0
Male	522	100.0	Methodist	35	7.3
Race	522		Lutheran	9	2.0
Asian/Pacific Islander	6	1.1	Protestant	9	2.0
Black/African American	12	2.2	Presbyterian	5	1.0
Native American	28	5.4	Episcopal	4	.83
White/Caucasian	461	88.3	Agnostic	3	.62
Other	15	3.0	Atheist	3	.62
Ethnicity	494		Buddhist	2	.42
Hispanic	22	4.5	Mormon	2	.42
Non-Hispanic	472	95.5	Muslim	2	.42
Academic Standing	523		Scientology	2	.42
Freshman	208	39.8	Evangelical	1	.21
Sophomore	185	35.4	Jehovah Witness	1	.21
Junior	102	19.5	Jewish	1	.21
Senior	27	5.2	Paganism	1	.21
Graduate Student	1	.19	Zoroastrianism	1	.21
Relationship Status	521		None	24	5.0
Not in a committed relationship	367	70.4			
In a committed relationship	154	29.6			
Sexual Orientation	519				
Heterosexual	504	97.1			
Homosexual	7	1.4			
Bisexual	8	1.5			

Table 2 Demographic Characteristics of University		
Characteristic	<i>n</i>	%
Age	23,522	
18 and under	2,034	8.7
19	3,145	13.4
20	2,920	12.4
21	3,131	13.3
22	2,762	11.74
23-29	6,228	26.5
30-39	2,029	8.7
40 and over	1,250	5.3
Gender	23,522	
Male	12,147	51.8
Female	11,314	48.2
Race	23,522	
Asian	399	1.7
Black/African American	1,029	4.47
Hispanic	594	2.5
International	1,869	8.0
Native American	2,032	8.64
White/Caucasian	17,599	74.82
Academic Standing	23,522	
Freshman	4,292	17.0
Sophomore	3,777	16.1
Junior	4,565	19.4
Senior	5,351	23.0
Special Undergraduate	617	3.0
Graduate	4,576	20.0
Professional	344	1.5
Resident Status	23,522	
In-State	16,951	72.1
Out-of-State	4,702	20.0
International	1,869	7.9

*Includes 1,759 students from a branch campus *Most recent data available Fall 2010

Self-Esteem

Self-Esteem was measured using the Rosenberg Self-Esteem Scale (Rosenberg, 1989). Responses for this survey were given in a 4-point Likert scale ranging from strongly agree to strongly disagree. For scoring, each item was assigned a value. For items 21, 22, 24, 26, 77 the scale was as follows: Strongly Agree=4, Agree=3, Disagree=2, and Strongly Disagree=1. Items 23,25,28,29,30 are reversed in valence and were re-coded as follows: Strongly Agree=1, Agree=2, Disagree=3, and Strongly Disagree= 4. For analysis the summation of all scores was calculated and analyzed as one aggregate score. Statistical analysis was completed using IBM SPSS version 19. Bivariate correlations were run among the variables of interest, first looking at self-esteem and alcohol consumption and then at self-esteem and sexual risk. There was a lack of variability in self-esteem responses; in general, almost all fraternity members reported high levels of self-esteem. Average of aggregate self-esteem scores showed $M=3.50$, $SD=0.70709$. This data is located in Tables 3 and 4.

Question	Rosenberg Self-Esteem Survey Questions	Strongly Agree		Agree		Disagree		Strongly Disagree	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
21	I feel that I am a person of worth, at least on an equal plane with others (<i>n</i> =519)	416	80.1	88	17.0	8	1.5	7	1.4
22	I feel that I have a number of good qualities (<i>n</i> =516)	404	78.3	105	20.4	4	.76	3	.58
23	All in all, I am inclined to feel that I am a failure (<i>n</i> =525)	23	4.4	24	4.6	124	23.6	354	67.4
24	I am able to do things as well as most other people (<i>n</i> =517)	291	56.3	205	39.6	13	2.5	8	1.6
25	I feel I do not have much to be proud of (<i>n</i> =515)	27	5.2	25	4.9	124	24.1	339	65.8
26	I take a positive attitude toward myself (<i>n</i> =516)	326	63.2	169	32.8	14	2.7	7	1.3
27	On the whole, I am satisfied with myself (<i>n</i> =516)	297	57.6	192	37.2	20	3.9	7	1.3
28	I wish I could have more respect for myself (<i>n</i> =517)	29	43.2	95	32.9	170	18.3	223	5.6
29	I certainly feel useless at times (<i>n</i> =517)	24	4.7	91	17.6	147	28.4	255	49.3
30	At times I think I am no good at all (<i>n</i> =518)	16	3.1	54	10.4	130	25.1	318	61.4

Table 4			
Mean and Standard Deviation for Self-Esteem Survey			
Question	N	M	SD
21	517	3.78	.52486
22	515	3.77	.47514
23	514	3.54	.77961
24	513	3.51	.62217
25	514	3.51	.81468
26	513	3.58	.61007
27	515	3.51	.63716
28	516	3.14	.90790
29	516	3.22	.89867
30	515	3.45	.80064

Alcohol Consumption

Alcohol consumption was measured predominately by question 32, which asked participants to identify how many times in the past 2 weeks they have had more than 5 drinks in a row, known as binge drinking. The analysis was completed using IBM SPSS version 19. Pearson bivariate correlations were run among the variables of interest, self-esteem and binge drinking. A cumulative frequency distribution was also run. No relationship was found between self-esteem and binge drinking.

Question 32:

Over the past 2 weeks, on how many occasions have you had 5 or more drinks in a row?

$r(478) = .008, p > .05, p = 0.925, M = 3.0, SD = 3.6$

Therefore, because the p-value was not statistically significant we fail to reject the null, (Ho1) There will be no relationship between level of self-esteem and binge drinking in college fraternity males.

Over half of fraternity members (69.6%) reported binge drinking, in the past 2 weeks, with frequency ranging from 6-30 times (Table 6). Additional data was gathered that indicated age of first alcohol consumption (Table 5) and drinking frequency in the past 30 days (Table 7). As determined earlier from the demographics, 77.3% of our population is not currently of the legal drinking age. Over three-quarters of our population (82.6%) indicated that they had consumed alcohol within the past 30 days, and one-third (31.3%) of participants reported getting behind the wheel and driving after consuming alcohol.

Additionally, participants were asked to answer a series of questions from a revised version of the BYAAC-Q (Kahler et al., 2005) regarding their personal consequences following

alcohol consumption. The results of this survey can be found in Table 8. Over half of respondents reported having a hangover (70.3%) or taking foolish risks (58.3%) while drinking. Just under half of respondents indicated that they had not been able to remember long stretches of time while drinking heavily (48.4%), that they drank on nights when they planned not to drink, (49.6%) and have passed out from drinking (48.3%).

Table 5 Participant Responses to Question 31: At what age did you have your first drink of alcohol? (n=465, M=15.9, SD=2.7)		
Age	Frequency	%
4	1	.2
5	3	.6
6	1	.2
7	1	.2
8	2	.4
9	3	.6
10	7	1.5
11	10	2.2
12	10	2.2
13	28	6.0
14	37	8.0
14.5	1	.2
14	65	14.0
15.5	1	.2
16	92	19.8
16.5	1	.2
17	54	11.6
18	103	22.2
19	22	4.7
20	8	1.7
21	14	3.0
30	1	.2

*If response was given as a range the mean was reported for analysis

Table 6 Participant Responses to Question 32: Over the past 2 weeks, on how many occasions have you had 5 or more drinks in a row? (n=493, M=3.0, SD=3.6)		
5 or more drinks in a row	Frequency	%
0	150	30.4
1	48	9.7
1.5	1	.2
2	66	13.4
3	50	10.1
4	54	11.0
5	35	7.1
6	35	7.1
6.5	1	.2
7	12	2.4
7.5	2	.4
8	12	2.4
9	2	.4
10	9	1.8
12	2	.4
13	3	.6
14	5	1.0
15	2	.4
19	1	.2
20	1	.2
24	1	.2
30	1	.2

If response was given as a range the mean was reported for analysis

Table 7 Participant Responses to Question 33: During the past 30 days, how many days did you have at least one drink of alcohol? (n=493, M=7.9, SD=8.4)		
Days of Alcohol Consumption	Frequency	%
0	86	17.4
1	27	5.5
2	33	6.7
2.5	1	.2
3	26	5.3
3.5	1	.2
4	26	5.5
5	32	6.5
6	25	5.1
6.5	1	.2
7	19	3.9
8	29	5.9
8.5	1	.2
9.0	9	1.8
10	56	11.4
11	1	.2
12	23	4.7
13	2	.4
14	6	1.2
15	23	4.7
16	5	1.0
17	4	.8
18	3	.6
20	25	5.1
21	3	.6
22	1	.2
23	1	.2
24	1	.2
25	3	.6
26	2	.4
27	3	.6
28	4	.8
30	11	2.2

*If response was given as a range the mean was reported for analysis

Table 8				
Alcohol Consequences of Participants				
(revised BYAAC-Q)				
Below is a list of things that sometimes happen to people either during or after they have been drinking alcohol. Next to each item below, please circle either YES or NO to indicate whether that item describes something that has happened to you <u>IN THE PAST YEAR.</u>	YES		NO	
	<i>n</i>	%	<i>n</i>	%
I have had a hangover (headache, sick stomach) the morning after I had been drinking (<i>n</i> =515)	362	70.3	153	29.7
I have taken foolish risks when I have been drinking (<i>n</i> =515)	300	58.3	215	41.7
I've not been able to remember large stretches of time while drinking heavily (<i>n</i> =514)	249	48.4	265	51.6
My drinking has gotten me into sexual situations I later regretted (<i>n</i> =512)	133	26.0	379	74.0
I often have ended up drinking on nights when I had planned not to drink (<i>n</i> =516)	256	49.6	260	50.4
I have woken up in an unexpected place after heavy drinking (<i>n</i> =516)	166	32.2	350	67.8
I have felt badly about myself because of my drinking (<i>n</i> =513)	122	23.8	391	76.2
I have driven a car when I knew I had too much to drink to drive safely (<i>n</i> =515)	161	31.3	354	68.7
I have neglected my obligations to family, work, or school because of drinking (<i>n</i> =516)	114	22.1	402	77.9
I have passed out from drinking (<i>n</i> =515)	249	48.3	266	51.7

Sexual Risk

Sexual risk was measured using the Sexual Risk Survey (Turchik & Garske, 2009). Participants were instructed to respond to a series of questions regarding the frequency of behavior, experiences, and sexual partners using a numerical response. The complete set of response rates can be viewed in Tables 9-14. However, due to inability to follow directions, a number of participants gave text responses. These text responses and their frequency can be found in Table 15. Due to the sensitive nature of the questions, many participants chose not to respond to questions or filled each response segment in with a 0. Therefore, the data may not accurately portray the level of sexual risk in question. Questions 52-58 indicated the most direct level of sexual risk measurement and were analyzed for this study. The analysis was completed using IBM SPSS version 19. Pearson bivariate correlations were run among the variables of interest, which were 52) self-esteem and intercourse with no condom, 53) vaginal intercourse without protection against pregnancy, 54) fellatio without a condom, 55) cunnilingus without adequate protection, 56) anal sex without a condom, 57) unprotected anal penetration by object followed by anal sex, and 58) anilingus without adequate protection. A cumulative frequency distribution of the data was also run.

Question 52:

How many times have you had vaginal intercourse without a latex or polyurethane condom?

$r(423) = .003249$, $p > .05$, $p = 0.239$, $M = 12.4$, $SD = 67.4$

Because the p-value was not statistically significant we fail to reject the null, (H_0) There will be no relationship between level of self-esteem and risky sexual behavior in college fraternity males.

Question 53:

How many times have you had vaginal intercourse without protection against pregnancy?

$r(436) = .018769$, $p < .05$, $p = .004$, $M = 4.0$, $SD = 16.9$

Because the p-value was statistically significant we reject the null, (Ho2) There will be no relationship between level of self-esteem and risky sexual behavior in college fraternity males.

Question 54:

How many times have you given or received fellatio without a condom?

$r(408) = .000529$, $p > .05$, $p = 0.649$, $M = 8.3$, $SD = 50.9$

Because the p-value was not statistically significant we fail to reject the null, (Ho2) There will be no relationship between level of self-esteem and risky sexual behavior in college fraternity males.

Question 55:

How many times have you given cunnilingus without adequate protection?

$r(414) = .006724$, $p > .05$, $p = 0.094$, $M = 5.91$, $SD = 16.6$

Because the p-value was not statistically significant we fail to reject the null, (Ho2) There will be no relationship between level of self-esteem and risky sexual behavior in college fraternity males.

Question 56:

How many times have you had anal sex without a condom?

$r(462) = .023716, p < .05, p = 0.001, M = 1.5, SD = 9.8$

Because the p-value was statistically significant we reject the null, (Ho2) There will be no relationship between level of self-esteem and risky sexual behavior in college fraternity males.

Question 57:

How many times have you or your partner engaged in anal penetration by a hand or other object without a latex glove or condom followed by unprotected anal sex?

$r(451) = .009801, p < .05, p = 0.036, M = .6266, SD = 4.1$

Because the p-value was statistically significant we reject the null, (Ho2) There will be no relationship between level of self-esteem and risky sexual behavior in college fraternity males.

Question 58:

How many times have you given or received analingus without adequate protection?

$r(457) = .009604, p < .05, p = 0.035, M = .7206, SD = 6.6$

Because the p-value was statistically significant we reject the null, (Ho2) There will be no relationship between level of self-esteem and risky sexual behavior in college fraternity males.

When measuring sexual risk any time semen, vaginal secretions, blood, or breast milk come into contact with the eyes, ears, nose, mouth, penis, vagina or anus it increases the chance of disease transmission. For this reason, analysis was focused on the questions that directly involved this level of risk. Around 41.3% of participants reported that they had vaginal

sex without a condom. Only 38.2% of participants indicated giving or receiving oral sex on a man without adequate protection. Text comments written in this area were indicative of a misinterpretation of the question and a homophobic response, undoubtedly affecting the participants' response. A greater number of participants reported giving oral sex on a woman without adequate protection (41.6%). Very few participants reported anal sex without a condom (13.6%), and even fewer reported anal penetration by hand or object followed by anal sex without a condom (7.1%). Approximately 7.2% of participants indicated giving or receiving oral stimulation of the anal region without adequate protection.

Over half of participants (55.9%) indicated that they were more inclined to "hook up" with a member of a fraternity or a sorority than a student who is not a member of the Greek system. Respondents reported all circumstances where they had met an individual that they hooked up. Given in response to the frequency, the results are as follows: 1) member of a fraternity or sorority, 2) at a party, 3) in class, 4) through family and friends, 5) at a bar or nightclub, 6) public places, 7) a club or organization, 8) at work, 9) a sports team or league, 10) at church, 11) living situation, 12) online, and 13) volunteering.

Table 9
Sexual Risk Survey Participant Responses
Questions 44-47

Question 44 (n=487, M=5.3, SD=10.9)			Question 45 (n=485, M=2.6, SD=8.6)			Question 46 (n=482, M=3.6, SD=10.1)			Question 47 (n=440, M=7.2, SD=52.3)		
Response	Frequency	%	Response	Frequency	%	Response	Frequency	%	Response	Frequency	%
0	136	27.9	0	273	56.3	0	236	49	0	309	70.2
1	79	16.2	1	58	12.0	1	57	11.8	1	19	4.3
1.5	1	.2	2	46	9.5	2	45	9.3	2	14	3.2
2	43	8.8	3	30	6.2	3	37	7.7	3	15	3.4
2.5	1	.2	3.5	1	.2	4	16	3.3	4	6	1.4
3	53	10.9	4	19	3.9	5	22	4.6	5	13	3.0
4	28	5.7	5	15	3.1	5.5	1	.2	6	1	.2
4.5	1	.2	6	4	.8	6	10	2.1	7	5	1.1
5	24	4.9	7	7	1.4	7	8	1.7	8	2	.5
6	14	2.9	8	6	1.2	8	4	.8	10	25	5.7
7	11	2.3	9	1	.2	10	14	2.9	14	1	.2
8	13	2.7	10	8	1.6	12	1	.2	15	3	.7
9	4	.8	11	1	.2	14	1	.2	20	5	1.1
10	30	6.2	12	1	.2	15	5	1.0	25	3	.7
11	3	.6	13	1	.2	16	1	.2	30	2	.5
12	5	1.0	14	1	.2	17.5	2	.4	35	1	.2
12.5	1	.2	15	2	.2	18	1	.2	40	2	.5
13	1	.2	20	1	.2	20	7	1.5	47	1	.2
14	2	.4	23	1	.2	25	5	1.0	50	3	.7
15	6	1.2	30	3	.4	30	1	.2	60	1	.2
17	1	.2	47	1	.2	35	1	.2	80	1	.2
20	6	1.2	57	1	.2	40	1	.2	84	1	.2
23	1	.2	60	1	.6	44	1	.2	100	4	.9
24	1	.2	75	1	.2	47	1	.2	102	1	.2
25	4	.8	81	1	.2	69	1	.2	365	1	.2
26	2	.4	101	1	.2	100	2	.4	1000	1	.2
28	1	.2				101	1	.2			
30	2	.4									
35	1	.2									
40	1	.2									
42	1	.2									
47	1	.2									
50	4	.8									
60	1	.2									
63	1	.2									
70	1	.2									
101	1	.2									
110	1	.2									

*If response was given as a range the mean was reported for analysis **All data points were used
44: How many partners have you engaged in sexual behavior with but not had sex with?
45: How many times have you left a social event with someone you just met?
46: How many times have you "hooked up" but not had sex with someone you didn't know or didn't know well?
47: How many times have you gone out to bars/parties/social events with the intent of "hooking up" and engaging in sexual behavior but not having sex with someone?

Table 10 Sexual Risk Survey Participant Responses Questions 48-51											
Question 48 (n=433, M=25.7, SD=433.1)			Question 49 (n=468, M=2.2, SD=6.0)			Question 50 (n=485, M=1.0, SD=3.4)			Question 51 (n=486, M=4.1, SD=10.3)		
Response	Frequency	%	Response	Frequency	%	Response	Frequency	%	Response	Frequency	%
0	319	73.7	0	268	57.3	0	343	70.7	0	176	36.2
1	21	4.8	1	54	11.5	1	64	13.2	1	98	20.2
2	13	3.0	1.5	1	.2	2	36	7.4	1.5	1	.2
3	9	2.1	2	39	8.3	3	13	2.7	2	38	7.8
4	9	2.1	3	37	7.9	4	6	1.2	3	37	7.6
5	13	3.0	3.5	1	.2	5	5	1.0	4	29	6.0
6	2	.5	4	13	2.8	7	2	.4	5	17	3.5
7	1	.2	4.5	1	.2	8	2	.4	6	17	3.5
8	2	.5	5	14	3.0	9	1	.2	7	12	2.5
9	1	.2	6	4	.9	10	4	.8	8	8	1.6
10	13	3.0	7	4	.9	12	1	.2	9	3	.6
12	2	.5	7.5	1	.2	15	2	.4	10	5	1.0
16	1	.2	8	1	.2	20	3	.6	11	6	1.2
17	2	.5	9	3	.6	25	1	.2	11.5	1	.2
20	4	.9	10	11	2.4	31	1	.2	12	3	.6
24	1	.2	11	2	.4	40	1	.2	13	3	.6
25	2	.5	12.5	1	.2				14	1	.2
29	1	.2	15	2	.4				15	3	.6
30	5	1.2	19	1	.2				16	2	.4
35	1	.2	20	3	.6				17	1	.2
43	1	.2	25	1	.2				19	1	.2
50	1	.2	30	2	.4				20	2	.4
60	1	.2	40	1	.2				23	2	.4
69	1	.2	50	1	.2				25	3	.6
100	2	.5	54	1	.2				26	1	.2
101	1	.2	67	1	.2				28	1	.2
102	1	.2							30	5	1.0
363	1	.2							31	1	.2
9001	1	.2							38	1	.2
									40	2	.4
									42	1	.2
									43	1	.2
									50	1	.2
									56	1	.2
									104	1	.2
									131	1	.2

*If response was given as a range the mean was reported for analysis **All data points were used
48: How many times have you gone out to bars/parties/social events with the intent of "hooking up" and having sex with someone?
49: How many times have you had an unexpected and unanticipated sexual experience?
50: How many times have you had a sexual encounter you engaged in willingly but later regretted?
51: How many partners have you had sex with?

Question 52 (n=436, M=12.4, SD=67.4)			Question 53 (n=450, M=4.0, SD=17.0)			Question 54 (n=420, M=8.3, SD=50.9)			Question 55 (n=425, M=5.9, SD=16.6)		
Response	Frequency	%	Response	Frequency	%	Response	Frequency	%	Response	Frequency	%
0	256	58.7	0	327	72.7	0	260	61.9	0	248	58.4
1	28	6.4	1	24	5.3	.5	1	.2	1	29	6.8
2	27	6.2	2	23	5.1	1	18	4.3	2	26	6.1
3	19	4.4	3	15	3.3	2	15	3.6	3	22	5.2
4	8	1.8	4	8	1.8	3	18	4.3	4	8	1.9
5	9	2.1	5	7	1.6	3.5	1	.2	5	19	4.5
6	7	1.6	6	3	.7	4	7	1.7	6	4	.9
7	2	.5	7	2	.4	5	11	2.6	7	3	.7
7.5	1	.2	7.5	1	.2	6	4	1.0	8	2	.5
8	4	.9	8	2	.4	7	2	.5	9	2	.5
9	1	.2	10	10	2.2	8	5	1.2	10	14	3.3
10	15	3.4	12.5	1	.2	9	1	.2	12	2	.5
11	2	.5	13	1	.2	10	12	2.9	13	1	.2
12	1	.2	15	1	.2	11	2	.5	15	4	.9
12.5	1	.2	20	4	.9	12	5	1.2	16	1	.2
13	2	.5	22	2	.4	13	1	.2	20	7	1.6
14	1	.2	25	2	.4	13.5	1	.2	22	1	.2
15	2	.5	30	3	.7	14	2	.5	24	1	.2
17	1	.2	35	2	.4	15	7	1.7	25	1	.2
20	8	1.8	40	1	.2	19	1	.2	30	5	1.2
22	2	.5	44	1	.2	20	12	2.9	32	1	.2
25	2	.5	47	1	.2	23	1	.2	32.5	1	.2
27	1	.2	50	1	.2	25	1	.2	35	2	.5
30	9	2.1	53	1	.2	26	1	.2	38	1	.2
34	1	.2	60	1	.2	27	1	.2	40	3	.7
35	3	.7	70	1	.2	30	6	1.4	45	3	.7
38	1	.2	100	2	.4	35	3	.7	50	4	.9
46	1	.2	150	1	.2	37	1	.2	60	1	.2
50	3	.7	152	1	.2	38	1	.2	64	1	.2
60	1	.2	200	1	.2	40	6	1.4	70	1	.2
75	1	.2				50	3	.7	75	1	.2
87	1	.2				60	1	.2	80	1	.2
100	7	1.6				65	1	.2	100	2	.5
120	1	.2				69	2	.5	101	1	.2
150	3	.7				100	3	.7	120	1	.2
172	1	.2							150	1	.2

*If response was given as a range the mean was reported for analysis **All data points were used

52: How many times have you had vaginal intercourse without a latex or polyurethane condom?
Note: Include times when you have used a lambskin or membrane condom.

53: How many times have you had vaginal intercourse without protection against pregnancy?

54: How many times have you given or received fellatio (oral sex on a man) without a condom?

55: How many times have you given cunnilingus (oral sex on a woman) without a dental dam or "adequate protection"
(please see definition of dental dam for what is considered adequate protection)?

Table 12 Sexual Risk Survey Participant Responses Questions 56-59											
Question 56 (n=477, M=1.5, SD=9.8)			Question 57 (n=466, M=.6266, SD=4.18)			Question 58 (n=472, M=.7206, SD=6.6)			Question 59 (n=472, M=1.8, SD=4.5)		
Response	Frequency	%	Response	Frequency	%	Response	Frequency	%	Response	Frequency	%
0	412	86.4	0	433	92.9	0	438	92.8	0	300	63.6
1	21	4.4	1	4	.9	1	7	1.5	1	50	10.6
2	8	1.7	2	8	1.7	2	2	.4	2	37	7.8
3	7	1.5	3	6	1.3	3	4	.8	3	23	4.9
3.5	1	.2	5	1	.2	4	5	1.1	3.5	1	.2
4	3	.6	7	6	1.3	6	4	.8	4	11	2.3
4.5	1	.2	8	1	.2	7	2	.4	5	7	1.5
5	4	.8	10	1	.2	9	1	.2	6	6	1.3
6	2	.4	20	2	.4	10	4	.8	7	6	1.3
7	1	.2	23	1	.2	12	1	.2	8	4	.8
8	1	.2	25	1	.2	20	2	.4	9	2	.4
10	2	.4	32	1	.2	21	1	.2	10	9	1.9
11	1	.2	69	1	.3	137	1	.2	11	1	.2
12	1	.2							12	1	.2
14	2	.4							12.5	1	.2
17	1	.2							15	1	.2
20	3	.6							16	2	.4
35	1	.2							17	3	.6
46	1	.2							20	3	.6
51	1	.2							25	1	.2
69	1	.2							27	1	.2
106	1	.2							34	1	.2
149	1	.2							53	1	.2

*If response was given as a range the mean was reported for analysis **All data points were used

56: How many times have you had anal sex without a condom?

57: How many times have you or your partner engaged in anal penetration by a hand ("fisting") or other object without a latex glove or condom followed by unprotected anal sex?

58: How many times have you given or received anilingus (oral stimulation of the anal region, "rimming") without a dental dam or "adequate protection"(please see definition of dental dam for what is considered adequate protection)?

59: How many people have you had sex with that you know but are not involved in any sort of relationship with (i.e., "friends with benefits", "fuck buddies")?

Table 13
Sexual Risk Survey Participant Responses
Questions 60-63

Question 60 (n=466, M=1.5, SD=4.2)			Question 61 (n=426, M=3.6, SD=9.6)			Question 62 (n=448, M=1.9, SD=7.8)			Question 63 (n=452, M=2.5, SD=28.3)		
Response	Frequency	%	Response	Frequency	%	Response	Frequency	%	Response	Frequency	%
0	322	69.1	0	251	58.9	0	335	74.8	0	317	70.1
1	44	9.4	1	40	9.4	1	31	6.9	1	56	12.4
2	31	6.7	2	25	5.9	2	20	4.5	2	35	7.7
3	18	3.9	3	12	2.8	3	17	3.8	3	7	1.5
3.5	1	.2	4	12	2.8	4	5	1.1	3.5	1	.2
4	9	1.9	5	12	2.8	5	5	1.1	4	3	.7
5	9	1.9	6	11	2.6	6	6	1.3	5	3	.7
6	2	.4	7	5	1.2	7	1	.2	6	6	1.3
7	6	1.3	8	1	.2	8	3	.7	7	4	.9
8	6	1.3	9	6	1.4	9	1	.2	8	1	.2
9	1	.2	10	5	1.2	10	5	1.1	9	2	.4
10	4	.9	15	16	3.8	12	1	.2	10	5	1.1
12	2	.4	16	4	.9	15	2	.4	11	1	.2
15	2	.4	18	2	.5	17	2	.4	15	4	.9
17	1	.2	20	1	.2	20	4	.9	20	2	.4
20	4	.9	27	9	2.1	21	1	.2	22	1	.2
28	1	.2	29	1	.2	22	1	.2	25	1	.2
30	1	.2	30	1	.2	23	1	.2	30	1	.2
33	1	.2	32	3	.7	25	1	.2	31	1	.2
43	1	.2	35	1	.5	30	4	.9	600	1	.2
			40	2	.2	43	1	.2			
			50	1	.2	129	1	.2			
			60	1	.2						
			69	1	.2						
			70	1	.2						
			100	1	.2						

*If response was given as a range the mean was reported for analysis **All data points were used

60: How many times have you had sex with someone you don't know well or just met?

61: How many times have you or your partner used alcohol or drugs before or during sex?

62: How many times have you had sex with a new partner before discussing sexual history, IV drug use, disease status and other current sexual partners?

63: How many times (that you know of) have you had sex with someone who has had many sexual partners?

Table 14 Sexual Risk Survey Participant Responses Questions 64-66								
Question 64 (n=448, M=1.2, SD=3.7)			Question 65 (n=463, M=2.7, SD=42.4)			Question 66 (n=457, M=.6565, SD=2.7)		
Response	Frequency	%	Response	Frequency	%	Response	Frequency	%
0	338	75.4	0	370	79.9	0	376	82.3
1	29	6.5	1	44	9.5	1	43	9.4
2	24	5.4	2	19	4.1	2	11	2.4
2.5	1	.2	2.5	1	.2	3	9	2.0
3	16	3.6	3	7	1.5	4	3	.7
4	9	2.0	3.5	1	.2	6	1	.2
5	4	.9	4	4	.9	7	1	.2
5.5	1	.2	5	3	.6	8	1	.2
6	4	.9	7	2	.4	9	3	.7
7	3	.7	8	1	.2	10	4	.9
8	1	.2	9	2	.4	14	1	.2
9	2	.4	10	2	.4	20	3	.7
10	4	.9	12	1	.2	34	1	.2
12	3	.7	13	1	.2			
14	1	.2	20	2	.4			
16	1	.2	33	1	.2			
20	4	.9	42	1	.2			
30	1	.2	911	1	.2			
32	2	.4						

*If response was given as a range the mean was reported for analysis **All data points were used
64: How many partners (that you know of) have you had sex with who had been sexually active before you were with them but had not been tested for STIs/HIV?
65: How many partners have you had sex with that you didn't trust?
66: How many times (that you know of) have you had sex with someone who was also engaging in sex with others during the same time period?

Table 15 Descriptive Responses for Sexual Risk Survey					
44	A few (1), A lot (1), Decent amount (1), Infinity (2), A lumpsum (1), Quite a bit (1), Too many (1), ?/IDK (5)	45	A couple (1), A few (4), A lot (5), All (1), Every time (1), Many (2), Not much (1), ?/IDK (2)	46	A few (4), A lot (13), Good amount (1), Many (1), ?/IDK (4)
47	A few (2), A lot (18), All (4), All the time (3), Always (2), Every night (1), Every time (6), Infinity (3), Most times (1), Many (2), Several (1), Too many (1), ?/IDK (4)	48	A couple (1), A few (4), A lot (15), All (3), All the time (1), Always (1), Every night (1), Every time (5), Infinity (3), Many (2), Most (1), Most nights (1), Multiple (1), Often (2), Several (1), Sometimes (2), Too many to count (1), ?/IDK (6)	49	A couple (3), A few (4), A lot (6), Every night (1), Many (1), Multiple (1), Some (2), ?/IDK (1)
50	A few (3), A lot (1), All (1), ?/IDK (1)	51	IDK/? (1)	52	A lot (8), All (2), Countless (1), Enough (2), Every time (3), Infinity (2), Many (3), More than I should (1), Mostly (1), Most times (1), Plenty (2), Several (1), Too many to count (3), ?/IDK (2)
53	A few, A lot (4), All the time (1), Countless (1), Every time (2), Infinity (1), Many (2), Mostly (1), Plenty (1), Several (1), Too many (2), ?/IDK (2)	54	A few (3), A lot (12), All (2), Always (4), Countless (1), Every time (5), Gay-none (1), I ain't gay, yo (1), infinity (3), Never (1), plenty (1), several (1)	55	A couple (1), A lot (12), All (1), Always (2), Every time (6), Ew (1), Many (2), Not many (1), Several (3), Too many to count (1), ?/IDK (5)
56	A few (2), A lot (1), Too many (1), ?/IDK (1)	57	A few (4), A lot (2), butt puss (1), gross (1), Gross-none (1),	58	A few (1), Nasty (1), Gross-none (1), ?/IDK (1)
59	A lot (2), Almost all (1), ?/IDK (1)	60	A couple (1), A few (1), A lot (3), Always (1), Many (1), Most times (1), Never (1), Omit (1)	61	A few (3), A lot (19), All (1), Always (3), Enough (1), Every time (1), Many (3), Often (1), Too many (1), ?/IDK (3)
62	A couple (2), A few (1), A lot (4), All (2), Always (3), Every time (1), Many (1), ?/IDK (2)	63	A couple (1), A few (3), A lot (2), Many (2), Most times (1), ?/IDK (5)	64	A few (2), All of them (1), Every time (1), Many (1), ?/IDK (9)
65	A few (1), A lot (2), All of them (3)	66	A few (1), A lot (1), All (1), ?/IDK (3)		
<p>44: How many partners have you engaged in sexual behavior with but not had sex with?</p> <p>45: How many times have you left a social event with someone you just met?</p> <p>46: How many times have you "hooked up" but not had sex with someone you didn't know or didn't know well?</p> <p>47: How many times have you gone out to bars/parties/social events with the intent of "hooking up" and engaging in sexual behavior but not having sex with someone?</p> <p>48: How many times have you gone out to bars/parties/social events with the intent of "hooking up" and having sex with someone?</p> <p>49: How many times have you had an unexpected and unanticipated sexual experience?</p> <p>50: How many times have you had a sexual encounter you engaged in willingly but later regretted?</p> <p>51: How many partners have you had sex with?</p> <p>52: How many times have you had vaginal intercourse without a latex or polyurethane condom?</p> <p>53: How many times have you had vaginal intercourse without protection against pregnancy?</p> <p>54: How many times have you given or received fellatio (oral sex on a man) without a condom?</p> <p>55: How many times have you given cunnilingus (oral sex on a woman) without a dental dam or "adequate protection"?</p> <p>56: How many times have you had anal sex without a condom?</p> <p>57: How many times have you or your partner engaged in anal penetration by a hand ("fisting") or other object without a latex glove or condom followed by unprotected anal sex?</p> <p>58: How many times have you given or received analingus (oral stimulation of the anal region) without 'adequate protection'?</p> <p>59: How many people have you had sex with that you know but are not involved in any sort of relationship with?</p> <p>60: How many times have you had sex with someone you don't know well or just met?</p> <p>61: How many times have you or your partner used alcohol or drugs before or during sex?</p> <p>62: How many times have you had sex with a new partner before discussing sexual history, IV drug use, disease status and other current sexual partners?</p> <p>63: How many times (that you know of) have you had sex with someone who has had many sexual partners?</p> <p>64: How many partners (that you know of) have you had sex with who had been sexually active before you were with them but had not been tested for STIs/HIV?</p> <p>65: How many partners have you had sex with that you didn't trust?</p> <p>66: How many times (that you know of) have you had sex with someone who was also engaging in sex with others during the same time period?</p>					

CHAPTER V

DISCUSSION

It is apparent that binge drinking and risky sexual behavior in college students is a public health concern. However, it can be difficult to gain access to this population and hold their attention long enough to receive valid and reliable responses. This section will discuss the many factors that impacted the results of this study; the findings, limitations, areas of future research, and conclusions.

Findings

No relationship was found between self-esteem and alcohol consumption due to a lack of variability in the reporting of self-esteem. Of the 7 items analyzed for a relationship between self-esteem and sexual risk, 4 showed significance. Of the items that showed significance, all were a weak relationship but may have been affected by improper reporting methods.

The first item measured with self-esteem that showed a high level of significance ($p=.004$), Question 53, asks how many times an individual has had vaginal sex without protection against pregnancy. There is a weak negative relationship between these variables. Self-esteem may play a role in whether or not an individual chooses to protect against unwanted pregnancy. In addition, individuals who are not taking precautions against pregnancy are not likely to take precautions against STD transmission. A total of 327 respondents selected 0 as a response to this question. However, many respondents who did not choose to answer the question at all also put a 0 as their response, which confounds the data because it is impossible

to differentiate between those responding in the negative and those refusing to respond to the question. It is possible that with the exception of the non-responders the relationship between these variables may have been stronger.

The second item measured with self-esteem that showed a high level of significance ($p=.001$), Question 56, asks how many times an individual has had anal sex without a condom. Again, there is a weak negative relationship between these variables. Self-esteem may play a role in whether an individual chooses to wear a condom to decrease disease transmission during anal sex. Lack of self-esteem would decrease the likelihood that either participant would speak up to vocalize their desire to utilize protection. In addition, lack of self-esteem would also decrease the likelihood that either partner would speak up to reject the act if they were an unwilling participant. A total of 412 respondents selected 0 as a response to this question. Again, many respondents who did not choose to answer the question at all also put a 0 as their response, which confounds the data because it is impossible to differentiate between those responding in the negative and those refusing to respond to the question. It is possible that with the exception of the non-responders the relationship between these variables may have been stronger.

The third item measured with self-esteem that showed significance ($p=.036$), Question 57, asks how many times an individual or their partner has engaged in anal penetration by a hand or other object without a latex glove or condom followed by unprotected anal sex. Once again, there is a weak negative relationship between these variables. The impact of self-esteem on this variable is similar to the previous question. Lack of self-esteem would decrease the likelihood that either partner would speak up to reject the act if they were an unwilling participant in either anal penetration by object or anal sex. In addition, self-esteem may play a

role in whether an individual chooses to wear a condom to decrease disease transmission during anal sex. A lack of self-esteem would decrease the likelihood that either participant would speak up to vocalize their desire to utilize protection. A total of 433 respondents selected 0 as a response to this question. Again, many respondents who did not choose to answer the question at all also put a 0 as their response, which confounds the data because it is impossible to differentiate between those responding in the negative and those refusing to respond to the question. It is possible that with the exception of the non-responders the relationship between these variables may have been stronger.

The last item measured with self-esteem that showed significance ($p=.035$), Question 58, asks how many times an individual has given or received anilingus without adequate protection. As with previous findings, there is a weak negative relationship between these variables. Similar to the previous question, self-esteem may play a role in whether an individual chooses to use protection to decrease disease transmission during oral stimulation of the anal region. A lack of self-esteem would decrease the likelihood that either participant would speak up to vocalize their desire to utilize protection or to reject the act if they were an unwilling participant. A total of 438 respondents selected 0 as a response to this question. Again, many respondents who did not choose to answer the question at all also put a 0 as their response, which confounds the data because it is impossible to differentiate between those responding in the negative and those refusing to respond to the question. It is possible that with the exception of the non-responders the relationship between these variables may have been stronger.

Limitations

At a large Midwestern university a group of 526 college fraternity males were surveyed to determine demographics, self-esteem, alcohol consumption, and sexual risk. This was a

convenience sample, and individuals were surveyed at their fraternity houses on one occasion. The collection of data took place between Spring Break and Finals Week, which may have impacted results.

The intent of the study was to add to the current literature and begin to fill in gaps in current research by focusing on the male fraternity population. There was a lack of variability in self-esteem due to the fact that most participants reported high levels. Findings indicated no relationship between self-esteem and alcohol consumption.

It is theorized that the human brain matures when individuals are in their early 20's (Rubia et al., 2000; Sowell et al., 2003). As individuals age, neural connections become more efficient at transmitting information which increase cognitive skills; the ability to plan, memory, attention, and response inhibition (Anderson, 2002; Johnson et al., 2009). Based on the demographics of the population, all participants fell below this age range. Lack of maturity was apparent on many of the completed surveys. Although the survey called for only numerical responses, many individuals did not follow the directions and gave written responses. Many of the responses on the SRS were vulgar and inappropriate. For example, "butt puss," "your mom," "I love boobs," "I'm drunk now" and multiple expletives were given as responses to survey questions. Other examples such as "a lot," "a few," "a couple," "too many to count," "infinity," "all the time," and "plenty" were commonly given as responses. All verbal responses were omitted from data analysis because such responses are subjective. Although the members were given the option to participate in the research or politely opt out, some fraternity members were blatantly disrespectful to the researchers, with one house even going so far as to throw the surveys on the ground and walk across them as they left the room.

The intrusive nature of the survey questions may have caused respondents to become

uncomfortable and provide guarded answers. The lack of privacy and the close proximity to other members in the meeting room where participants were filling out surveys may have caused some to be additionally cautious with their responses. The fraternity house “Mom” typically attends formal dinner, so the houses who scheduled for researchers to come during their dinner had the additional pressures of responding in the presence of “Mom.” Some members may have responded with the intention of protecting the reputation of the Greek system and reported lower numbers of drinking and sexual risk, or marked 0 in response to each question to avoid answering questions altogether.

Several of the representatives from IFC who scheduled a time for the researchers to come did not communicate this with the other members of their chapter. When researchers arrived at several of the locations there were very few members present and nobody present was aware of the scheduled data collection. It was initiation week at a few of the houses and the fraternity members were very reluctant to allow non-members inside of their fraternity house. This lack of preparation on the part of the chapter houses caused the research assistants to feel as if they lacked authority over the situation.

The length of the survey was an issue at some houses because members were simultaneously eating dinner and were not as focused on their responses. At other houses the length of the survey was an issue because members were anxious to begin their chapter meeting and rushed to complete the surveys. The fact that it was “Dead Week,” or pre-finals week, may have also impacted the responses because participants may have been sleep deprived and anxious to finish with dinner and meetings and resume their studies. The instructions on the survey instrument were seemingly overlooked by many in their haste to complete the surveys, as many were not answered correctly and could not be used for data analysis.

Question number 54 on the SRS survey was frequently misunderstood by participants. It reads: How many times have you given or received fellatio (oral sex on a man) without a condom? Numerous respondents crossed this question out, or wrote comments such as, "I ain't gay," "Not gay," and "I'm straight, yo." In addition, many participants responded to the survey questions as if they were doing a 12-month recall, although the survey specifically requests only a 6-month recall. This became apparent after several responses of 365. Members were also uncertain whether their fraternity houses were on or off campus, so responses showed that some indicated living ON campus in their fraternity house while others showed they lived OFF campus in their fraternity house.

Analysis

Most fraternity members that participated in this study reported having high levels of self-esteem. This lack of variability in the independent variable created a limitation in analyzing its power to predict other variables. It was expected that there would be a negative correlation between self-esteem/binge drinking as well as self-esteem/sexual risk. There was a negative correlation; however, it was not always significant. There is literature to support that being a member of a fraternity increases levels of self-esteem so it is possible that this may explain why most members reported having high self-esteem (Atlas & Morier, 1994; Brand & Dodd, 1998). In addition, the feeling of camaraderie and "brotherhood" may increase an individual's perception of their level of self-esteem.

When looking at the results from the alcohol consequences questionnaire, only 26% of participants reported that drinking had gotten them into sexual situations they later regretted. This supports previous research that showed women were significantly more likely to report 'regret' afterwards, with men more likely to report 'satisfied' (Paul & Hayes, 2002). One-third of

respondents reported driving a vehicle after consuming alcohol. This finding is similar to that of Hingson et al, who found that one-quarter of college students reported driving while under the influence. A study by Kahler et al., 2005, showed that 60.3% of college students reported taking foolish risks while drinking, 53.2% reported passing out from drinking, and 27.1% had woken up in an unexpected place after drinking. The current findings are similar; with 58.3% of college students reported taking foolish risks while drinking, 48.3% reported passing out from drinking, and 32.2% had woken up in an unexpected place after drinking.

Alcohol use has been associated with an increase in risky sexual behavior (Randolph et al., 2009; Gullette & Lyons, 2006). Being under the influence of alcohol or illegal drugs contributes to unplanned and unprotected sexual encounters (Clapp & McDonnell, 2000; Gullette & Lyons, 2006; Hingson et al., 2002; Hingson & Howland, 2002; O'Malley & Johnston, 2002; Presley et al., 2002). Although many participants in the current study did report using alcohol and drugs before sex, the number of participants who answered with a 0 when opting not to answer the questions affected the data. In a study done by Buhi et al. (2010) 4.3% reported using a condom during oral sex, 31.4% reported using a condom while engaging in anal sex, and 58% reported using a condom at last vaginal intercourse. In the current study, 38.1% and 42.6% reported giving or receiving oral sex without protection, while the remaining participants responded with 0. It is impossible to differentiate between a numerical response of 0 and an indication of unwillingness to participate in the survey, impacting how well a comparison can be made. In this study 41.3% reported having vaginal sex without a condom, with the remaining participants responding with 0. Again, the impossibility of differentiation between a numerical response of 0 and an indication of unwillingness to participate in the survey greatly affects the integrity of the data. Around 13.6% of participants reported having sex without a condom, while the remaining participants responded with 0. Since it is not possible to

differentiate between a numerical response of 0 and an indication of unwillingness to participate in the survey data interpretation is difficult.

Areas of Future Research

More research needs to be done on self-esteem and year-in-school since so many of the current research is conflicting. It would be beneficial to repeat this study at other universities across the nation to see if there is a similar response in levels of self-esteem. Completing this study with minority populations or with a greater racial and ethnic diversity would assist in targeting public health problems within those populations. In addition, it would be helpful to also repeat this study looking college males who are not a member of a fraternity to have a comparison group. To gather data from the female perspective it is necessary to look at both at college females who are a member of a sorority compared to those who are not a member. As noted from the data, as social acceptability decreased the response rate also decreased. Future studies in this area can help to break down the social barriers and increase acceptance so that participants can respond honestly without social desirability bias.

Conclusion

The findings from this study will be beneficial to health educators and health care professionals due to the rising concerns over rates of binge drinking and STD's in college students. Research such as this can assist individuals responsible for program design and implementation with setting goals and objectives for target populations. As always, adding to the current literature assists the research community in striving for significance, which leads to change and the hopes for accomplishing goals and objectives as set by Healthy People 2020.

REFERENCES

- Abbey, A., Parkhill, M.R., Buck, P.O., & Saenz, C. (2007). Condom use with a casual partner: What distinguishes college students' use when intoxicated? *Psychology of Addictive Behaviors*, 21 (1), 76-83.
- Abbey, A., Parkhill, M.R., Jacques-Tiura, A.J., & Saenz, C. (2009) Alcohol's role in men's coercion to obtain unprotected sex. *Substance Use and Misuse*, 44, 1329-1348.
- Abbey, A., Zawacki, T., Buck, P.O., Clinton, A.M., & McAuslan, P. (2004). Sexual assault and alcohol consumption: what do we know about their relationship and what types of research are still needed? *Aggression and Violent Behavior*, 9, 271-303.
- ABC's of STD's. (1995). New York: EDK Associates.
- Adefuye, S.A., Abiona¹, T.C., Balogun, J.A. & Lukobo-Durrell, M. (2009). HIV sexual risk behaviors and perception of risk among college students: Implications for planning interventions. *BCM Public Health*, 9:281.
- Alva, S. A. (1998). Self-reported alcohol use of college fraternity and sorority members. *Journal of College Student Development*, 39, 3-10.
- American Cancer Society. (2006). Cancer facts and figures 2006. Atlanta, GA. http://www.cancer.org/docroot/STT/stt_0.asp. Retrieved March 8, 2006.

American College Health Association–National College Health Assessment (ACHA-NCHA)

Web Summary. Available at: http://www.acha-ncha.org/data_highlights.html. Accessed 28 August 2007.

American College Health Association-National College Health Assessment II (ACHA-NCHA)

Reference group Executive Summary Fall 2009. Linthicum, MD: American College Health Association, 2009.

American Foundation for Suicide Prevention. (2012). The truth about suicide: Real stories of depression in college. Retrieved from http://www.afsp.org/files/College_Film//factsheets.pdf on February 12, 2012.

Anderson P. (2002) Assessment and development of executive function (EF) during childhood.

Neuropsychological Development Cognition, Section C Child Neuropsychology, 8, 71–82.

Arnold, P., Fletcher, S., & Farrow, R. (2002). Condom use and psychological sensation seeking by college students. *Sexual and Relationship Therapy*, 17, 354-365.

Astorino, T.A., & Roberson, D.W. (2010). Efficacy of acute caffeine ingestion for short term high-intensity exercise performance-a systematic review. *Journal of Strength and Conditioning Research*, 24, 257-266.

Atlas, G. & Morrier, D. (1994). The sorority rush process: self-selection, acceptance criteria, and the effect of rejection. *Journal of College Student Development*, 35, 346-353.

Attila, S., & Cakir, B. (2011). Energy-drink consumption in college students and associated factors. *Nutrition Journal*, 27 (2011), 316-322.

- Baele, J., Dusseldorp, E., & Maes, S. (2001). Condom use self-efficacy: Effect on intended and actual condom use in adolescents. *Journal of Adolescent Health, 28*, 421–431.
- Baer, J.S. (1994). Effects of college residence on perceived norms for alcohol consumption: an examination of the first year in college. *Psychology of Addictive Behaviors, 8*, 43–50.
- Baer, J. S., & Carney, M. M. (1993). Biases in perceptions of the consequences of alcohol use among college students. *Journal of Studies on Alcohol, 54*, 54–60.
- Baer, J. S., Kivlahan, D. R., & Marlatt, G. A. (1995). High-risk drinking across the transition from high school to college. *Alcoholism: Clinical & Experimental Research, 19*, 54–61.
- Baer, J. S., Stacy, A., & Larimer, M. (1991). Biases in the perception of drinking norms among college students. *Journal of Studies on Alcohol, 52*, 580–586.
- Bagdasarov, Z., Banerjee, S., Greene, K., & Campo, Shelly. (2008). Indoor tanning and problem behavior. *Journal of American College Health, 56* (5), 555-561.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1992). A social cognitive approach to the exercise of control over AIDS infection. In R. J. DiClemente (Ed.), *Adolescents and AIDS: A generation in jeopardy* (pp. 89–116). Newbury Park, CA: Sage.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Bartholow, B. D., Sher, K. J., & Krull, J. L. (2003). Changes in heavy drinking over the third decade of life as a function of collegiate fraternity and sorority involvement: A prospective, multilevel analysis. *Journal of Health Psychology, 22*, 616- 626.

- Basen-Engquist, K. Psychosocial predictors of “safer sex” behaviors in young adults. (1992).
AIDS Education and Prevention, 4,120–134.
- Berg, C. J., Lust, K. A., Sanem, J. R., Kirch, M. A., Rudie, M., Ehlinger, E. et al. (2009). Smoker self-identification versus recent smoking among college students. *American Journal of Preventive Medicine*, 36, 333–336.
- Berning, J.M., Adams, K.J., DeBeliso, M., Stamford, B.A., & Newman, I.M. (2008). Anabolic Androgenic steroids: use and perceived use in non-athlete college students. *Journal of American College Health*, 56 (5),, 499-503.
- Berry, D. M. (2011). Depression and religiosity and/or spirituality in college: A longitudinal survey of students in the USA. *Nursing and Health Sciences*, 13, 76-83.
- Blascovich, J., & Tomaku, J. (1991). Measures of self-esteem. In J.P. Robinson, P.R. Shaver, & L.S. Wrightsman. (Eds.), *Measures of personality and social psychological attitudes* (p. 115-160). San Diego: Academic Press.
- Boeringer, S. B. (1999). Associations of rape-supportive attitudes with fraternal and athletic participation. *Violence Against Women*, 5, 81-90.
- Boeringer, S. B., Shehan, C. L., & Akers, R. L. (1991). Social contexts and social learning in sexual coercion and aggression: Assessing the contribution of fraternity membership. *Violence Against Women*, 5, 81-90.
- Borsari, B. Drinking games in the college environment: A review. *Journal of Alcohol and Drug Education*, 48, 29-51.

- Borsari B., & Carey K. B. (1999) Understanding fraternity drinking: Five recurring themes in the literature. *Journal of American College Health* 48:30–27.
- Borsari, B., & Carey, K. B. (2001). Peer influences on college drinking: A review of the research. *Journal of Substance Abuse*, 13(4), 391–424.
- Borsari, B., & Carey, K. B. (2003). Descriptive and injunctive norms in college drinking: A meta-analytic integration. *Journal of Studies on Alcohol*, 64(3), 331–341.
- Boswell, A. A., & Spade, J. Z. (1996). Fraternities and college rape culture: Why are some fraternities more dangerous places for women? *Gender & Society*, 10, 133-147.
- Brand, J.A. & Dodd, D.K. (1998) Self-esteem among college men as a function of greek affiliation and year in college. *Journal of College Student Development*, 39 (6), 611-615.
- Buckner, J. D., Schmidt, N. B., & Eggleston, A. M. (2006). Social anxiety and problematic alcohol consumption: The mediating role of drinking motives and situations. *Behavior Therapy*, 37, 381–391.
- Buhi, E.R., Marhefka, S.L. & Hoban, M.T. (2010). The state of the union: Sexual health disparities in a national sample of US college students. *Journal of American College Health*, 58 (4), 337-346.
- Caetano, R. & Cunradi, C. (2002) Alcohol dependence: A public health perspective. *Addiction*. 97 (6) 633-645.
- California State University, Fullerton. (2003) What is Greek life? Retrieved from <http://www.fullerton.edu/deanofstudents/greeklife/greek%20life.htm> on February 13, 2012.

- Capone, C., Wood, M. D., Borsari, B., & Laird, R. D. (2007). Fraternity and sorority involvement, social influences, and alcohol use among college students: A prospective examination. *Psychology of Addictive Behaviors*, 21(3), 316–327.
- Carey, K. B., Borsari, B., Carey, M. P., & Maisto, S. A. (2006). Patterns and importance of self-other differences in college drinking norms. *Psychology of Addictive Behaviors*, 20, 385–393.
- Carter, C. A., & Kahnweiler, W. M. (2000). The efficacy of the social norms approach to substance abuse prevention applied to fraternity men. *Journal of American College Health*, 49, 66–71.
- Cashin J.R., Presley, C.A., & Meilman, P.W. (1998) Alcohol use in the Greek system: Follow the leader? *Journal of Studies on Alcohol*. 59:63–70.
- Centers for Disease Control and Prevention. (2007). Cigarette smoking among adults—United States, 2006. *MMWR. Morbidity and Mortality Weekly Report*, 56, 1157–1161
- Centers for Disease Control and Prevention. (2011) Excessive alcohol use: Addressing a leading risk for death, chronic disease, and injury at a glance. Retrieved from <http://www.cdc.gov/chronicdisease/resources/publications/aag/alcohol.htm> on February 12, 2012.
- Centers for Disease Control and Prevention (2002). Guidelines for school programs to prevent skin cancer. *Morbidity and Mortality Weekly Report*, 51, 1-24.
- Centers for Disease Control and Prevention (1995). HIV/AIDS and college students: A CDC pathfinder. Retrieved from http://www.aegis.com/pubs/cdc_fact_sheets/1995/CPATH003.htm

- Centers for Disease Control and Prevention (2012). Retrieved from <http://www.cdc.gov/healthyyouth/nutrition/facts.htm> on February 12, 2012
- Centers for Disease Control and Prevention. (2009). Sexually Transmitted Disease Surveillance 2009. Retrieved from <http://www.cdc.gov/std/stats09/default.htm> on January 3, 2012.
- Centers for Disease Control and Prevention: Subpopulation Estimates from the HIV Incidence Surveillance System United States, 2006. *Morbidity and Mortality Weekly Report*, 57(36):985-989.
- Certain, H.E., Harahan, B.J., Saewyc, E.M., & Fleming, M.F. (2009) Condom use in heavy drinking college students: The importance of always using condoms. *Journal of American College Health*. 58 (3), 187-194.
- Clapp, J., & McDonnell, A. L. (2000). The relationship of perceptions of alcohol promotion and peer drinking norms to alcohol problems reported by college students. *Journal of College Student Development*, 41, 19-26.
- Clauson, K.A., Shields, K.M., McQueen, C.E., & Persad, N. (2008). Safety issues associated with commercially available energy drinks. *Journal of American Pharmacy Association*, 48, e55-63.
- College Continuation Rates for Recent High School Graduates 1959 to 2009. *Postsecondary Education Opportunity*, 2010, 215 (May) pp. 1-13.
- Cooper M. L., Agocha V. B., Sheldon M. S. (2000). A motivational perspective on risky behaviors: the role of personality and affect regulatory processes. *Journal of Personality*, 68, 1059–88.

- Courtenay, W.H. (1998). College men's health: An overview and call to action. *Journal of American College Health*, 46, 279-290.
- Courtenay, W.H. (2000). Constructions of masculinity and their influence on men's well being: A theory of gender and health. *Social Science and Medicine*, 50, 1385-1401.
- Cubbins, L.A. & Tanfer, K. (2000). The influence of gender on sex: A study of men's and women's self-reported high-risk sex behavior. *Archives of Sexual Behavior*. 29(3):229–257.
- Cyders , M.A., Flory, K., Rainer, S., & Smith, G.T. (2009). The role of personality dispositions to risky behavior in predicting first-year college drinking. *Society for the Study of Addiction*, 104, 193-202.
- Daepfen, J.B., Krieg, M.A., Burnand, B., & Yersin, B. (1998). MOS-SF-36 in evaluating health-related quality of life in alcohol-dependent patients. *American Journal of Drug and Alcohol Abuse* 24, 685-694.
- Del Boca F. K., Darkes J., Greenbaum P. E., & Goldman M. S. (2004). Up close and personal: temporal variability in the drinking of individual college students during their first year. *Journal of Consulting Clinical Psychology*, 72, 155–64.
- DeJoy DM. (1992). An examination of gender differences in traffic accident risk perception. *Accidental Analysis and Prevention*, 24(3):237-246.
- DeSantis, A., Noar, S.M., & Webb, E.M. (2009) Nonmedical Stimulant use in fraternities. *Journal of the Studies on Alcohol and Drugs*. 952-954.

- DeSantis, A., Noar, S.M., & Webb, E.M. (2010). Speeding through the frat house: a qualitative exploration of nonmedical ADHD stimulant use in fraternities. *Journal of Drug Education*. 40 (2) 157-171.
- DeSimone, J. (2007). Fraternity membership and binge drinking. *Journal of Health Economics*, 26, 950-967.
- DiClemente, R.J., Wingood, G.M., Crosby R.A., Sionean, C., Brown, L., Rothham, B., Zimand, E., Cobb, B.K., Harrington, K., & Davies, S. (2001). A prospective study of psychological distress and sexual risk behavior among black adolescent females. *Pediatrics*.108, E85.
- Dierker, L., Lloyd-Richardson, E., Stolar, M., Flay, B., Tiffany, S., Collins, L. et al. (2006). The proximal association between smoking and alcohol use among first year college students. *Drug and Alcohol Dependence*, 81, 1–9.
- Dilorio, C., Dudley, W. N., Soet, J., Watkins, J., & Maibach, E. (2000). A social cognitive-based model for condom use among college students. *Nursing Research*, 49, 208–214.
- Donovan, D., Mattson, M.E., Cisler, R.A., Longbarger, R., & Zweben, A. (2005). Quality of life as an outcome measure in alcoholism treatment research. *Journal of Studies of Alcohol*, 15, 119-139.
- Donovan, J. E., Jessor, R., & Jessor, L. (1983). Problem drinking in adolescence and young adulthood: A follow-up study. *Journal of Studies on Alcohol*, 44, 109–137.
- Dorsey, A. M., Scherer, C. W., & Real, K. (1999). The college tradition of “drink ‘til you drop”:
The relation between students’ social networks and engaging in risky behaviors. *Health Communication*, 11, 313–334.

- Douglas, K.A., Collins, J.L., & Warren, C. (1997). Results from the 1995 National College Health Risk Behavior Survey. *Journal of American College Health*, 46:55–66.
- D’Zurilla, T. J., Chang, E. C., & Sanna, L. J. (2003). Self-esteem and social problem solving as predictors of aggression in college students. *Journal of Social and Clinical Psychology*, 22, 424-440.
- Eisenberg, M., Neumark-Sztanier, D., & Paxon, S. (2004). Five-year change in body satisfaction among adolescents. *Journal of Psychosomatic Research*, 61, 521-527.
- Eng T, Butler W. (1997). *The hidden epidemic: confronting sexually transmitted diseases*. Washington: National Academy Press,
- Engs R. C., Diebold B. A., Hansen D. J. (1994). The drinking patterns and problems of a national sample of college students, *Journal of Alcohol and Drug Education*, 41: 13–33.
- Erikson, E. (1950). *Childhood and society*. New York: W.W. Norton & Company.
- Erikson, E. (1968). *Identity, youth and crisis*. New York: W.W. Norton & Company.
- Evans, N.A. (2004). Current concepts in anabolic-androgenic steroids. *American Journal of Sports Medicine*, 32, 534-542.
- Evans, N.A. (1997). Gym & tonic: a profile of 100 male steroid users. *British Journal of Sports Medicine*, 31, 54-58.
- Everette, S.A., Lowry, R., Cohen, L.R., & Dellinger, A.M. (1999). Unsafe motor vehicle practices among substance using college students. *Accident Analysis and Prevention*. 31 (6), 667-673.

- Fabian, L.E.A., Toomey, T.L., Lenk, K.M., & Erickson, D.J. (2008). Where do underage college students get alcohol? *Journal of Drug Education*, 38 (1), 15-26.
- Fabiano, P. M., McKinney, G., Bates, S., Trimble, J. E., & Pearson, K. (1993). *WWU lifestyle project: Patterns of alcohol and drug consumption and consequences among Western Washington University students*. Technical Report No. 1993-06, Western Washington University, Office of Institutional Assessment and Testing.
- Fabiano, P. M., McKinney, G., Bates, S., Trimble, J. E., & Pearson, K. (1996). *WWU lifestyle project follow-up: Patterns of alcohol and drug consumption and consequences among Western Washington University students*. Technical Report No. 1996-01, Western Washington University, Office of Institutional Assessment and Testing.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117–140.
- Foster, J.H., Marshall, E.J., & Peters, T.J. (1997). Comparison of the quality of life of cancer patients and alcohol dependents (abstract). *Quality of Life Research*, 6, 646.
- Furrow, J.L., & Wagener, L.M. (2000). Lessons learned: The role of religion in the development of wisdom in adolescence. In W.S. Brown (Ed.), *Understanding wisdom: Sources, science, & society*, 361-391. Philadelphia, PA: Templeton Foundation.
- Gayle, H.D., Keeling, R.P., Garcia-Tunonm, et al. (1990). Prevalence of human immunodeficiency virus among university students. *New England Journal of Medicine*, 323 (22), 1538-1541.
- Gfroerer, J. C., Greenblatt, J. C., & Wright, D. A. (1997). Substance use in the US college-age population: Differences according to educational status and living arrangement. *American Journal of Public Health*, 87,62–65.

- Glassman, T., Werch, C.E., Jobli, E., & Bian, H. (2007). Alcohol-related fan behavior on college football game day. *Journal of American College Health*, 56 (3), 255-260.
- Glenn, N., & Marquardt, E. (2001). *Hooking Up, Hanging Out and Hoping for Mr. Right: College Women on Dating and Mating Today*. New York: Report to the Independent Women's Forum, Institute for American Values.
- Glindemann, K. E., & Geller, E. S. (2003). A systematic assessment of intoxication at university parties: Effects of the environmental context. *Environment and Behavior*, 35, 655–664.
- Goodenow, C., Netherland, J., & Szalacha, L. (2002). AIDS related risk among adolescent males who have sex with males, females, or both: Evidence from a statewide survey. *American Journal of Public Health*, 92, 203–210.
- Gough, B., & Edwards, G. (1998). The beer talking: Four lads, a carry out and the reproduction of masculinities. *The Sociological Review*, 46(3), 409–435.
- Greene, K. & Brinn, L.S (2003). Messages influencing college women's tanning bed use: statistical versus narrative evidence format and a self-assessment to increase perceived susceptibility. *Journal of Health Communication*, 8, 443-461.
- Grello, C.M., Welsh, D.P., & Harper, M.S. (2006). No strings attached: The nature of casual sex in college students. *Journal of Sex Research*, 43, 255-267.
- Guidi, J., Pender, M., Hollon, S.D., Zisook, S., Schwartz, F.H., Pedrelli, P., Farabaugh, A., Fava, M., & Petersen, T.J. (2007). The prevalence of compulsive eating and exercise among college students: An exploratory study. *Psychiatry Research* 165 (2009) 154–162.

- Gullette, D. L., & Lyons, M. A. (2006). Sensation seeking, self-esteem, and unprotected sex in college students. *Journal of the Association of Nurses in AIDS Care, 17* (5), 23-31.
- Gullette, D. L., & Lyons, M. A. (2005). Sexual sensation seeking, compulsivity, and HIV risk behaviors in college students. *Journal of Community Health Nursing, 22*, 47-60.
- Gullette, D. L., & Turner, J.G. (2003). Pros and cons of condom use among gay and bisexual men as explored via the Internet. *Journal of Community Health Nursing, 20*, 161–171.
- Halperin, A.C., Smith, S.S., Heiligenstein, E., Brown, D., & Fleming, M.F. (2010). Cigarette smoking and associated health risks among students at five universities. *Nicotine and Tobacco Research, 12* (2) 96-104.
- Hawkins, C.A., Hawkins, R.C., Smith, M.L., & Grant, D. (2005). The relationship among hours employed, perceived work interferences, and grades as reported by undergraduate social work students. *Journal of Social Work Education, 41*, 13-27.
- Herd, D., & Grube, J. (1993). Drinking contexts and drinking problems among black and white women. *Addiction, 88*, 1101–1110.
- Hillhouse, J.J., Turrisi, R., & Kastner, M. (2000). Modeling tanning salon behavioral tendencies using appearance motivation, self-monitoring, and the theory of planned behavior. *Health Education Resource, 15*, 405-414.
- Hingson R.,Heeren T.,Winter M.,Wechsler H. (2005). Magnitude of alcohol-related mortality and morbidity among U.S. college students ages 18–24: changes from 1998 to 2001. *Annual Review of Public Health, 26*: 259–79.

- Hingson, R. W., Heeren, T., Zakocs, R. C., Kopstein A., & Wechsler, H. (2002). Magnitude of alcohol-related morality and morbidity among U.S. college students ages 18-24. *Journal of Studies on Alcohol*, 63, 136-144.
- Hingson, R., & Howland, J. (1993). Alcohol and non-traffic related injuries. *Addiction*, 88, 877–883.
- Hingson, R. W., & Howland, J. (2002). Comprehensive community interventions to promote health: Implications for college age drinking problems. *Journal of Studies on Alcohol Supplement*, 14, 226-240.
- Howard, M.A., & Marczinski, C.A. (2010). Acute effects of a glucose energy drink on behavioral control. *Experimental and Clinical Psychopharmacology*, 18 (6), 553-561.
- How Much Sleep Do We Really Need? (2009) Washington, DC: National Sleep Foundation.
Retrieved from http://www.sleepfoundation.org/site/c.huIXKjM0IxF/b.2417325/k.3EAC/How_Much_Sleep_Do_We_Really_Need.htm.
- Hoyle, R.H., Fejfar, M.C., & Miller, J.D. (2000). Personality and sexual risk taking: a quantitative review. *Journal of Personality and Social Psychology*. 68, 1203–1231.
- Husten, C. G., McCarty, M. C., Giovino, G. A., Chrismon, J. H., & Zhu, B. (1998). Intermittent smokers: A descriptive analysis of persons who have never smoked daily. *American Journal of Public Health*, 88, 86–89.
- Iwamoto, D.K., Cheng, A., Lee, C.S., Takamatsu, S., & Gordon, D. (2011). “Man-ing” up and getting drunk: The role of masculine norms, alcohol intoxication, and alcohol-related problems among college men. *Addictive Behaviors*. 36, (2011), 906-911.

- Iyadurai, S.J., & Chung, S.S. (2007). New-onset seizures in adults: possible association with consumption of popular energy drinks. *Epilepsy Behavior*, 10, 504-508.
- Jadack, R. A., Hyde, J. S., & Keller, M. L. (1995). Gender and knowledge about HIV, risky sexual behavior, and safer sex practices. *Research in Nursing Health*, 18(4), 313–324.
- Joffe, A., & Radius, S. Self-efficacy and intent to use condoms among college freshmen. (1993). *Journal of Adolescent Health*, 14, 262–68.
- Johnson, S.B., Blum, R.W., & Giedd, J.N. (2009). Adolescent maturity and the brain: The promise and pitfalls of neuroscience research in adolescent health policy. *Journal of Adolescent Health*, 45, 216–221
- Jones, R. (2004). Relationship of sexual imposition, dyadic trust, and sensation seeking with sexual risk behavior in young urban women. *Research in Nursing Health* 27, 185-197.
- Justus, A.N., Finn, P.R., & Steinmetz, J.E. (2000). The influence of traits of disinhibition on the association between alcohol use and risky sexual behavior. *Alcoholism: Clinical and Experimental Research*, 24, 1028–1035.
- Kahler, C.W., Hustad, J., Barnett, N.P., Strong, D.R., & Borsari, B. (2008). Validation of the 30-day version of the Brief Young Adult Alcohol Consequences Questionnaire for use in longitudinal studies. *Journal of Studies on Alcohol and Drugs*, 69, 611-615.
- Kahler, C.W., Strong, D.R., & Read, J.P. (2005). Toward efficient and comprehensive measurement of the alcohol problems continuum in college students: the brief young adult alcohol consequences questionnaire. *Alcoholism, Clinical And Experimental Research*, 29 (7), 1180-1189.

- Kalichman, S. C., Heckman, T., & Kelly, J. A. (1996). Sensation seeking as an explanation for the association between substance use and HIV related risky sexual behavior. *Archives of Sexual Behavior, 25*, 141–154
- Kalichman, S. C., Johnson, J. R., Adair, V., Rompa, D., Multhauf, K., & Kelly, J. A. (1994). Sexual sensation seeking: Scale development and predicting AIDS-risk behavior among homosexually active men. *Journal of Personality Assessment, 62*, 385-397.
- Kalichman, S. C. & Rompa, D. (1995). Sexual sensation seeking and sexual compulsivity scales: Reliability, validity, and predicting HIV risk behavior. *Journal of Personality Assessment, 65*, 586–601.
- Kalof, L., & Cargill, T. (1991). Fraternity and sorority membership and gender dominance attitudes. *Sex Roles, 25*, 417-423.
- Kanayama, G., Hudson, J.I., & Pope, H.G. (2010). Illicit anabolic-androgenic steroid use. *Hormonal Behavior, 58*,111–121.
- Kelly-Weeder, S. (2010). Binge drinking and disordered eating in college students. *Journal of the American Academy of Nurse Practitioners, 23* (2011), 33-41.
- Kenney, B. A., & Holahan, C. J. (2008). Depressive symptoms and cigarette smoking in a college sample. *Journal of American College Health, 56*, 409–414.
- Kernis, M.H., Whisenhunt, C.R., Waschull, S.B., Greenier, K.D., Berry, A.J., Herlocker, C.E. & Anderson, C.A. (1998). Myutiple facets of self-esteem and their relations to depressive symptoms. *Journal of Personality and Social Psychology. 24* (6), 657-668.

- Khallad, Y. (2010). Health risk behaviors among college youth. *Journal of Health Psychology*, 15 (6), 925-934.
- Konstanski, D., Fisher, A., & Gullone, E. (2004). Current conceptualization of body image dissatisfaction: Have we got it wrong? *Journal of Child Psychology and Psychiatry*, 45, 1317-1325.
- Korcuska, J.S. & Thombs, D.L. (2003). Gender role conflict and sex-specific drinking norms: Relationships to alcohol use in undergraduate women and men. *Journal of College Student Development*. 44 (2) 204-216.
- Kouri, E.M., Pope Jr, H.G., Katz, D.L., & Oliva, P. (1995). Fat-free mass index in users and nonusers of anabolic-androgenic steroids. *Clinical Journal of Sports Medicine*, 5, 223–228.
- LaBrie, J., Earlywine, M., Schiffman, J., Pedersen, E., & Marriot, C. (2005). Effects of alcohol, expectancies, and partner type on condom use in college males: Event-level analyses. *Journal of Sex Research*, 42, 259-266.
- LaBrie, J.W., Schiffman, J. & Earlywine, M. (2002). Expectancies specific to condom use mediate the alcohol and sexual risk relationship. *Journal of Sex Research*. 39(2), 145–152.
- Lambert, T., Kahn, A., & Apple, K. (2003). Pluralistic ignorance and hooking- up. *Journal of Sex Research*, 40, 129-133.
- Larimer, M. E., Irvine, D. L., Kilmer, J. R., & Marlatt, G. A. (1997). College drinking and the Greek system: Examining the role of perceived norms for high-risk behavior. *Journal of College Student Development*, 38, 587–598.

- Larimer M.E., Turner, A.P., Mallett, K.A., & Geisner, I.M. (2004). Predicting drinking behavior and alcohol-related problems among fraternity and sorority members: Examining the role of descriptive and injunctive norms. *Psychology of Addictive Behaviors*, 18:203–212.
- Laska, M.N., Pasch, K.E., Lust, K., Story, M., & Ehlinger, E. (2011). The differential prevalence of obesity and related behaviors in two-vs. four year colleges. *Obesity Journal*, 19 (2) 453-456.
- Leigh, B.C., & Stall, R. (1993). Substance use and risky sexual behavior for exposure to HIV: issues in methodology, interpretation, and prevention. *American Journal of Psychology*, 48, 1035-1045.
- Lemle, R., & Mishkind, M.E. (1989). Alcohol and masculinity. *Journal of Substance Abuse Treatment*, 6, 213-222.
- Lewis, B.A. & O’Neill, H.K. (2000). Alcohol expectancies and social deficits relating to problem drinking among college students. *Addictive Behaviors*. 25 (2), 295-299.
- Lewis, M. A., Hove, M., Whiteside, U., Lee, C. M., Kirkeby, B. J., Oster-Aaland, L., et al. (2008). Fitting in and feeling fine: Conformity and coping motives as mediators of the relationship between social anxiety and problematic drinking. *Psychology of Addictive Behaviors*, 22, 58–67.
- Lewis, M.A., Litt, D.M., Blayney, J.A., Lostutter, T.W., Granato, H., Kilmer, J.R., & Lee, C.M. (2011). They drink how much and where? Normative perceptions by drinking contexts and their association to college students’ alcohol consumption. *Journal of Studies on Alcohol and Drugs*, 72, 844-853.

- Lo, C. C., & Globetti, G. (1993). A partial analysis of the campus influence on drinking behavior: Students who enter college as nondrinkers. *Journal of Drug Issues, 23*, 715–725.
- LoCastro, J.S., Youngblood, M., Cisler, R.A., Mattson, M.E., Zweben, A., Anton, R.F., & Donovan, D.M. (2008). Alcohol Treatment Effects on Secondary Nondrinking Outcomes and Quality of Life: The COMBINE Study. *Journal of Studies on Alcohol and Drugs, 3* (2009), 186-196.
- Lonnquist LE, Weiss GL, & Larsen DL. (1992). Health value and gender in predicting health protective behavior. *Women Health, 19*(2/3):69-85.
- Low, K. G., & Gendaszek, A. E. (2002). Illicit use of psychostimulants among college students: A preliminary study. *Psychology, Health, & Medicine, 7*, 283-287.
- Lund, H.G., Reider, B.D., Whiting, A.B., & Prichard, J.R. (2010). Sleep patterns and predictors of disturbed sleep in a large population of college students. *Journal of Adolescent Health, 46* (2010), 124-132.
- Mahalik, J.R., Locke, B.D., Ludlow, L.H., Diemer, M.A., Scott, R.P.J., Gottfried, M., et al. (2003). Development of the conformity to masculine norms inventory. *Psychology of Men and Masculinity, 4* (1), 3-25.
- Malinauskas, B.M., Aeby, V.G., Overton, R.F., Carpenter-Aeby, T., & Barber-Heidal, K. (2007). A survey of energy drink consumption patterns among college students. *Nutrition Journal, 6*, 35.
- Martin, S.E., & Bryant, K. (2001). Gender differences in the association of alcohol intoxication and illicit drug abuse among persons arrested for violent and property offenses. *Journal of Substance Abuse, 13*, 563-581.

Mayo Clinic (2012). HIV/AIDS definitions. Retrieved from <http://www.mayoclinic.com/health/hiv-aids/DS00005> on February 13, 2012.

Mayo Clinic (2012). STD definitions. Retrieved from <http://www.mayoclinic.com/health/sexually-transmitted-diseases-stds/DS01123> on February 13, 2012.

McCabe, S.E., Schulenberg, J.E., Johnston, L.D., O'Malley, P.M., Bachman, J.G., & Kloska, D.D. (2005). Selection and socialization effects of fraternities and sororities on U.S. college student substance use: A multi-cohort national longitudinal study. *Addiction*, 100:512–524.

McCoul, M. D., & Haslam, N. (2001). Predicting high risk sexual behavior in heterosexual and homosexual men: The roles of impulsivity and sensation seeking. *Personality and Individual Differences*, 31,1303–1310.

Menning, C.L., (2009). Unsafe at Any House? : Attendees' Perceptions of Microlevel Environmental Traits and Personal Safety at Fraternity and Nonfraternity Parties. *Journal of Interpersonal Violence*, 24 (10) 1714-1734.

Miller, K., Danner, F., & Staten, R. (2008). Relationship of work hours with selected health behaviors and academic progress among a college student cohort. *Journal of American College Health*, 56 (6), 675-679.

Moffitt, T.E., Caspi, A., Harrington, H., & Milne, B.J. (2002). Males on the life-course-persistent and adolescence-limited antisocial pathways: follow up at age 26 years. *Developmental Psychopathology*, 14, 179-207.

- Morgan, T.J., Morganstern, J., Blanchard, K.A., LaBouvie, E., & Bux, D.A. (2003). Health-related quality of life for adults participating in outpatient substance abuse treatment. *American Journal of Addiction, 12*, 198-210.
- Murray, C & Turner, E. (2004). Health, risk, and sunbed use: a qualitative study. *Health Risk and Society, 6*, 67-80.
- Nasar, J. L., & Fisher, B. (1992). Design for vulnerability: Cues and reactions to fear of crime. *Social Science Research, 76*, 48-58.
- National Eating Disorders Association (NEDA). (2012) Retrieved from <http://www.nationaleatingdisorders.org/information-resources/general-information.php#terms-definitions> on February 13, 2012.
- National Highway Traffic Safety Administration (NHTSA). (2004). Motor vehicle occupant protection facts: Children, youth, and young adults. DOT HS 810 654. <http://www.nhtsa.dot.gov/people/injury/airbags/MVOP2004/index.htm> retrieved March 6, 2009.
- Nelson, M.C., Lust, K., Story, M., & Ehlinger, E. (2008). Credit card debt, stress, and key health risk behaviors among college students. *American Journal of Health Promotion, 33* (6), 400-407.
- Netting, N.S. & Burnett, M.L. (2004). Twenty years of student sexual behavior: Subcultural adaptations to a changing health environment. *Adolescence, 39*(153), 19–28.
- Norberg, M.M., Norton, A.R., Oliver, J., & Zvolensky, M.J. (2010). Social Anxiety, reasons for drinking, and college students. *Behavior Therapy, 41*, 555-566.

- Nyaronga, D., Greenfield, T.K., & McDonald, P.A. (2009). Drinking context and drinking problems among Black, White, Hispanic men and women in the 1985, 1995, and 2005 U.S. National Alcohol Surveys. *Journal of Studies on Alcohol and Drugs*, 70, 16-26.
- O’Dea, J.A., & Abraham, S. (2002). Eating and exercise disorders in young college men. *Journal of American College Health*, 50, 273-278.
- O’Hare, T. M. (1990). Alcohol expectancies and social anxiety in male and female undergraduates. *Addictive Behaviors*, 15, 561–566.
- Oleckno, W.A., & Blacconiere, M.J. (1990). Wellness of college students and differences by gender, race, and class standing. *College Student Journal*, 24(4):421-429.
- O’Malley, P. M., & Johnston, L. D. (2002). Epidemiology of alcohol and other drug use among American college students. *Journal of Studies on Alcohol Supplement*, 14, 23-39.
- Owen, J.J., Rhoades, G.K., Stanley, S.M., & Fincham, F.D. (2008). “Hooking Up” among college students: Demographic and psychological correlates. *Archives of Sexual Behavior*, 39, 653-663.
- Pao, M., Lyon, M., D’Angelo, L., Schuman, W., Tipnis, T., & Mrazek, D. (2000). Psychiatric diagnoses in adolescents seropositive for the human immunodeficiency virus. *Archives of Pediatric and Adolescent Medicine*, 154, 240-244.
- Parent, E. C., & Newman, D. L. (1999). The role of sensation seeking in alcohol use and risk-taking behaviors among college women. *Journal of Alcohol and Drug Education*, 44, 12-17.

- Parish, J. G., & Parish, T. S. (1991). Support systems functionality, self-concepts and alcohol use. *College Student Journal, 25*, 470–472.
- Park, A., Sher, K.J., & Krull, J.L. (2006). Individual differences in the “Greek Effect” on risky drinking: The role of self-consciousness. *American Psychological Association, 20* (1), 85-90.
- Park, A., Sher, K. J., & Krull, J. L. (2009). Selection and socialization of risky drinking during the college transition: The importance of microenvironments associated with specific living units. *Psychology of Addictive Behaviors, 23*, 404–414.
- Park, A., Sher, K.J., Wood, P.K., & Krull, J.L. (2009). Dual mechanisms underlying accentuation of risky drinking via fraternity/sorority affiliation: The role of personality, peer norms, and alcohol availability. *Journal of Abnormal Psychology, 118* (2), 241-255.
- Parkinson, A.B., & Evans, N.A. (2006). Anabolic androgenic steroids: a survey of 500 users. *Medical Science and Sports Exercise, 38*, 644-651.
- Parsons, J. T., Halkitis, P. T., Bimbi, D., & Borkowski, T.(2000). Perceptions of the benefits and cost associated with condom use and unprotected sex among late adolescent college students. *Journal of Adolescence, 23*, 377-391.
- Paul, E., & Hayes, K. (2002). The casualties of “casual” sex: A qualitative exploration of the phenomenology of college students’ hook-ups. *Journal of Social and Personal Relationships, 19*, 639-661.
- Paul, E.L., McManus, B., & Hayes, A. (2000). “Hookups”: Characteristics and correlates of college students spontaneous and anonymous sexual experiences. *Journal of Sex Research, 37*, 76-88.

- Penhollow, T. M., Young, M., & Bailey, W. (2007). Relationship between religiosity and “hooking-up” behavior. *American Journal of Health Education*, 38, 338-345.
- Peralta, R. L. (2007). College alcohol use and the embodiment of hegemonic masculinity among European American men. *Sex Roles*, 56, 741–756.
- Pernanen, K. (1991). Alcohol in human violence. New York: Guilford Press.
- Phillips, K.A., McElroy, S.L., Hudson, J.I., & Pope Jr, H.G. (1995). Body dysmorphic disorder: an obsessive-compulsive spectrum disorder, a form of affective spectrum disorder, or both. *Journal of Clinical Psychiatry*, 56, 41-51.
- Phillips, K.A., McElroy, S.L., Keck Jr, P.E., Pope Jr, H.G., & Hudson, J.I. (1993) Body dysmorphic disorder: 30 cases of imagined ugliness. *American Journal of Psychiatry*, 150, 302-308.
- Pinch, W.J., Heck, M., & Vinal, D. (1986). Health needs and concerns of male adolescents. *Adolescence*, 21(84):961-969.
- Polizzotto, M.N., Saw, M.M., Tjhung, I., Chua, E.H., & Stockwell, T.R. Fluid skills: Drinking games and alcohol consumption among Australian university students. *Drug Alcohol Review*, 26, 469-475.
- Pope Jr., H.G., Gruber, A.J., Choi, P., Olivardia, R., & Phillips, K.A. (1997). Muscle dysmorphia: an underrecognized form of body dysmorphic disorder. *Psychosomatics*, 38, 548-57.
- Prentice, D. A., & Miller, D. T. (1993). Pluralistic ignorance and alcohol use on campus: Some consequences of misperceiving the social norm. *Journal of Personality and Social Psychology*, 64, 243–256.

- Presley, C. A., Meilman, P. W., & Leichter, J. S. (2002). College factors that influence drinking. *Journal of Studies on Alcohol Supplement, 14*, 82-90.
- Presley C. A., Meilman P. W., Cashin J. R. (1998). *Alcohol and Drugs on American College Campuses: Use, Consequences, and Perceptions of the Campus Environment*, Vol. IV. 1992–1994. Carbondale, IL: Core Institute, Southern Illinois University.
- Presley C. A., Meilman P. W., Cashin J. R., Lyerla R. (1996). *Alcohol and Drugs on American College Campuses: Use, Consequences, and Perceptions of the Campus Environment*, Vol. III. 1991–1993. Carbondale, IL: Core Institute, Southern Illinois University.
- Presley C. A., Leichter M. A., Meilman P. W. (1998). *Alcohol and Drugs on American College Campuses: A Report to College Presidents: Third in a Series, 1995, 1996, 1997*. Carbondale, IL: Core Institute, Southern Illinois University.
- Puddey, I. B., Rakic, V., Dimmitt, S. B., & Beilin, L. J. (1999). Influence of pattern of drinking on cardiovascular disease and cardiovascular risk factors—a review. *Addiction, 94*, 649–663.
- Quadland, M. C. (1985). Compulsive sexual behavior: Definition of a problem and an approach to treatment. *Journal of Sex and Marital Therapy, 11*, 121–132.
- Quadland, M. C., & Shattles, W. D. (1987). AIDS, sexuality, and sexual control. *Journal of Homosexuality, 14*, 277–298.
- Randolph, M.E., Torres, H., Gore-Felton, C., Lloyd, B. & McGarvey, E.L. (2009). Alcohol use and sexual risk behavior among college students: Understanding gender and ethnic differences. *The American Journal of Drug and Alcohol Abuse. 35*, 80-84.

- Ratner, P.A., Bottorff, J.L., Johnson, J.L., & Hayduk, L.A. (1994). The interaction effects of gender within the health promotion model. *Research in Nursing and Health*, 17, 341-350.
- Read, J.P., Wood, M.D., Davidoff, O.J., McLacken, J., & Campbell, J.F. (2002). Making the transition from high school to college: The role of alcohol-related social influence factors in students' drinking. *Substance Abuse*. 23:53–65.
- Reed, M. B., Wang, R., Shillington, A. M., Clapp, J. D., & Lange, J. E. (2007). The relationship between alcohol use and cigarette smoking in a sample of undergraduate college students. *Addictive Behaviors*, 32, 449–464.
- Reissig, C.J., Strain, E.C., & Griffiths, R.R. (2009). Caffeinated energy drinks-a growing problem. *Drug and Alcohol Dependency*, 99, 1-10.
- Rigotti, N. A., Lee, J. E., & Wechsler, H. (2000). US college students' use of tobacco products: Results of a national survey. *Journal of American Medical Association*, 284, 699–705.
- Rolison, M. R. (2002). Factors influencing adolescents' decision to engage in risk-taking behaviors. *Adolescence*, 37, 585-597.
- Rosenberg, Morris. (1989). *Society and the Adolescent Self-Image*. Revised edition. Middletown, CT: Wesleyan University Press.
- Roth, T., Roehrs, T.A., Carskadon, M.A. et al. (1994). Daytime sleepiness and alertness. In: Kryger, M.H. Roth, T., Dement, W.C., eds. *Principles and Practice of Sleep Medicine*. 2nd edition. Philadelphia, PA: Saunders, 40-49.
- Rubia K, Overmeyer S, Taylor E, et al.(2000). Functional frontalisation with age: Mapping neurodevelopmental trajectories with fMRI. *Neuroscience Biobehavioral*, 24:13–9.

- Rutledge, P.C., Park, E., & Sher, K.J. (2008). 21st birthday drinking: Extremely extreme. *Journal of Consulting and Clinical Psychology*, 76 (3), 511-516.
- Sadovsky, V. V., Keller, M. L., & McKinney, K. (2002). College student's perceptions and practices of sexual activities in sexual encounters. *Journal of Nursing Scholarship*, 34, 133-138.
- Schall, M., Kemeny, A., & Maltzman, I., (1992). Factors associated with alcohol use in University students. *Journal of Studies on Alcohol*, 53 (2), 122-136.
- Scott-Sheldon, L.A., Carey, K.B. & Carey, M.P. (2008). Health behavior and college students: Does Greek affiliation really matter? *Journal of Behavioral Medicine*, 31, 61-70.
- Seal, A., Minichiello, V., & Omodei, M. (1997). Young women's sexual risk taking behaviour: revisiting the influences of sexual self-efficacy and sexual self-esteem. *International Journal of STD/AIDS*, 8, 159-65.
- Sher K.J., Bartholow, B.D., & Nanda S. (2001) Short- and long-term effects of fraternity and sorority membership on heavy drinking: A social norms perspective. *Psychology of Addictive Behaviors*. 15:42-51.
- Sher, K. J., Trull, T. J., Bartholow, B. D., & Vieth, A. (1999). Personality and alcoholism: Issues, methods, and etiological processes. In K. E. Leonard & H. T. Blane (Eds.), *Psychological theories of drinking and alcoholism* (2nd ed., pp. 54-105). New York: Guilford.
- Shisslak, C., Crago, M., & Estes, L. (1995). The spectrum of eating disturbances. *International Journal of Eating Disorders*, 18, 209-219.

- Shrier, L., Emans, S., Woods, E., & DuRant, R. (1996). The association of sexual risk behaviors and problem drug behaviors in high school students. *Journal of Adolescent Health, 20*, 377–383.
- Sinha, J.W., Cnaan, R.R., & Gelles, R.W. (2007). Adolescent risk behaviors and religion: Findings from a national study. *Journal of Adolescence, 30*, 231-249.
- Sowell E.R., Petersen B.S., Thompson P.M., et al. (2003) Mapping cortical change across the human life span. *Nature Neuroscience, 6*, 309–315.
- Sterk, C. E., Klein, H., & Elifson, K. W. (2004). Predictors of condom-related attitudes among at-risk women. *Journal of Women’s Health, 13*, 676-688.
- Stewart, S. H., Morris, E., Mellings, T., & Komar, J. (2006). Relations of social anxiety variables to drinking motives, drinking quantity and frequency, and alcohol-related problems in undergraduates. *Journal of Mental Health, 15*, 671–682.
- Stice, E., Killeen, J.D., Hayward, C., & Taylor, C.B. (1998). Support for the continuity hypothesis of bulimic pathology. *Journal of Consulting and Clinical Psychology, 66*, 784-790.
- Stiffman A, Dore P, Earls F, Cunningham R. (1992). The influence of mental health problems on AIDS-related risk behaviors in young adults. *Journal of Nervous and Mental Disorders, 180*, 314–320.
- Stompler, M. (1994). “Buddies” or “slutties”: The collective sexual reputation of fraternity little sisters. *Gender & Society, 8*, 297-323.

- Substance Abuse & Mental Health Services Administration (SAMHSA). (2009). Facts about common mental illness. Retrieved from [http://promoteacceptance.samhsa.gov/publications /thefacts.aspx#adhd](http://promoteacceptance.samhsa.gov/publications/thefacts.aspx#adhd) on February 13, 2012.
- Substance Abuse & Mental Health Services Administration (SAMHSA). (2007). *Results from the 2006 National Survey on Drug Use and Health: national findings. (NSDUH Series H-32, DHHS Publication No. SMA 07-4293)*. Rockville, MD: Office of Applied Studies, USDHHS.
- Sullivan, L.E., Fiellin, D.A., & O'Connor, P.G. (2005). The prevalence and impact of alcohol problems in major depression: a systematic review. *American Journal of Medicine*. 118, 330–341.
- Taub, J.M. (1978). Behavioral and psychophysiological correlates of irregularity in chronic sleep routines. *Biological Psychology*, 7, 37-53.
- Taylor, D.J., & Bramoweth, A.D. (2010). Patterns and consequences of inadequate sleep in college students: Substance use and motor vehicle accidents. *Journal of Adolescent Health*, 46 (2010) 610-612.
- Tennen, H., & Herzberger, S. (1987). Depression, self-esteem, and the absence of self-protective attributional biases. *Journal of Personality and Social Psychology*, 52, 72-80.
- Testa, M. (2002). The impact of men's alcohol consumption on perpetration of sexual aggression. *Clinical Psychology Review*, 22, 1239-1263.
- Teter, C.J., McCabe, S.E., Cranford, J.A., Boyd, C.J., & Guthrie, S.K. (2005). Prevalence and motives for illicit use of prescription stimulants in and undergraduate student sample. *Journal of American College Health*. 53, 253-262.

- Teter, C.J., McCabe, S.E., LaGrange, K., Cranford, J.A., & Boyd, C.J. (2006). Illicit use of specific prescription stimulants among college students: Prevalence, motives, and routes of administration. *Pharmacotherapy*, 26, 1501-1510.
- Thombs, D.L. (1995). Problem behavior and academic achievement among first-semester college freshman. *Journal of College Student Development*, 36, 280-288.
- Thome, J., & Espelage, D.L. (2004). Relations among exercise, coping, disordered eating, and psychological health among college students. *Eating Behaviors* 5, 37–351.
- Tolou-Shams, M., Brown, L.K., Houck, C., & Lescano, C.M. (2008). The association between depressive symptoms, substance use, and HIV risk among youth with an arrest history. *Journal of Studies on Alcohol and Drugs*. 69, 58–64.
- Tourangeau, R., & Yan, T. (2007). Sensitive Questions in Surveys. *Psychological Bulletin*, 133, (5), 859–883.
- Tsai, L.L., & Li, S.P (2004). Sleep patterns in college students: Gender and grade differences. *Journal of Psychosomatic Research*, 56, 231-237.
- Turchik, J.A., & Garske, J.P. (2009). Measurement of sexual risk taking among college students. *Archives of Sexual Behavior*, 38, 936-948.
- University of Maryland: Department of Sociology. (2012). Using The Rosenberg Self-Esteem Scale. Retrieved from <http://www.bsos.umd.edu/socy/Research/rosenberg.htm> on January 26, 2012.

- Valliant, P. M., & Scanlan, P. (1996). Personality, living arrangements, and alcohol use by first year university students. *Social Behavior and Personality: An International Journal*, 24, 151–156.
- Volk, R.J., Cantor, S.B., Steinbauer, J.R., & Cass, A.R. (1997). Alcohol use disorders, consumption patterns, and health-related quality of life of primary care patients. *Alcoholism Clinical and Experimental Research*, 21, 899-905.
- Wagner, M. K. (2001). Behavioral characteristics related to substance abuse and risk-taking, sensation seeking, anxiety sensitivity, and self-reinforcement. *Addictive Behaviors*, 26, 115- 20.
- Walters, T.S. & Bennett, M.E. (2000). Addressing drinking among college students: a review of the empirical literature. *Alcoholism Treatment Quarterly*. 18:61–77.
- Wannamethee, S. G., Shaper, A. G., Perry, I. J., & Alberti, K. G. M. M. (2002). Alcohol consumption and incidence of type II diabetes. *Journal of Epidemiology and Community Health*, 56, 542–548.
- Ward, B. W., & Gryczynski, J. (2009). Social learning theory and the effects of living arrangement on heavy alcohol use: Results from a national study of college students. *Journal of Studies on Alcohol and Drugs*, 70, 364–372.
- Ward, S. K., Chapman, K., Cohn, E., White, S., & Williams, K. (1991). Acquaintance rape and the college social scene. *Family Relations*, 40, 65-71.

- Waring, W.S., Goudsmit, J., Marwick, J., Webb, D.J., & Maxwell, S.R. (2003). Acute caffeine intake influences central more than peripheral blood pressure in young adults. *American Journal of Hypertension*, 16, 919-924.
- Wechsler, H., Davenport, A., Dowdall, G., Moeykens, B., & Castillo, S. (1994). Health and behavioral consequences of binge drinking in college: A national survey of students at 140 campuses. *Journal of the American Medical Association*, 272 (21), 1672-1677.
- Wechsler, H., Dowdall, G.W., Davenport, A., & Castillo, S. (1995). Correlates of college student binge drinking. *American Journal of Public Health*, 85, 921-926.
- Wechsler, H., Kuh, G.D., & Davenport, A. (1996). Fraternities, sororities, and binge drinking: results from a national study of American Colleges. *NASPA Journal*, 33 (4), 260-279.
- Wechsler, H. & Nelson, T.F. (2008). What we have learned from the Harvard School of Public Health College Alcohol Study: Focusing attention on college student alcohol consumption and the environmental conditions that promote it. *Journal of Studies on Alcohol and Drugs*. 69:481-490.
- Wechsler H., Lee J. E., Kuo M., Lee H. (2000). College binge drinking in the 1990s: a continuing problem: results of the Harvard School of Public Health 1999 college alcohol study. *Journal of American College Health* 48: 199-210.
- Wechsler H., Lee J., Kuo M., Seibring M., Nelson T. F., Lee H. (2002). College binge drinking in the 1990s: a continuing problem. *Journal of American College Health*, 48: 199-210.
- Wechsler, H., Lee, J., Kuo, M., Seibring, M., Nelson, T.F., & Lee, H. (2002). Trends in college binge drinking during a period of increased prevention efforts: Findings from 4 Harvard

School of Public Health College Alcohol Study surveys: 1993–2001. *Journal of American College Health*. 50:203–217.

Weinstock, H., Berman, S., & Cates, W. Jr. (2004). Sexually transmitted diseases among American youth: incidence and prevalence estimates, 2000. *Perspectives on Sex and Reproductive Health*. 36, 6-10.

Wells, S., Graham, K., Speechley, M., & Koval, J. J. (2005). Drinking patterns, drinking contexts and alcohol-related aggression among late adolescent and young adult drinkers. *Addiction*, 100, 933–944.

Welte, J.W., Barnes, G.M., Hoffman, J.H., Wieczorek, W.F., & Zhang, L. (2005). Substance involvement and the trajectory of criminal offending in young males. *American Journal of Drug and Alcohol Abuse*, 31, 267-284.

Wetter, D. W., Kenford, S. L., Welsch, S. K., Smith, S. S., Fouladi, R. T., Fiore, M. C. et al. (2004). Prevalence and predictors of transitions in smoking behavior among college students. *Health Psychology*, 23, 168–177.

Wood, M. D., Nagoshi, C. T., & Dennis, D. A. (1992). Alcohol norms and expectations as predictors of alcohol use and problems in a college student sample. *American Journal of Drug and Alcohol Abuse*, 18, 461–476.

Workman, T. A. (2001). Finding the meanings of college drinking: An analysis of fraternity drinking stories. *Health Communication*, 13, 427-447.

World Health Organization (2012). Depression. Retrieved from <http://www.who.int/mentalhealth/management/depression/definition/en/> on February 12, 2012.

- Wilburn, V. R., & Smith, D. E. (2005). Stress, self-esteem, and suicide ideation in late adolescents. *Adolescence, 40*, 33-45.
- Wulfert, E., & Wan, C. K. (1993). Condom use: A self-efficacy model. *Health Psychology, 12*, 346–353.
- Yesmont, G. A. (1992). The relationship of assertiveness to college students' safer sex behaviors. *Adolescence, 27*, 253–272.
- Young, M., Pehnollow, T.M., & Bailey, W.C. (2010). Hooking-up and condom provision: Is there a double standard? *American Journal of Health Studies, 25* (3), 156-164.
- Zamboanga, B.L., Horton, N., Tyler, K., O'Riordan, S., Calvert, B., & McCollum, E. (2007). The utility of the AUDIT in screening for drinking game involvement among female college students. *Journal of Adolescent Health, 40*, 359-361.
- Zamboanga, B.L., Leitkowski, L.K., Rodriguez, L., & Cascio, K.A. (2006). Drinking games in female college students: More than just a game? *Addictive Behavior, 31*, 1485-1489.
- Zamboanga, B.L., Schwartz, S.J., Van Tyne, K., Ham, L.S., Olthius, J.V., Huang, S., Kim, S.Y., Hudson, M., Forthun, L.F., Bersamin, M., & Weisskirch, R. (2010). Drinking game behaviors among college students: How often and how much? *The American Journal of Drug and Alcohol Abuse, 36*, 175-179.
- Zamboni, B. D., Crawford, I., & Williams, P. G. (2000). Examining communication and assertiveness as predictors of condom use: Implications for HIV prevention. *AIDS Education and Prevention, 12*, 492–504.

Zuckerman, M. (1983). A biological theory of sensation seeking. In M. Zuckerman (Ed.),
Biological bases of sensation: Seeking, impulsivity, and anxiety (pp. 37-76). Hillsdale,
NJ: Lawrence Erlbaum Associates, Inc.

APPENDICES

APPENDIX I

FORMAL SCRIPT

FORMAL SCRIPT

Hi, my name is Jennifer Ferguson and I am a Masters student in the School of Applied Health and Education Psychology Health Promotion program. I'm here today requesting your assistance in my research by filling out a completely anonymous survey. The purpose of my research is to look at the relationship between self-esteem, alcohol consumption, and risky sexual behavior.

As an alumna of the Greek system at Oklahoma State University, I wanted to work with the Interfraternity council to examine this relationship and collaborate with the IFC to create educational materials to keep our members' safe. I will be visiting each of the chapter houses and all surveys will be shuffled together, rendering it impossible to differentiate between responses from houses.

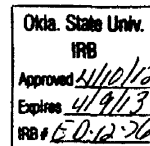
Your participation is completely voluntary and you may skip any questions that you do not wish to answer. After the data is analyzed I will provide educational materials to Ival Gregory, which he can disseminate to the IFC at a meeting in the Fall of 2012.

Again, the surveys are completely anonymous and have no identifiers but will still be kept under lock and key in the office of the Primary Investigator until the data is analyzed in May 2012, after which the surveys will be shredded.

I hope you will consider taking approximately 20 minutes of your time to assist with this research to keep our campus and Greek community safe.

If you choose to participate, completion of this anonymous survey is considered to be consent.

Thank you for your time.



APPENDIX II

COVER SHEET/NOTICE OF PROCEDURE AND CONSENT

Participant Information Oklahoma State University

PLEASE REMOVE THESE NOTES FROM THE SURVEY AND RETAIN FOR YOUR RECORDS

Title: Self-Esteem, Alcohol Consumption, and Risky Sexual Behavior in College Fraternity Males

Investigators:

Primary Investigator: Jennifer Ferguson, B.S., Health Promotion, Candidate for M.S., Health Promotion Oklahoma State University

Advisor: Bridget Miller, Ph.D., Associate Professor, Health Education & Promotion, Oklahoma State University

Purpose: The purpose of this study is to study the relationship between self-esteem, alcohol consumption, and risky sexual behaviors that could result in contracting a sexually transmitted disease. A vast amount of research on self-esteem and sexual risk has been done with women and adolescents. This study will focus on men to gain an understanding and begin to fill the gaps in research.

What to expect: Participation in this research will require completion of 1 demographic questionnaire and 3 surveys that focus on self-esteem, alcohol consumption, and sexual history/experiences. Please complete each question before moving on to the next question. However, you may skip any questions you do not wish to answer. It should take you about 20 minutes to complete the survey.

Risks: The principal risks associated with this study are those associated with a breach in confidentiality. To minimize these risks no identifiers are to be associated with your data and no signed record of your consent will be collected.

Benefits: You may gain an appreciation and understanding of how research is conducted.

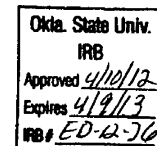
Compensation: The PI has agreed to create educational materials for the **Interfraternity Council**. Following completion of data analysis in the summer of 2012, education materials targeting the needs of chapter houses on campus will be created and submitted to Ivai Gregory, who will disseminate the information to the IFC in the Fall of 2012 to be utilized for education and intervention purposes.

Your rights: Your participation in this research is voluntary. There is no penalty for refusal to participate, and you are free to withdraw your consent and participation in this project at any time without penalty.

Confidentiality: These surveys are completely anonymous and have no identifiers included. The completed surveys from every chapter house on campus will be shuffled into the same stack, rendering it impossible to differentiate between houses. Neither you nor your chapter house will be identified individually; this research will look at the Greek community as a whole. Surveys will be kept under lock and key in the office of the PI until they are scored and analyzed in the summer of 2012, at which time they will be shredded. The only individuals with access to the completed surveys will be the PI and the statistical consultant.

Contacts: You may contact the researcher at the following address and phone number should you desire to discuss your participation in the study and/or request information about the results of the study.
Primary Investigator: Jennifer Ferguson, B.S., Willard, School of Applied Health and Educational Psychology (SAHEP), Stillwater, OK 74078, (405) 714-4707. Advisor: Dr. Bridget Miller, 427 Willard, Stillwater, OK 74078, 405-744-7680. If you have questions about your rights as a research volunteer, you may contact Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu.

If you choose to participate: By completing the survey, you are giving your consent.



APPENDIX III

INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL LETTER

Oklahoma State University Institutional Review Board

Date: Tuesday, April 10, 2012
IRB Application No ED1276
Proposal Title: Self-Esteem, Alcohol Consumption, and Sexual Risk in College Fraternity Males (Thesis)

Reviewed and Processed as: Exempt

Status Recommended by Reviewer(s): Approved Protocol Expires: 4/9/2013

Principal Investigator(s):

Jennifer Ferguson	Bridget Miller
P.O. Box 874	427 Willard
Stillwater, OK 74076	Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,



Shelia Kennison, Chair
Institutional Review Board

APPENDIX IV

INTERFRATERNITY COUNCIL (IFC) CORRESPONDENCE

Dear XXXX,

I am currently a graduate student in the College of Education pursuing a Masters of Science in Health Promotion. As an undergraduate student, I was a member of a sorority at and attended many Greek events. I became interested in how self-esteem played a role in binge drinking and impacted sexual risk. As a Health Educator, I am familiar with the high rates of binge drinking and sexually transmitted diseases in the college population and wanted an opportunity to examine this further.

I would like to look at these associations using 3 surveys; the first that measures self-esteem, the second that focuses on alcohol consumption, and the final that looks at sexual risk behaviors. The combination of these 3 surveys should take no longer than 15 minutes to complete. I am interested in studying these associations within fraternity members.

For each chapter's participation in the study I would like to offer an educational seminar over binge drinking and sexually transmitted diseases if they should choose to accept. I would also be interested in putting together a health and safety presentation that can be implemented by fraternity members in the future.

I appreciate your taking the time to bring this request to the Interfraternity Council.

Thank you,
Jennifer Ferguson

Jennifer,

We will discuss this at IFC Exec next Sunday in preparation for its presentation at Pike on November 17th. If you have any additions or corrections between now and that time let me know.

XXXX

I sent an email from my phone and it obviously didn't work properly. My apologies. I will be at the meeting tomorrow, thank you for passing along my phone number to the gentleman who called.

Sincerely,
Jennifer Ferguson

Great!

XXXX

Hello XXXX,

I am preparing to submit my official IRB application and it would be helpful to have documentation that I was given permission to work with the IFC and chapter houses for my research. I spoke with you and YYYY over the phone several times last semester but I was wondering if you would be willing to type a brief

statement that indicates I presented to you and the IFC and was given approval to visit the houses during their weekly meeting time to administer my survey instrument.

Thank you for your time,

Jennifer Ferguson

Ms. Ferguson,

I can verify that you spoke to IFC on November 17, 2011, to present your proposal for data collection from the fraternities. I have attached the minutes of that meeting to document your presence and the topic of your presentation to the Interfraternity Council on that date.

I will remind the members of IFC, who are almost all new this semester, of your proposal and of the acceptance of same by their predecessors at the IFC meeting this week.

XXXX

***Meeting Minutes are not included due to confidentiality issues with the inclusion of member names.**

APPENDIX V

SURVEY INSTRUMENT

SURVEY INSTRUMENT

THE FOLLOWING INSTRUMENT WILL MEASURE DEMOGRAPHICS, PSYCHOLOGICAL, AND SOCIAL RISK FACTORS AS THEY PERTAIN TO HEAVY EPISODIC DRINKING AND RISKY SEXUAL BEHAVIOR.

PLEASE ANSWER ALL QUESTIONS, DO NOT LEAVE ANY BLANK.

PLEASE ANSWER HONESTLY, AS ALL RESPONSES WILL REMAIN ANONYMOUS.

INSTRUMENTS FROM EACH CHAPTER HOUSE WILL BE SHUFFLED INTO ONE STACK, RENDERING IT IMPOSSIBLE TO DIFFERENTIATE WHICH RESPONSES CAME FROM EACH HOUSE.

YOUR PARTICIPATION IS GREATLY APPRECIATED.

1	What is your current age? <input type="checkbox"/> 18 <input type="checkbox"/> 19 <input type="checkbox"/> 20 <input type="checkbox"/> 21 <input type="checkbox"/> 22 <input type="checkbox"/> 23 <input type="checkbox"/> 24 <input type="checkbox"/> 25+
2	What is your gender? <input type="checkbox"/> female <input type="checkbox"/> male <input type="checkbox"/> intergender <input type="checkbox"/> transgender
3	What race do you identify with most closely? <input type="checkbox"/> Asian/Pacific Islander <input type="checkbox"/> Black/African American <input type="checkbox"/> Native American <input type="checkbox"/> White/Caucasian <input type="checkbox"/> Other
4	What race do you identify with most closely? Select all that apply. <input type="checkbox"/> Hispanic <input type="checkbox"/> Non-Hispanic
5	What is your current academic class standing? <input type="checkbox"/> freshman <input type="checkbox"/> sophomore <input type="checkbox"/> junior <input type="checkbox"/> senior <input type="checkbox"/> graduate student
6	What is your current relationship status? <input type="checkbox"/> single, not in a committed relationship <input type="checkbox"/> single, in a committed relationship <input type="checkbox"/> married <input type="checkbox"/> separated or divorced <input type="checkbox"/> widowed
7	What sexual orientation do you identify with most closely? <input type="checkbox"/> heterosexual <input type="checkbox"/> homosexual <input type="checkbox"/> bisexual
8	Which religious affiliation do you identify with most closely? Please list below. _____
9	How often do you attend church? <input type="checkbox"/> daily <input type="checkbox"/> weekly <input type="checkbox"/> monthly <input type="checkbox"/> more than twice a year <input type="checkbox"/> never

10	<p>What is your current Greek status?</p> <p><input type="checkbox"/> active member <input type="checkbox"/> inactive member <input type="checkbox"/> uninitiated future member (pledge) <input type="checkbox"/> alumni</p>
11	<p>What is your current residential status?</p> <p><input type="checkbox"/> on campus and live alone <input type="checkbox"/> on campus and live with roommate(s) How many roommates? _____</p> <p><input type="checkbox"/> off campus and live alone <input type="checkbox"/> off campus and live with roommates(s) How many roommates? _____</p>
12	<p>Do you live with your significant other?</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no</p>
13	<p>Where do you currently live?</p> <p><input type="checkbox"/> fraternity chapter house <input type="checkbox"/> fraternity chapter managed/owned apartments</p> <p><input type="checkbox"/> residence hall/dorm <input type="checkbox"/> house/mobile home <input type="checkbox"/> apartment/duplex</p>
14	<p>Have you ever been tested for a Sexually Transmitted Disease (STD)?</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no (if no, skip to question 18)</p>
15	<p>What method was used for STD testing?</p> <p><input type="checkbox"/> blood draw <input type="checkbox"/> penis swab <input type="checkbox"/> both blood draw and penis swab <input type="checkbox"/> urine sample</p>
16	<p>Have you ever tested positive for an STD?</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no (if no, skip to question 18)</p>
17	<p>Please indicate ALL of the sexually transmitted occurrences you have EVER tested positive for.</p> <p><input type="checkbox"/> chlamydia <input type="checkbox"/> gonorrhea <input type="checkbox"/> syphilis <input type="checkbox"/> herpes <input type="checkbox"/> pubic lice/crabs <input type="checkbox"/> trichomoniasis</p> <p><input type="checkbox"/> hepatitis <input type="checkbox"/> scabies <input type="checkbox"/> human immunodeficiency virus (HIV)</p> <p><input type="checkbox"/> human papilloma virus (HPV) ex: genital warts <input type="checkbox"/> Other: _____</p>
18	<p>Are you aware of anyone <i>in your fraternity at OSU</i> who has tested positive for an STD?</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no If yes, how many people? _____</p>
19	<p>Are you aware of anyone <i>in another fraternity at OSU</i> who has tested positive for an STD?</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no If yes, how many people? _____</p>
20	<p>Are you aware of anyone <i>in a fraternity outside of OSU</i> who has tested positive for an STD?</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no If yes, how many people? _____</p>

<p>Below is a list of statements regarding your general feelings about yourself.</p> <p>If you STRONGLY AGREE, circle SA. If you AGREE, circle A.</p> <p>If you DISAGREE, circle D. If you STRONGLY DISAGREE, circle SG.</p>		4	3	2	1
		Strongly Agree	Agree	Disagree	Strongly Disagree
21	I feel that I am a person of worth, at least on an equal plane with others	SA	A	D	SD
22	I feel that I have a number of good qualities	SA	A	D	SD
23	All in all, I am inclined to feel that I am a failure	SA	A	D	SD
24	I am able to do things as well as most other people	SA	A	D	SD
25	I feel I do not have much to be proud of	SA	A	D	SD
26	I take a positive attitude toward myself	SA	A	D	SD
27	On the whole, I am satisfied with myself	SA	A	D	SD
28	I wish I could have more respect for myself	SA	A	D	SD
29	I certainly feel useless at times	SA	A	D	SD
30	At times I think I am no good at all	SA	A	D	SD
<p>A drink is defined as a 12 oz. bottle of 5% beer or wine cooler, a 5 oz. glass of 12% wine, or a 1.5 oz. shot of 80 proof liquor straight or in a mixed drink.</p> <p>Please note that in the state of Oklahoma one bottle of beer typically contains only 3.2% alcohol. Please view the Beer Conversion chart to determine how many 3.2% beers are equivalent to one 5% beer.</p>		<p>Beer Conversion Chart</p> <p>Number of 3.2% Beers ↔ Number of 5% beers</p> <p>(2) 3.2% beers = (1) 5% beer (11) 3.2% beers = (7) 5% beers</p> <p>(3) 3.2% beers = (2) 5% beers (12) 3.2% beers = (8) 5% beers</p> <p>(5) 3.2% beers = (3) 5% beers (14) 3.2% beers = (8) 5% beers</p> <p>(6) 3.2% beers = (4) 5% beer (15) 3.2% beers = (10) 5% beers</p> <p>(8) 3.2% beers = (5) 5% beers (17) 3.2% beers = (11) 5% beers</p> <p>(9) 3.2% beers = (6) 5% beers (19) 3.2% beers = (12) 5% beers</p>			
<p>Please refer to the instructions and conversion chart above and record your best estimate of consumption.</p>					RESPONSE
31	At what age did you have your first drink of alcohol (full drink, not just a few sips)?				
32	Over the past 2 weeks, on how many occasions have you had 5 or more drinks in a row?				
33	During the past 30 days, how many days did you have at least one drink of alcohol?				

Below is a list of things that sometimes happen to people either during or after they have been drinking alcohol. Next to each item below, please circle either YES or NO to indicate whether that item describes something that has happened to you <u>IN THE PAST YEAR</u> .		YES	NO
34	I have had a hangover (headache, sick stomach) the morning after I had been drinking.	YES	NO
35	I have taken foolish risks when I have been drinking.	YES	NO
36	I've not been able to remember large stretches of time while drinking heavily.	YES	NO
37	My drinking has gotten me into sexual situations I later regretted.	YES	NO
38	I often have ended up drinking on nights when I had planned not to drink.	YES	NO
39	I have woken up in an unexpected place after heavy drinking.	YES	NO
40	I have felt badly about myself because of my drinking.	YES	NO
41	I have driven a car when I knew I had too much to drink to drive safely.	YES	NO
42	I have neglected my obligations to family, work, or school because of drinking.	YES	NO
43	I have passed out from drinking	YES	NO

Disclaimer:

On the following page is the Sexual Risk Survey.

This survey includes slang terminology which may be offensive to some participants.

However, use of this terminology is necessary to obtain the most accurate behavioral recall.

This behavioral recall methodology will assist in identifying prevalent high-risk health behaviors.

Please read the following statements and record the number that is true for you over the past 6 months for each question on the blank. If you do not know for sure how many times a behavior took place, try to estimate the number as close as you can. Thinking about the average number of times the behavior happened per week or per month might make it easier to estimate an accurate number, especially if the behavior happened fairly regularly. If you've had multiple partners, try to think about how long you were with each partner, the number of sexual encounters you had with each, and try to get an accurate estimate of the total number of each behavior.

If the question does not apply to you or you have never engaged in the behavior in the question, put a "0" on the blank. Please do not leave any items blank.

Remember that in the following questions "sex" includes oral, anal, and vaginal sex and that "sexual behavior" includes passionate kissing, making out, fondling, petting, oral-to-anal stimulation, and hand-to-genital stimulation.

Refer to the Glossary for any words you are not sure about. Please be aware that the survey contains slang terminology to assist in behavioral recall. This terminology may be offensive to some participants but is required to identify high-risk behaviors.

Please consider only the last 6 months when answering and please be honest.

In the past six months...		Number
44	How many partners have you engaged in sexual behavior with but not had sex with?	
45	How many times have you left a social event with someone you just met?	
46	How many times have you "hooked up" but not had sex with someone you didn't know or didn't know well?	
47	How many times have you gone out to bars/parties/social events with the intent of "hooking up" and engaging in sexual behavior but not having sex with someone?	
48	How many times have you gone out to bars/parties/social events with the intent of "hooking up" and having sex with someone?	
49	How many times have you had an unexpected and unanticipated sexual experience?	
50	How many times have you had a sexual encounter you engaged in willingly but later regretted?	

For the next set of questions, follow the same direction as before. However, for questions 8–23, if you have never had sex (oral, anal, or vaginal), please put a "0" on each blank.

51	How many partners have you had sex with?	
52	How many times have you had vaginal intercourse without a latex or polyurethane condom? Note: Include times when you have used a lambskin or membrane condom.	
53	How many times have you had vaginal intercourse without protection against pregnancy?	
54	How many times have you given or received fellatio (oral sex on a man) without a condom?	
55	How many times have you given cunnilingus (oral sex on a woman) without a dental dam or "adequate protection" (please see definition of dental dam for what is considered adequate protection)?	

56	How many times have you had anal sex without a condom?		
57	How many times have you or your partner engaged in anal penetration by a hand (“fisting”) or other object without a latex glove or condom followed by unprotected anal sex?		
58	How many times have you given or received anilingus (oral stimulation of the anal region, “rimming”) without a dental dam or “adequate protection”(please see definition of dental dam for what is considered adequate protection)?		
59	How many people have you had sex with that you know but are not involved in any sort of relationship with (i.e., “friends with benefits”, “fuck buddies”)?		
60	How many times have you had sex with someone you don’t know well or just met?		
61	How many times have you or your partner used alcohol or drugs before or during sex?		
62	How many times have you had sex with a new partner before discussing sexual history, IV drug use, disease status and other current sexual partners?		
63	How many times (that you know of) have you had sex with someone who has had many sexual partners?		
64	How many partners (that you know of) have you had sex with who had been sexually active before you were with them but had not been tested for STIs/HIV?		
65	How many partners have you had sex with that you didn’t trust?		
66	How many times (that you know of) have you had sex with someone who was also engaging in sex with others during the same time period?		
67	Are you more inclined to “hook up” with a member of a fraternity/sorority than a student who is not a member of the Greek system?	YES	NO
68	<p>Please indicate ALL circumstances where you have met an individual that you have hooked up with</p> <p><input type="checkbox"/> Member of a fraternity/sorority <input type="checkbox"/> in class <input type="checkbox"/> at work <input type="checkbox"/> bar/nightclub <input type="checkbox"/> volunteering <input type="checkbox"/> sports team/league</p> <p><input type="checkbox"/> through family/friends <input type="checkbox"/> at church <input type="checkbox"/> online <input type="checkbox"/> at a party <input type="checkbox"/> a club/organization <input type="checkbox"/> living situation</p> <p><input type="checkbox"/> public places</p>		

SURVEY INSTRUMENT REFERENCES:

Questions 01-20 Demographic Questionnaire

Questions 21-30 Rosenberg Self-Esteem Scale (Rosenberg, 1989)

Questions 31- 43 Brief Young Adult Alcohol Consequences Questionnaire (B-YAACQ) Revised (Kahler et al., 2005)

Questions 44-68 Sexual Risk Survey (Turchik & Garske, 2009)

APPENDIX VI

SURVEY INSTRUMENT: GLOSSARY OF TERMS

GLOSSARY OF TERMS

Below is a list of terms used in one of the surveys. You are not required to read this, and the definitions may be offensive to some people. However, the definitions may be helpful in answering some of the questions.

Analingus: Oral to anal stimulation, where a person stimulates another person's anal region with one's mouth/tongue (a.k.a. "rimming", "butt/ass licking")

Anal Sex: Penis to anus stimulation, where a man's penis penetrates another person's anus (a.k.a. "butt/ass sex")

Birth Control/Protection against pregnancy: Methods used to prevent pregnancy, such as taking birth control pills, Norplant implants, birth control patches, condoms, diaphragms, contraceptive sponges, withdrawing before ejaculation, etc. Note: Only latex and polyurethane condoms will also effectively protect against STIs

Condom: A male condom is a sheath (usually made of latex) that is placed on the outside of the penis and covers the entire shaft of the penis during sexual relations to help protect against pregnancy and STIs. A female condom is a soft flexible tube (usually made of polyurethane) that is inserted into the vagina before sex to protect against pregnancy and STIs. Note: Only latex & polyurethane condoms offer adequate protection against STIs.

Cunnilingus: Oral sex on a woman, using one's mouth to stimulate a woman's genitals (a.k.a. "eating a woman out", "going down on a woman")

Dental dam (or "adequate protection"): A thin piece of latex that can be placed between the mouth and the vagina during oral sex on a woman to help prevent STIs, or placed between the mouth and anal region during oral to anal sex (analingus) to prevent STIs and bacterial infections. Although purchased dental dams are the most reliable, they can also be self-made by cutting a large square from a latex condom (people often use flavored condoms for this) or by using a square of plastic wrap as long as there are no holes in the material and the covering adequately covers the genital region. These self-made dental dams are considered "adequate protection" in this study.

Fellatio: Oral sex on a man, using one's mouth to stimulate a man's penis (a.k.a. "blow job", "giving head")

Hooking up: Engaged in sexual behavior (such as making out/fondling) or sex with someone, usually outside of a relationship

IV drugs: Intravenous drugs that are injected into the body using a needle and a syringe, drugs that you can "shoot up" such as heroin.

Oral Sex: Mouth to genital stimulation, using one's mouth to stimulate or touch the genitals of a man or a woman (a.k.a. fellatio, cunnilingus, "blow jobs", "going down on someone")

Sex: Includes oral, anal, and vaginal sex.

Sexual behavior: Includes passionate kissing, fondling, petting, oral-to-anal stimulation and hand-to genital stimulation (includes "making out", "dry sex/humping", "fingering", analingus, "rimming" "handjobs")

Sexual partner: A person with whom you have had sex (oral, anal or vaginal)

STI: Stands for a sexually transmitted infection, a disease that can be given to someone through oral, genital and/or anal sex. Some STIs may also be gotten through oral to anal contact and hand to genital contact. STIs include herpes,

trichomonas, chlamydia, syphilis, gonorrhea, vaginitis, genital warts, pubic lice, hepatitis B and HIV infection which leads to AIDS.

Vaginal sex: Sexual intercourse where a man's penis penetrates a woman's vagina, this is the only type of sex that can directly result in pregnancy. (Please note that rear-entry intercourse, such as "doggy-style" sex, is considered vaginal sex as long as the penis is penetrating the vagina and not the anal region.)

APPENDIX VII

SURVEY INSTRUMENT: SIX-MONTH RECALL CALENDAR

October 2011						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 OSU Powwow Downtown Stillwater Car Show
2	3	4	5	6 OSU-Tulsa Career Fair	7	8 Dad's Day and Family Weekend Football vs. Kansas
9	10 Columbus Day	11	12	13	14 Fall Break: No Class	15 Football @ Longhorns
16	17	18	19	20 Miss OSU Scholarship Pageant	21	22 Football @ Missouri
23	24	25	26	27 All-Night Pomp	28 Homecoming Walk-Around	29 Homecoming Parade Football vs. Baylor
30 Halloween Carnival	31 Halloween					

November 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 Deadline to file diploma application	2 Men 's Basketball: Panhandle State	3	4	5 Football vs. Kansas State
6 Men's Basketball: OK Baptist	7	8 Election Day	9 Women's Basketball: Fort Hays State	10	11 Veteran's Day Men's Basketball: A&M Corpus Christi	12 Football @ Texas Tech
13 Women's Basketball: Rice Wrestling: Central Missouri Open	14	15 Men's Basketball: Arkansas Pine Bluff	16 Men's Basketball: UTSA	17 Tragic plane crash that took the lives of Coach Budke, Coach Serna, and Olin and Paula Branstetter	18 Football @ Iowa State Wrestling: Rutgers FRESHMAN FOLLIES	19 Women's Basketball: Grambling State FRESHMAN FOLLIES
20 Women's Basketball: Texas Arlington	21	22	23 Men's Basketball: Stanford THANKSGIVING BREAK	24 Thanksgiving Day THANKSGIVING BREAK	25 Men's Basketball: Virginia Tech Wrestling: Iowa State THANKSGIVING BREAK	26 Women's Basketball: Choppin State
27	28	29 Women's Basketball: Alcorn State	30 Men's Basketball: Tulsa			

December 2011						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3 Football vs. Oklahoma
4 Women's Basketball: Indiana Men's Basketball: Langston Wrestling: Minnesota	5 Pre-Finals Week Begins "Dead Week"	6	7 Men's Basketball: Missouri State	8 Women's Basketball: Missouri State Hanukkah begins	9 Pre-Finals Week Ends "Dead Week"	10 Men's Basketball:
11 Wrestling: Oklahoma	12 Finals Week Begins	13	14	15	16 Finals Week Ends Graduate College Commencement Ceremony Hanukkah ends	17 Undergraduate Commencement Ceremony Men's Basketball: New Mexico
18 Women's Basketball: Texas Pan American Wrestling: Reno Tournament of Champions	19	20 Final Grades Due	21 Men's Basketball: Alabama	22 Women's Basketball: Arkansas Pine Bluff	23	24 Christmas Eve
25 Christmas Day	26 Kwanza Begins	27	28 Men's Basketball: SMU	29 Women's Basketball: Mississippi State	30 Women's Basketball: Long Island Wrestling: Boise State	31 New Years Eve Men's Basketball: Virginia Tech

January 2012

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 New Years Day Wrestling: Wyoming	2 Football: Tostidos Fiesta Bowl vs. Stanford	3	4 Women's Basketball: Texas Tech Men's Basketball: Texas Tech	5	6	7 Women's Basketball: Texas Men's Basketball: Texas Wrestling: Iowa
8	9 Spring Semester Begins Men's Basketball: Oklahoma	10	11 Women's Basketball: Baylor	12	13	14 Women's Basketball: Oklahoma Men's Basketball: Baylor
15	16 Martin Luther King Jr. Day University Holiday: No Class	17	18 Women's Basketball: Kansas Men's Basketball: Iowa State	19	20 Wrestling: Arizona State	21 Men's Basketball: Kansas State Women's Basketball: Missouri
22 Wrestling: Iowa State	23	24 Women's Basketball: Texas A&M	25 Men's Basketball: Missouri	26	27 Wrestling: NC State	28 Women's Basketball: Kansas State Men's Basketball: Texas A&M
29 Wrestling: Binghamton and Bucknell	30	31 Men's Basketball: Texas Tech				

February 2012

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 Women's Basketball: Iowa State	2 OSU Career Fair	3	4 Women's Basketball: Oklahoma Men's Basketball: Baylor
5 Superbowl XLVI	6	7 Men's Basketball: Iowa State	8 Women's Basketball: Texas Tech	9	10 Softball: North Texas	11 Men's Basketball: Kansas Women's Basketball: Texas Softball: Texas A&M Corpus Christi and Houston
12 Softball: Texas A&M Corpus Christi Wrestling: National Duals	13	14 Valentine's Day	15 Women's Basketball: Baylor Men's Basketball: Missouri	16 Wrestling: Oklahoma	17 Softball: Virginia Tech and Auburn Baseball: Cal Poly	18 Men's Basketball: Texas Women's Basketball: Texas A&M Baseball: Cal Poly
19 Softball: Alabama Wrestling: National Duals Semis & Finals	20 President's Day	21 Mardi Gras 6 week grades due Baseball: Dallas Baptist	22 Baseball: St Gregory's Men's Basketball: Oklahoma Women's Basketball: Kansas State	23 Softball: Pacific and BYU	24 Baseball: Bowling Green State Softball: Northwestern and Arizona Wrestling: Missouri	25 Softball: Oregon Baseball: Bowling Green State Women's Basketball: Iowa State Men's Basketball: Texas A&M
26 Baseball: Bowling Green State	27 Men's Basketball: Kansas	28	29 Baseball: Missouri State Women's Basketball: Kansas			

March 2012

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 Varsity Review	2 Varsity Review Softball: Iowa Baseball: TCU	3 Varsity Review Wrestling: Big 12 Championship Softball: LSU & Iowa Baseball: TCU Women's Basketball: Missouri Men's Basketball: Kansas State
4 Softball: LSU Baseball: TCU	5	6 Baseball: Missouri State	7 Softball: Tulsa Women's Basketball: Missouri Men's Basketball: Texas Tech	8 Men's Basketball: Missouri	9 Baseball: Alabama A&M Softball: Loyola and Nebraska	10 Baseball: Alabama A&M Softball: Arkansas Pine Bluff
11 Softball: Loyola and Nebraska	12	13 Baseball: Arkansas Pine Bluff Softball: Wichita State	14 Baseball: Arkansas Pine Bluff	15 Wrestling: NCAA Championship	16 Wrestling: NCAA Championship Softball: San Jose State & UC Santa Barbara Baseball: Houston	17 St. Patrick's Day Wrestling: NCAA Championship Softball: San Jose State & UC Santa Barbara Baseball: Houston
18 Softball: Wisconsin Baseball: Houston Women's Basketball: Wichita State	19 Spring Break Begins	20 Baseball: Central Arkansas Softball: Tulsa	21	22 Women's Basketball: Missouri State	23 Spring Break Ends Softball: Kansas	24 Baseball: Missouri DH Softball: Kansas
25 Softball: Kansas Women's Basketball: Colorado Baseball: Missouri	26	27 Baseball: Arkansas Little Rock	28 Women's Basketball: San Diego Softball: Oklahoma	29	30 Baseball: Baylor Softball: Texas A&M	31 Greek Discovery Day Women's Basketball: James Madison Baseball: Baylor Softball: Texas A&M

VITA

Jennifer R. McAtee

Candidate for the Degree of

Master of Science

Thesis: SELF-ESTEEM, ALCOHOL CONSUMPTION, AND RISKY SEXUAL
BEHAVIORS IN COLLEGE FRATERNITY MALES

Major Field: Health Promotion

Biographical:

Education:

Will complete the requirements for the Master of Science in Health Promotion
at Oklahoma State University, Stillwater, Oklahoma in July 2012.

Completed the requirements for the Bachelor of Science in Health Promotion at
Oklahoma State University, Stillwater, Oklahoma in May 2010.

Experience:

Biometric Screening Technician/Team Lead
American Red Cross CRP/First Aid/AED Instructor
American Red Cross HIV/STD and Blood Borne Pathogens Instructor
Graduate Assistant Instructor, HHP-2603 Total Wellness
Certified Personal Trainer/Group Exercise Instructor
Freelance Writer

Professional Memberships:

National Commission for Health Education Credentialing, Inc.
Certified Health Education Specialist (CHES)

American College of Sports Medicine (ACSM)

Name: Jennifer R. McAtee

Date of Degree: July 2012

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: SELF-ESTEEM, ALCOHOL CONSUMPTION, AND RISKY SEXUAL BEHAVIORS IN COLLEGE FRATERNITY MALES

Pages in Study: 134

Candidate for the Degree of Master of Science

Major Field: Health Promotion

Scope and Method of Study: Fraternity members who were at least 18 years of age were recruited to participate in this study. We recruited as many participants as possible and had a total of 526 returned survey instruments. The survey instrument measured demographics, self-esteem, alcohol consumption, and sexual risk. Hypotheses included: Ho1 There will be no relationship between level of self-esteem and binge drinking in college fraternity males and Ho2 There will be no relationship between self-esteem and risky sexual behavior in college fraternity males.

Findings and Conclusions: Analysis was completed using IBM SPSS version 19. Pearson bivariate correlations were run among the variables of interest, self-esteem/binge drinking and self-esteem/sexual risk. There was a weak negative relationship between self-esteem/binge drinking which was not significantly correlated. Because our p-value was not statistically significant we failed to reject Ho1. There was a weak negative relationship between all self-esteem/sexual items. 4 items were found to be significant. Because our p-value for these 4 was statistically significant we reject Ho2. 3 items were not found to be significant. Because our p-value for these 3 was not statistically significant we failed to reject Ho2. This study added to the current literature and gained data that will be beneficial in creating intervention programs and advancing future research in this area.

ADVISER'S APPROVAL: Dr. Bridget Miller
