College Drinking, Greek Affiliation And The Need To Fit In: An Analysis Of Social Norms And Motivations Associated With Fraternity and Sorority Binge Drinking

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COLLEGE DRINKING, GREEK AFFILIATION AND THE NEED TO FIT IN: AN ANALYSIS OF SOCIAL NORMS AND MOTIVATIONS ASSOCIATED WITH FRATERNITY AND SORORITY BINGE DRINKING

by

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ABSTRACT

This study proposes that members of Greek social organizations have higher rates of binge drinking as compared to other college students due to their greater acceptance of norms and motives that support binge drinking. The College Alcohol Study, a survey conducted by the Harvard School of Public Heath, was administered to 10, 904 university students. The survey measured various aspects of students' experiences at their respective universities including experiences with and perceptions of alcohol use. Logistic regression analysis was used to determine normative and motivational predictors of binge drinking for Greek and non-Greek students. The results show that Greek members binge drink at higher levels than do other students. The results also indicate that social norm and motive variables, which were thought to be predictive of binge drinking practices for all students, are better predictors of binge drinking for non-Greek members. Implications of theses findings, discussion of results, limitations of the study, and recommendations for future research are presented.

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LIST OF ABBREVIATIONS

U.S.	United States
CAS	College Alcohol Study
H.S.	High school
G.P.A.	Grade point average
O.R.	Odds Ratio

CHAPTER ONE: INTRODUCTION

An overwhelming percentage of college students report the use of alcohol in the past year (Wechsler, 1996; Wechsler and Dowdall, 1998; Wechsler, Lee, Kuo, and Lee, 2000). Among those students who drink are groups of students who take the use of alcohol to a higher and more dangerous level. These students are referred to as binge drinkers, and about half of all college students report binge drinking in the past year (Wechsler, 1996; Wechsler and Dowdall, 1998; Wechsler, Lee, Kuo, and Lee, 2000). Binge drinking is a pattern of alcohol consumption that places the user at risk for negative outcomes like missing class/work, forgetting events while drinking, getting into fights, unplanned sexual activity, and alcohol overdose (Wechsler, 1996). If continued, this style of drinking can also lead to more deleterious consequences in the future such as alcohol dependence and even death. In addition, researchers have found that college students, compared with other persons the same age who do not attend college, have an increased chance of experiencing alcohol related problems (Johnson, O'Malley, Bachman and Schulenberg, 2005). It is clear that alcohol use and binge drinking are ongoing problems for college students, thus warranting the attention of researchers, educators, administrators, and the like to combat the problem and keep students safe.

The College Alcohol Study, or CAS, is a national survey that researchers have utilized since 1993 to study the alcohol norms and practices of college students in the United States. Findings from the CAS indicate that binge drinking rates between the years 1993 and 2001 have remained relatively steady at 44% (Wechsler, Lee, Kuo, Seibring, Nelson, and Lee, 2002). However, rates of frequent binge drinking, students who binge drink more than three times in a

two week period, have steadily increased from 19.7% in 1993 to 22.8% in 2001 (Wechsler, 1996; Wechsler et al., 2000; Wechsler et al., 2002). This is important given that frequent binge drinkers account for the consumption of nearly two-thirds of all the alcohol consumed by college students (Wechsler and Nelson, 2001).

These high rates of drinking have not, however, been linked to all persons in the 17-22 year-old age range. Data from the National Household Survey on Drug Abuse, a household survey that samples college and non-college persons alike, indicates that rates of alcohol use were higher for persons in college than for persons of the same age who were not in college (Gfroerer, Greenblatt, and Wright, 1997). This study also reported that substance misuse was higher for persons in the 17-22-year old age range than any other age range studied (Gfroerer et al., 1997). These findings highlight the fact that college students are at a greater risk for alcohol use and binge drinking and therefore are appropriate research subjects. These findings suggest that the college environment facilitates alcohol use and binge drinking. Entrance into college is a transition period for students and a time when normative guidelines are unclear. Therefore, drinking norms are often misperceived and alcohol use and binge drinking become normative actions (Borsari and Carey, 1999).

Students who are most likely to binge drink while in college are men, white, under the age of 24, fraternity/sorority members, and high school binge drinkers (Wechsler, 1996; Wechsler et al., 2000). While binge drinking has long since been viewed as a problem for men, studies indicate that the number of women who report binge and frequent binge drinking is on the rise and could even reach levels equal to that of men's in the near future (Young, Morales, McCabe, Boyd, and D'Arcy, 2005). Students who are members of Greek letter social organizations (fraternities and sororities) also exhibit elevated rates of binge drinking as it was

reported that nearly two-thirds of all Greek members are binge drinkers and one-half are frequent binge drinkers (Wechsler and Dowdall, 1998).

The goal of the present research is to examine the alcohol use patterns of college students, focusing on members of Greek organizations. Using the CAS I will determine if social norms and drinking motives, two variables associated with binge drinking among college students, can explain why members of Greek organizations are more likely to binge drink than other students. I believe that fraternity and sorority members represent the most susceptible students in the college environment to have social norms and motivations that allow them to justify and accept drinking at elevated levels. Other studies on binge drinking do not focus on motives for binge drinking among Greeks (Cooper, 1994; Cox and Klinger, 1988) and are also limited in their studies of drinking norms among Greeks (Borsari and Carey, 2001; Perkins, 2002; Prentice and Miller, 2003). Therefore, this paper will attempt to combine social norms and motives of Greeks in order to compare this group of students with other students on campus; something that has not been done thus far. Due to the high levels of alcohol intake for Greek students, understanding this "at risk" group's social norms and motivations associated with drinking alcohol will provide valuable information that can be utilized to create efficient education and prevention programs that target this specific group of students.

CHAPTER TWO: LITERATURE REVIEW

This research will look specifically at what type of drinking motivations facilitate binge drinking and the extent to which social norms affect alcohol drinking levels of fraternity/sorority members. Prior to looking specifically at motivations and social norms, however, I will elaborate on the magnitude of the problem within this group beginning with a theoretical perspective behind binge drinking.

Theoretical Perspective

This paper relies on Sutherland's theory of differential association to assist in explaining why members of Greek organizations binge drink at higher levels than do other students. Sutherland's theory is based on the premise that deviant behavior, such as binge drinking, is a learned behavior (Sutherland, 1947). The theory also generally states that deviant behavior is learned through one's primary social group(s) (Sutherland, 1947). In the university environment, these social groups are peer networks and/or organizations to which students belong. Through interaction with members of their social groups, students acquire definitions for appropriate and inappropriate behavior. Thus, the norms of the group become reinforcements or deterrents for their own behaviors. Depending on the student's interpretations of the primary social group's actions and/or the context of situations, these definitions may lead one to engage in deviant behavior or serve as a deterrent to deviant behavior. It is through this process of socialization that group norms are created and sustained. In an environment such as a university where peer groups are the primary source of reference for students, peers are an important predictor for behaviors

such as binge drinking. It should be no surprise that peer groups such as fraternities and sororities have a great impact on members' behaviors and attitudes.

Research has found that the actual behavior of peers is more important than the attitudes of peers (Warr and Stafford, 1991). It follows then that delinquent behavior, such as binge drinking, is one student's imitation of the group's behavior and/or a response to their observation of the delinquent act. Therefore, peer groups, group norms, and motives for binge drinking are important variables to consider when looking at students' drinking behaviors. It could be the case that the university environment indirectly fosters binge drinking practices by placing students in close proximity with other students and limits their contact with persons outside of the university setting. The differential association perspective helps to raise awareness that university environments are secluded from the "real world" and students would benefit from off campus community activities and the observation of positive rewards for non-delinquent activities.

Another characteristic of the university environment that affects binge drinking rates is the differential opportunity of the students to obtain and consume alcohol. Some students have limited access to obtain alcohol for reasons such as their minor age and/or lack of contacts to obtain alcohol for them, while other students have ample opportunities to obtain alcohol through friends, parties, etc. It is expected that fraternity and sorority members would have more opportunities to obtain alcohol because their organizations have students of legal age within them and traditionally have parties each semester which include alcohol.

Alcohol Use

In the initial wave of the CAS, 1993, 84% of the college students surveyed reported alcohol use in the previous year and 44% reported binge drinking (Wechsler, 1996). Together with the second wave of the survey, 1997, Wechsler et al. (1998) found that more than one-half of the students who reported the use of alcohol were binge drinkers. These statistics emphasize the rate at which college students consume alcohol.

College students have long been the focus for binge drinking research. One study that examines the binge drinking rates of this group is the Monitoring the Future Survey. This study found that annual rates for alcohol use from 1975-2004 are typically higher for college students than others in the same age range (17-22) who are not enrolled in college (Johnson, et al., 2005). The 2004 Monitoring the Future Survey found that 68% of college students reported binge drinking in the past month versus 59% of same age peers who were not in college (Johnson et al., 2005). These findings suggest that college may place students at risk for binge drinking. In other words, there are aspects of the college environment that promote the heavy use of alcohol and place students at an increased risk for binge drinking.

Using data from the National Household Survey on Drug Abuse, Gfroerer, Greenblatt, and Wright (1997) found that college students were more likely than non-college students to use alcohol and to report the heavy use of alcohol (Gfroerer et al., 1997). One possible reason for this finding could be that a college lifestyle is more conducive for alcohol use because it is a transition point in a young person's life where parental supervision is diminished and independence is gained (Gfroerer et al., 1997). This transition shifts the source of influence from the parents to one's peers (Weitzman, 2004). Peer and social influences become the method by

which college students establish social norms and thereby allow students to adopt norms that are congruent with and tolerant of binge drinking. Greek members standout in the college environment because past research has shown that Greeks tend to view binge drinking as more normative than other students and Greeks also have higher rates of binge drinking (Wechsler, 1996; Borsari and Carey, 1999). Therefore, Greek organizations, because they view alcohol use as being more normative, may have an even greater influence on their members' drinking patterns.

Members of Greek organizations are especially susceptible to the risk of alcohol use due to the socialization role of alcohol in the Greek environment. There is a social drinking scene present in the Greek environment and this results in new members observing other older members drinking and therefore presents a pressure for new members to conform to group's already established norms (Borsari and Carey, 1999). There is also the potential for self-selection of already heavy drinkers (high school drinkers) into environments like Greek organizations, which support continued heavy/binge drinking (Borsari and Carey, 1999).

The initial wave of the CAS found that 80% of those living in sorority houses and 86% of those living in fraternity houses reported binge drinking (Wechsler, 1996). The fraternity house is a place that fosters alcohol use by establishing a climate where alcohol use is normative. This occurs through lack of adult supervision, increased opportunities for members to drink, members who hold more tolerant attitudes towards drinking, and members who are more likely to conform to group norms (Borsari and Carey, 1999). The Monitoring the Future Survey also found high rates of alcohol use among Greeks and reported that membership in a Greek organization tends to increase heavy drinking episodes among college students (Johnson et al., 2005). While researchers have found that men drink more than women (Dawson and Archer, 1992), they have

also found that fraternity men drink more than sorority women thus putting fraternity men at a high risk for alcohol related problems on the college campus (Harrington, Brigham, and Clayton, 1999). However, Greek affiliation is not the only variable to be considered when looking at binge drinking on the college campus.

Another group of college students that tends to drink more is white students (Wechsler, 1996; Wechsler et al., 2000). A study by Paschall, Flewelling, and Faulkner (2000) found that white persons in college were more likely to report alcohol misuse than high school dropouts and persons who graduated high school but did not attend college. The opposite, however, was found for African Americans college students. African Americans in college reported an alcohol misuse rate of 27%, a rate much lower than African American high school graduates and high school drop-outs, while their white counterparts reported a rate of 65%, which is higher than white high school graduated and high school drop-outs (Paschall et al., 2000).

A similar study focusing on binge drinking and race conducted by Grenier, Borskey, and Folse (1998) found that students at a predominately African American University had relatively moderate rates of alcohol use compared to traditional universities. While this university showed lower levels of alcohol use overall, it is noteworthy that the fraternity and sorority members on campus were at a significantly higher risk of being a binge drinker than other students on their campus (Grenier et al., 1998). Low rates of alcohol use for African American students have also been found at predominately white universities with only about 5 percent of African American students reporting binge drinking and the majority reporting the use of alcohol for social reasons (Globetti, Globetti, Lo, and Brown, 1996). One reason for the discrepancy of use by race could be that African Americans who attend college have norms that are more conservative and have less favorable attitudes towards alcohol use than their white counterparts unless they are

fraternity or sorority members (Paschall et al., 2000). Another reason could be due to the high number of African American students who live in residence halls and the low number of African American Greek houses, which limit the places that alcohol can be consumed (Globetti et al., 1996). Therefore, while race is a predictor of binge drinking, it becomes diminished when Greek affiliation is present. Although it is unknown what percent of fraternity and sorority members are African American, it is suspected that there are fewer African American Greeks than Caucasian Greeks due to the fact that there are only nine traditionally African American nationally-recognized Greek Organizations and 90 traditionally Caucasian nationally-recognized Greek organizations (National Panhellenic Conference website; National Pan-Hellenic Council, Inc. website; North-American Interfraternity Conference website).

Another group of college students who tend to drink heavily are students who began drinking in high school (Wechsler, 1996; Wechsler et al., 2000). College students who drank alcohol in high school are also at an increased risk of becoming a binge drinker in college. The initial wave of the CAS reported that one-half of college binge drinkers were also binge drinkers in high school (Wechsler, 1996). The Monitoring the Future Survey has found similar results for high school alcohol use and reported that 51% of high school students reported the use of alcohol in 1992 (Johnson et al., 2005). High school drinkers may view the Greek system as tolerant of drinking and therefore self-select into this environment in order to continue their drinking habits (Borsari and Carey, 1999). Once they are a part of the Greek system, alcohol is present as part of the social scene and its use is reinforced through group norms.

As is the case with high school drinkers, college men also drink alcohol at higher levels than do college women. A study by Dawson and Archer (1992) found that the percent of men who drank five or more drinks in one day was 88% higher than women who did so. One

explanation for such an extreme number is the fact that women metabolize alcohol at a slower rate than do men (Wechsler, Dowdall, Davenport, and Rimm, 1995b; Wechsler and Nelson, 2001). Because women's bodies process alcohol differently than men's, the effects of alcohol can vary greatly even if body size, weight and alcohol intake are similar. A study conducted by Wechsler and Nelson (2001), revealed that even after accounting for body mass, women experienced similar alcohol related problems as men even when drinking at lower levels than the men. Therefore, it follows that women would drink less than men.

Traditionally, women have not consumed alcohol at levels that placed them in the category of binge drinker (Jennison, 2004). More recently, however, studies have shown that the number of women who binge drink in college is increasing. The CAS reported that the binge drinking rates of women increased from 39.0% in 1993 to 40.9% in 2001, while the rates of males actually decreased slightly from 49.2% in 1993 to 48.6% in 2001 (Wechsler et al., 2002). In addition, women who are members of sororities are more likely than non-members to become a binge drinker in college (Wechsler, 1996), therefore the Greek environment may be especially influential for women.

All of the previously mentioned groups of college students who are susceptible to and endorse heavy alcohol use are at risk to experience negative consequences related to their alcohol use. The CAS found that students who drink at or above binge drinking levels experience higher levels of alcohol related problems (Wechsler, 1996). Among these are hangovers, missing classes, doing something they regret, forgetting events, getting behind in school work, arguing with friends, engaging in unplanned sexual activities, damaging property, injuring themselves, riding with a drunk driver, driving drunk, alcohol over dose, etc. (Wechsler et al., 1996).

Fraternity and Sorority Membership

Students who join Greek letter social organizations exhibit drinking patterns at increased levels compared to other college students (Wechsler et al., 2000). Fraternity and sorority members have been found to binge drink more often than other college students (Wechsler et al., 2000). Because fraternity and sorority members are a high risk group for developing heavy drinking practices and experiencing alcohol related problems in college, it is important to study this group in greater detail.

Greeks are an important group of students to study with regard to binge drinking not only because of their high rates of binge drinking but also because of their visibility on campus. Greeks are encouraged to be active in other university organizations such as student government, are encouraged to participate in university sponsored activities, and are encouraged to do volunteer and philanthropic work on campus and in the surrounding community all the while presenting themselves as members of their Greek organization. Therefore, the members of Greek organizations are visible both on and off of campus and when drinking occurs, they are recognized by other students and members of the community as being a Greek member.

While two out of every five college students can be categorized as a binge drinker, two out of every three members of a Greek letter organization and four out of five students who live in Greek housing can be categorized as a binge drinker (Wechsler et al., 2000; Wechsler and Dowdall, 1998). One reason for the high concentration of heavy drinkers in the Greek system could be due to the self-selection of high school binge drinkers into fraternities or sororities that they perceive to be tolerant of their already heavy consumption of alcohol (Borsari and Carey, 1999). The reason that new college students believe the Greek system to be a place tolerant of

heavy alcohol use is because it is an environment that has traditionally condoned heavy alcohol use (Wechsler, 1996). Alcohol has also been used by fraternities and sororities when socializing with others (Borsari and Carey, 1999). The socialization process of the Greek system fosters group member cohesiveness and promotes group norms through drinking rituals, observation of drinking, lack of adult supervision to deter drinking, and lack of repercussions if caught drinking (Borsari and Carey, 1999). New members observe heavy drinking among older members and are under pressure to conform to the perceived norms of the group because they want to be accepted into the group. Older members often offer drinks to younger members or ask why they are not drinking and this places pressure on the new members to drink as well in order to fit in.

For female college students, the strongest predictor of binge drinking was found to be sorority membership (Wechsler, 1996). While sorority women were found less likely to have drank alcohol in high school (Wechsler et al., 1996), their rates become very high upon entering college. This suggests the Greek environment may be a key factor for introducing females to binge drinking. One characteristic of the Greek environment which may influence binge drinking is residing in the sorority house. Eighty percent of women who live in sorority houses qualify as binge drinkers (Wechsler, 1996; Wechsler and Dowdall, 1998) and 62.4% of sorority members self reported their patterns of alcohol consumption at binge drinking levels (Wechsler et al., 2002). Fraternity men who resided in their respective houses also report high levels of binge drinking. Eighty-six percent of those living in fraternity houses qualified as binge drinkers (Wechsler, 1996) and 75.1% of fraternity members self reported their alcohol consumption at binge drinking levels (Wechsler et al., 2002). As previously reported, over half of these men were also binge drinkers in high school and continued their drinking patterns into college (Wechsler et al., 1996).

Greek members drink more drinks on average, drink heavier, and suffer more negative consequences than college students who are not in a fraternity or sorority (Cashin, Presley, and Meilman, 1998). In addition, fraternity members have been found to drink at higher rates than sorority members (Harrington, Brigham, and Clayton, 1997). When taking into account the fact that 46% of post-secondary institutions have Greek systems on their campuses (Cashin et al., 1998), it is evident the magnitude at which alcohol consumption is a concern and problem for college campuses, especially those with Greek systems.

For those universities that offer Greek housing, fraternity and sorority members who live in their respective houses are at extreme risks of becoming a binge and frequent binge drinkers (Cashin et al., 1998). Living in a Greek house, however, is not the only predictor of elevated drinking for this group of students. The study conducted by Cashin et al. (1998) also revealed that leaders within fraternities, such as officers and senior members of the fraternity, and those members who were most involved in the fraternity, reported higher drinking levels than other members of the fraternity and non-members. Research conducted by Haynie (2001) found that in an environment where delinquency, such as binge drinking, is present, peer density, one's centrality in the group, and one's popularity in the group has a significant effect on group members' willingness to participate in binge drinking. Therefore, Greek organizations have the ability to cultivate binge drinking practices because of members' cohesion within their friendship network which thereby places emphasis on the central and popular members of the group. Greek organizations are places where peer density is high and Haynie (2001) has shown that in this type of environment delinquency, such as binge drinking is highly associated with peer drinking.

The above findings reveal that alcohol consumption by fraternity and sorority members remains a concern for researchers and college administrators alike. Further analysis into the

motivations and norms of alcohol consumption by Greek members will yield important findings that will facilitate more appropriate programs to control extreme alcohol practices of this group both on and off of campus.

Social Norms of College Students

Social norms act as a general guideline for one's behavior and tell us what behavior is appropriate or unacceptable in certain circumstances. Individual norms are shaped by the actions of others and one's perception of other's behaviors (Prentice and Miller, 1993). In order to maintain balance, students adjust their behaviors to conform to the norms they perceive other students to embody (Prentice and Miller, 1993). Because college students are in a new environment, away from parents for the first time, normative expectations of behavior are unclear. During this transitional period, new students often adjust their behaviors to match the norms of other students in the college environment because they want to fit in. If students do not conform to the group norms, they risk rejection and alienation by their peers.

Normative misperception becomes a problem when students overestimate other students' alcohol consumption rates. If students believe that the majority of college students are binge drinking, they will conform to the expected behavior (Borsari and Carey, 2001). This faulty reasoning may lead some students to drink at higher rates than the actual rates of other students. Therefore, the research suggests that correcting student misperceptions about the campus drinking norms will result in students adjusting their behaviors to conform with new, lower norms (Borsari and Carey, 2001; Perkins, 2002; Prentice and Miller, 1993; Rimal and Real, 2003).

Research regarding the alcohol consumption rates of US college students has targeted social norms as predictors of alcohol drinking behaviors. For example, beliefs about the levels at which other students are drinking alcohol may affect other students' own drinking levels (Arata, Stafford, and Tims, 2003; Borsari and Cary, 2001; Carter and Kahnweiler, 2000; Thombs, Wolcott, and Farkash, 1997). Therefore, if students believe that other students are drinking alcohol at higher quantities and frequencies than they are, then it makes it acceptable for those students to drink at increased quantities and frequencies (Arata et al., 2003; Borsari and Cary, 2001; Carter and Kahnweiler, 2000; Thombs et al., 1997). Students conform to group norms to fit in. When they observe others drinking or hear about other students drinking, this tells them that drinking is acceptable. Once the students accept drinking norms, they look to group norms again to gain perspective on the acceptable drinking frequency and quantity. If they perceive rates of drinking to be high and frequent, they will accept this norm and drink accordingly. Various studies have documented that students' perceptions of their campuses' drinking norm was a strong predictor of students' drinking rates; more so than the campuses' actual drinking norm (Perkins, Haines, and Rice, 2005; Perkins, Meilman, Leichliter, Cashin, and Presley, 1999; Perkins and Wechsler, 1996).

Some characteristics of students who tend to misperceive and overestimate social drinking norms include being male, having drinking companions who also misperceive social drinking norms, believing that peers drink at more elevated levels, and membership in a fraternity or sorority (Borsari and Carey, 2001; Nagoshi, Wood, Cote, and Abbit, 1994; Weitzman, Nelson, and Wechsler, 2003). These students may be at an increased risk for binge drinking as their behaviors will tend to match their elevated perceptions. Prentice and Miller (1993) noted, however, that males were more likely to increase their drinking levels to match

perceived norms than women. The research, however, does not tell us if this is true for Greeks as well. Therefore, gender may be a mitigating factor for drinking norm misperceptions for some but maybe not all students.

Aside from gender, high school binge drinking practices are also important when looking at college drinking patterns. High school binge drinkers enter college with norms already acceptable of binge drinking and therefore are able to continue their practice into college and have the potential to pass on their behavior to other students. High school binge drinking has been identified by researchers as a key variable in propensity to drink alcohol or continue using alcohol (Wechsler, 1996; Wechsler and Dowdall, 1998). The 1993 wave of the CAS revealed that one half of college binge drinkers were also binge drinkers in high school (Wechsler, 1996) and further evaluation revealed that these same high school students were more likely to continue their binge drinking practices into college (Weitzman et al., 2003). Therefore the drinking norms are already present for these students and these students may associate with others who also accept their norms.

For those students who abstained from drinking in high school, the chances that they would begin drinking in college were less than those who did drink in high school (Lo and Globetti, 1993). Lo and Globetti (1993) did report two instances in which abstaining in high school did not decrease the student's chances for drinking in college; having friends who did not discourage their drinking or joining a fraternity or sorority. It is further evident then that social norms play a vital part in the drinking practices of high school students, especially males, and college students. Peers have a significant impact on one's norms, shape one's decision to drink alcohol, and impact the amount of alcohol that is consumed.

Social Norms of Fraternity and Sorority Members

Greek members have been found to hold different drinking norms than other students. Members of fraternities and sororities are envolved in establishing elevated binge drinking norms which allow them to drink at higher levels than other college students (Cashin et al., 1998). Even non-Greeks perceive the norms of Greek members to be at higher levels than other, non-Greek students (Cashin et al., 1998). Drinking alcohol, even at levels surpassing the campus norm, is then seen as normative and more acceptable for Greek members and this leads to higher levels of binge drinking for these students (Arata et al., 2003; Carter and Kahnweiler, 2000).

The Greek environment is one that has social norms that seem to tolerate binge drinking among its members. Therefore, the new members' drinking patterns become similar to other members as they adjust their drinking norms and behaviors to match those of their peers. In fact, studies have shown that those members of the Greek system, who have the most impact on new members such as officers and senior members, have the highest rates of drinking (Cashin et al., 1998).

Another factor that affects Greeks' drinking norms is preconceived notions about Greek members' drinking patterns. Elevated assumptions about fraternity and sorority drinking have been found to exist among students even prior to entering college and were then found to persist through students' first year of college (Baer, 1994). Being a member in a fraternity or sorority was not found to create norm misperceptions because the misperceptions were present prior to becoming a member (Baer, 1994). The elevated drinking norms of fraternity and sorority members may then be related to the motivations of students to become members in these organizations and not the organization itself.

Another characteristic of Greeks is that Greek affiliation places the student in an environment where the norms of the group outweigh all other norms. The pressures to conform to the group and to fit in outweigh all previous norms regarding drinking. A study conducted by Carter and Kahnweiler (2000) found that almost 70% of fraternity and sorority members accurately categorized themselves as binge drinkers. Therefore, if the norms of the group are more supportive of binge drinking, as they are for Greeks, then drinking rates will be elevated for this group. The social norms of the group regarding drinking dictate what the members perceive as acceptable behavior and how they will behave.

As referenced previously, peer influences are a strong predictor of alcohol use for high school students, and peer influences continue to affect college drinking patterns especially for members of Greek organizations (Borsari and Carey, 1999). Because Greek organizations have traditionally been seen as organizations that accept drinking norms, Greek organizations attract members who are already binge drinkers.

While the relationship may be spurious in nature, the fact remains that 60% of fraternity members were binge drinkers in high school (Wechsler et al., 1996). While we are unable to determine if binge drinkers seek out fraternity membership to facilitate their habit or if the fraternity's reputation for alcohol tolerance attracts males who then become binge drinkers, the relationship between alcohol use and fraternity membership is undeniable. This pattern of high school drinking and Greek membership was not, however, found for sorority members as few female high school drinkers were found to join sororities upon entering college (Wechsler et al., 1996). These findings help confirm the link between high school drinking and college drinking for males and are therefore the reason for taking high school drinking and Greek membership into account when studying college alcohol drinking practices.

Drinking Motives of College Students

Previous studies have focused on specific motivations for drinking alcohol like coping, conforming, enhancement, or social reasons. Studies have found that these different motivations for drinking yield different patterns of drinking and may therefore require unique education and programs to lower the students' alcohol consumption (Carey and Correia, 1997; Cooper, 1994; Cooper, Frone, Russell, and Mudar, 1995; Cooper, Russell, Skinner, and Windle, 1992; Williams and Clark, 1998). Coping and conforming motives are related to negative reinforcements such as depression and anxiety while enhancement and social motives are related to positive reinforcements such as family and friends (Carey and Correia, 1997; Cooper, 1994; Cooper et al., 1995). In other words, drinking alcohol can be related to alleviating negative mood states or enhancing positive ones.

Coping motivations describe students who drink alcohol with the intention that it will reduce or regulate negative emotions (Cooper, 1994). For example, students drink to relieve negative feelings because they performed poorly on an exam. Students who drink alcohol for coping reasons tend to be depressed, drink alcohol at a moderate quantity, drink frequently, report increased drinking problems, drink alone, associate their alcohol use with the use of downers, and present symptoms predictive of abusive drinking (Cooper, 1994; Cooper et al., 1992; Cooper et al., 1995; Williams and Clark, 1998). Students who drink alcohol for coping reasons tend to use alcohol frequently, which can lead to additional problems like social and occupational dysfunctions. Persons who drink alcohol as a coping mechanism are more likely to experience alcohol related problems and are more likely to binge drink than persons who have other motivations for drinking (Cooper, 1994).

A second motive for drinking that is closely related to coping motives is conformity motives (Cooper, 1994). Students who drink alcohol as a way of conforming do so to avoid social censure or rejection much in the same way copers seek to diminish negative emotions (Cooper, 1994). For example, students drink because they are at a party and every one else at the party is drinking. Unlike copers, however, these students' alcohol consumption is not found to be related to quantity or frequency of drinking. Their alcohol consumption is only found to be positively related to negative alcohol related problems (Cooper, 1994). Conforming motives for drinking alcohol focus on the negative reinforcements for alcohol use and therefore results in a different pattern of alcohol use. Conformers are less likely to binge drink.

Enhancement motivations describe students who drink alcohol with the intent it will promote a positive mood or well-being (Cooper, 1994). For example, some students drink alcohol in order to help get work done. Students who utilize enhancement reasons for drinking alcohol report higher quantities of alcohol consumption than coping or conforming students, drink frequently, drink with others in social settings, are more likely to binge drink and report the use of enhancers like marijuana or cocaine in combination with alcohol use (Cooper et al. 1995; Williams and Clark, 1998). Unlike coping or conforming motives, enhancement motives were not found to be associated with high levels of alcohol related problems. These students are, however, more likely to use other type of drugs and are also more likely to be binge drinkers. Therefore, enhancement motive drinkers would require different education and prevention methods for their alcohol use than students who drink to cope or to conform.

Like enhancement motives, social motives for drinking are derived from positive reinforcements. Students who drink alcohol for social reasons do so with the intention that drinking alcohol will lead to positive rewards (Cooper, 1994). For example, students drink to

celebrate a special occasion with friends. Students who drink for social reasons are much like enhancement drinkers in that they drink frequently and heavily and are more likely to binge, but unlike enhancement drinkers they usually do not associate their drinking with drug use (Cooper, 1994; Cooper et al., 1992).

Students who drink for reasons related to negative reinforcements are less likely to binge drink while students who drink for reasons related to positive reinforcements are more likely to binge drink. Binge drinkers have been found to perceive alcohol use as having more positive than negative consequences (Durkin, Wolfe, and Clark, 1995). Therefore, it is possible that most binge drinkers drink for either enhancement or social reasons and may actually drink in such excess in order to increase positive consequences (Durkin et al., 1995). Therefore it is important to take into consideration drinking motivations when looking at drinking patterns of college students. Different motivations lead to different patterns of drinking and would require different educational programs to combat drinking problems.

Fraternity/Sorority Motives

It is not only important to acknowledge that different motivations for drinking alcohol will yield different drinking styles, but it is also important to determine if certain groups of students, like fraternity/ sorority members, are more likely to endorse one or multiple motives for drinking alcohol. This would help target mass quantities of students without having to evaluate each student individually to determine their drinking motive. Multiple motives, however, could make students more likely to become a binge drinker due to multiple triggers associated with drinking.

There were no articles found that specifically looked at drinking motivations for members of fraternities and sororities. This group of students, due to their high levels of alcohol consumption, should be studied more intently. The present study, therefore, will attempt to determine if the drinking motives of fraternity and sorority members are different from other college students in order to provide a base line for which alcohol education and prevention programs can be developed to target these specific groups. It is hypothesized that Greeks are more likely to endorse drinking motives related positive reinforcement and as stated above, they will also be more likely to binge drink.

Objective

Motivations and social norms are significant predictors of college student alcohol consumption. The body of reviewed literature has revealed, however, that studies focusing on drinking motives and social norms of fraternity and sorority members are limited. The present research attempts to add to this body of literature by focusing specifically on the motivations and social norms of fraternity and sorority members.

It is hypothesized that the present study will yield the following results: 1) Greek members binge drink more than non-Greek members; 2) Greeks have higher rates of binge drinking because they have more permissive social norms regarding alcohol use; 3) Greek members have higher rates of binge drinking because they are more likely to endorse drinking motives that lead to binge drinking.

CHAPTER THREE: METHODOLOGY

Study Design and Sample

This study used data from the 2001 Harvard School of Public Health College Alcohol Study (CAS), the most current wave of data available to the public. This survey was first administered in 1993 to over 14,000 college students at 120 four-year colleges in 40 states. Follow up surveys, using the same sample of schools, were completed in 1997, 1999, and 2001. The CAS is a random sample of college and university students in the U.S. including students from both public and private schools, all female and historically African American schools, large/medium/small schools, and schools located in urban/suburban/rural locations.

The list of colleges and universities who participated in the original wave of the survey was obtained from the American Council on Education, to ensure that the participating colleges and universities were representative of 4-year accredited colleges and universities in the US. The original survey was administered at 140 schools, administrators at each school were asked to provide a random list of 215 full time students, researchers then mailed surveys to this group of students. The attrition rate from 1993 to 2001 consisted of 20 schools. The majority of these schools were dropped from the study due to the schools' inability to produce a list of students to meet the time constraints of the study; one school was also excluded from the study due to their low response rate (Wechsler et al., 2002). Therefore, the 2001 CAS consisted of 119 schools across the U.S.; representing 38 states and the District of Columbia (Wechsler et al., 2002). For the 2001 wave, 113 schools had been surveyed in the previous waves of the study and 6 schools that had been dropped from previous analysis were reintroduced.

The CAS examines the substance use of college students, primarily alcohol use, while also surveying the students' involvement in organizations such as athletics or fraternities and sororities, the students' drinking behaviors during high school and college, the students' motives for drinking alcohol, and the students' perceived norms about alcohol use. The questions in the 2001 wave of the study were repeated standard questions that were also used in previous surveys with only minor changes to some questions.

Using similar methods as previous years, the 2001 survey was mailed directly to students in February of 2001 and consisted of 3 separate mailings within a 3-week period. The initial mailing included a letter of invitation to the student asking them to participate in the survey and a questionnaire. The initial mailing was followed by a reminder post card and a second copy of the questionnaire. Mailings were scheduled so as not to interfere with spring break occurrences, which could skew the results. Students were informed that their participation in the survey was voluntary and they did not have to answer any question that they were not comfortable with. Cash prizes were offered to encourage responses from the students.

The 2001 wave of the CAS resulted in a 52% response rate; correlation analysis was conducted to determine if non-responders had introduced a bias in the responses. Findings indicated that response rates of individual colleges were not associated with binge drinking rates and no significant difference in the binge drinking rates of students who responded after the first mailing and those who responded after the second or third mailing were found (Wechsler et al., 2002).

Measures

In this study alcohol use is operationalized as binge drinking and is measured as a dichotomous variable (no = 0, yes = 1 for all dichotomous variables). The survey instructed students to define one drink as a 12-oz bottle or can of beer, a 12-oz bottle or can of wine cooler, a 4-oz glass of wine, or a 1.25-oz shot of liquor either straight or in a mixed drink (Wechsler et al., 2002). Binge drinking, however, is defined differently for men and women. While binge drinking is defined as consuming five or more alcoholic beverages at one sitting in other surveys such as the Monitoring the Future Survey, the gender specific model used by the CAS is able to take into account the fact that women can experience elevated problems even when drinking lesser amounts than men. For the CAS, binge drinking was defined as the consumption of at least 5 drinks at a sitting for men or 4 drinks at a sitting for women during the two weeks prior to them completing the survey (Wechsler et al., 2002). A study by Wechsler et al. (1995b) found that women who drink four alcoholic drinks at a sitting experienced similar alcohol related problems as the men who consumed five drinks at a sitting. The definition of binge drinking has been set at five drinks for men due to studies that found that men who drank at or above this level were significantly more likely to experience alcohol related problems and experience more negative outcomes than male students who drank at lower levels (Wechsler et al., 2000; Wechsler and Nelson, 2001). While the definition of binge drinking at five drinks at a sitting allows studies of alcohol consumption to be comparable in their findings, only the CAS takes into account the gender specific definition of binge drinking. Therefore, the CAS is the most accurate database to use when looking at differences and similarities in alcohol use. For purposes of this study, the recoded variable “binge drinking” was used because it combines males and females binge

drinking rates into one variable while also taking into consideration the varying definitions of binge drinking for males and females. The variable binge drinking is coded 0 = no, 1 = yes.

Controls

For the purposes of this study, standard demographic variables that have also been used by other researchers who use CAS data to predict alcohol use were used as control variables (Wechsler, Dowdall, Davenport, and Castillo, 1995a). The controls consist of the following dichotomous variables: Greek membership (no = 0, yes = 1); Gender (female = 0, male = 1); race (black = 0, white = 1); Hispanic ethnicity (no = 0, yes = 1); age (24 or older = 0, less than 24 = 1,); marital status (all other statuses = 0, never married = 1); living arrangement (all other living arrangements = 0, off campus = 1); Athlete (no = 0, yes = 1); GPA (lower than B+ = 0, B+ or better = 1); high school binge drinking (no = 0, yes = 1). The variable high school binge drinker was created from questions within the survey which asked students about their drinking practices in high school.

Motives

The following survey questions and responses were used to determine students' motives for drinking alcohol: "How important is each of the following reasons for you to drink alcohol..." to get away from problems and troubles, to relax or relieve tension, to get drunk, to have a good time with friends, to celebrate, to help get work done, to fit in with friends, to feel more comfortable when with the opposite sex, everyone else is drinking, because it's cheap. The

response set for these variables are (1) not at all important, (2) somewhat important, (3) important, and (4) very important.

Social Norms

The following questions and responses represent social norm predictors for students. Social norm measures are important because they help to determine students' perceptions about alcohol use and help to determine why certain norms lead to binge drinking. The following questions and responses were used to measure the social norms of the student responders. To measure approval of binge drinking behavior, students were asked, "to what extent do students at your school approve of having six drinks at a party?" (0 = do not approve, 1 = approve). The norms of peers have been shown to impact students' own norms and to help determine the extent of this integration, the questions were asked, "how many close friends do you have?" (0 = none to 5 = five or more) and "how many hours per day on average have you spent socializing with friends in the past thirty days" (0 = zero hours to 5 = five or more hours). Next, the college lifestyle of the respondent was measured through the question, "how important is it for you to participate in parties at college?" (1 = not at all important to 4 = very important). Previous studies have found that parental drinking patterns and legal drinking age are predictors of alcohol use (Arata et al., 2003; Weitzman et al., 2003) and therefore we included the questions, "Describe your father/mother's use of alcohol during most of the time that you were growing up" (0 = abstainer, 1 = drinker) and "what should be the legal minimum drinking age?" (1 = 21 years old and over to 5 = under 18 years old). The question which asked about mother's and father's

drinking practices are asked separately in the CAS, but have been recoded to represent both parent's drinking practices into one variable.

Analytic Strategy

Analysis of the data began with obtaining the descriptive statistics of all variables included in the data analysis. Next, a Chi-square was run to examine the relationship between Greek membership and binge drinking. It is hypothesized that Greek members will report higher rates of binge drinking than other students. Finally, a series of logistic regression models were used to examine the relationship between binge drinking, Greek affiliation, social norms, motives for drinking, and controls. The entire file was split by Greek affiliation and non-affiliation and all four previously mentioned regression models were run using the split file. This allowed the comparison of Greeks and non-Greeks at every level of the regression process. It is hypothesized that Greeks will endorse motives and social norms that relate to higher levels of binge drinking.

The baseline regression model includes Greek affiliation and the control variables. It is hypothesized that there will be a positive relationship between Greek membership and binge drinking. The second regression model, the "social norms" model, adds the social norms predictors to the baseline model. It is hypothesized that all of the social norm variables will be positive predictors of binge drinking. It is hypothesized that the social norm variables will mediate the relationship between Greek membership and binge drinking. Mediation would occur if the regression coefficient for Greek membership becomes non-significant once the social norms predictors are entered into the model, and would mean that Greeks drink more because of

social norms. The third regression model, the "drinking motives" model, adds the drinking motives predictors to the baseline model. It is hypothesized that Greek members will endorse drinking motives that result in binge drinking and therefore the variables for enhancement motive and social motive will be positive predictors of binge drinking. It is hypothesized that the motive variables will mediate the relationship between Greek Affiliation and binge drinking which suggests that Greeks drink more because of their motives for drinking. The final regression model, the "complete" model, includes all variables. It is hypothesized that the social norm and motive variables together will further mediate the relationship between Greek affiliation and binge drinking and will predict binge drinking better than all of the other models. This model will also let us know whether social norms or motives are a better predictor of binge drinking.

CHAPTER FOUR: FINDINGS

The range, mean, and standard deviation for each of the control, social norm, and motive variables are provided in Table 1. The descriptive statistics for the total sample indicate that 43% of the sample reported binge drinking in the past two weeks, 12% of the sample reported affiliation with a Greek Organization (n=1339), 36% were male, 74% were white, 87% were younger than 24, 57% lived off campus, 57% had a G.P.A. of a B+ or better, and 25% reported binge drinking in high school. The total sample size for the 2001 CAS was 10,904.

The descriptive statistics for the social norm variables used in this study are also presented in Table 1. With regard to the social norm variables, 73% of the sample reported that students at their school approved of having six drinks at a party, the mean number of close friends was about 4 (3.66), the mean amount of time spent socializing with friends was about 2.7 hours (2.67), 60% of the sample reported that their mother or father drank alcohol, and the mean response for what the legal drinking age should be was about 20 years old (2.43).

Finally, the descriptive statistics for the motive variables are also listed in Table 1. For all motive variables, the responses were recorded as not at all important (1), somewhat important (2), important (3), or very important (4). The motive variables to have a good time with friends (2.56) and to celebrate (2.49) had a mean response that related to the response important. The motive to relax or relieve tension (2.14) was found to have a mean response that related to the response somewhat important. The remaining motives had a mean response of not at all important. The enhancement and social motives to get drunk (1.72), to have a goodtime with friends (2.56), to celebrate (2.49), to help get work done (1.07), to feel comfortable with the

opposite sex (1.41), and because it is cheap (1.24) were most likely to be endorsed by the sample.

Table 1
Descriptive Statistics- Range, Mean, and Standard Deviation

Controls	Total Sample		Non-Greeks		Greeks	
Binge Drinking (0,1)	0.43	(0.50)	0.41	(0.49)	0.63	(0.48)
Greek Affiliation (0,1)	0.12	(0.33)				
Male (0,1)	0.36	(0.48)	0.36	(0.48)	0.36	(0.48)
White (0,1)	0.74	(0.44)	0.73	(0.44)	0.83	(0.38)
Hispanic (0,1)	0.08	(0.27)	0.08	(0.27)	0.06	(0.23)
Age (0,1)	0.87	(0.34)	0.86	(0.35)	0.92	(0.26)
Never Married (0,1)	0.91	(0.28)	0.91	(0.29)	0.95	(0.21)
Live Off Campus (0,1)	0.58	(0.49)	0.59	(0.49)	0.48	(0.50)
Athlete (0,1)	0.14	(0.35)	0.14	(0.34)	0.17	(0.38)
G.P.A. (0,1)	0.57	(0.49)	0.57	(0.50)	0.58	(0.49)
H.S. Binge (0,1)	0.25	(0.44)	0.24	(0.43)	0.33	(0.47)

Social Norms	Total Sample		Non-Greeks		Greeks	
Students Approve of 6 Drinks (0,1)	0.73	(0.44)	0.72	(0.45)	0.83	(0.38)
Number of Close Friends (0,5)	3.66	(1.55)	3.59	(1.56)	4.22	(1.26)
Time Socializing with Friends (0,5)	2.67	(1.51)	2.62	(1.51)	3.03	(1.45)
Parties Importance (1,4)	2.07	(0.90)	2.02	(0.88)	2.45	(0.92)
Parents Drink (0,1)	0.60	(0.49)	0.60	(0.49)	0.67	(0.47)
Legal Drinking Age (1,5)	2.43	(1.43)	2.41	(1.43)	2.64	(1.38)

Motives	Total Sample		Non-Greeks		Greeks	
Get Away From Troubles (1,4)	1.42	(0.71)	1.41	(0.72)	1.43	(0.70)
Relax/Relieve Tension (1,4)	2.14	(0.88)	2.13	(0.89)	2.20	(0.84)
To Get Drunk (1,4)	1.72	(0.91)	1.69	(0.90)	1.92	(0.97)
Good Time With Friends (1,4)	2.56	(1.01)	2.54	(1.02)	2.75	(0.98)
To Celebrate (1,4)	2.49	(0.89)	2.46	(0.90)	2.67	(0.85)
Help Get Work Done (1,4)	1.07	(0.32)	1.07	(0.32)	1.06	(0.32)
Fit In With Friends (1,4)	1.27	(0.58)	1.26	(0.57)	1.32	(0.63)
Comfortable With Opposite Sex (1,4)	1.41	(0.73)	1.39	(0.71)	1.54	(0.82)
Everyone Else is Drinking (1,4)	1.43	(0.68)	1.41	(0.67)	1.54	(0.75)
Because It's Cheap (1,4)	1.24	(0.59)	1.23	(0.58)	1.31	(0.67)

Range is listed in column with the variable name. The standard deviation is listed in parenthesize.

A Chi-square analysis was run using the variables Greek affiliation and binge drinking. A total of 43.3% respondents, both Greek and non-Greek, reported binge drinking in the past two weeks. Results show that 40.5% of non-Greeks self-reported binge drinking and 62.9% of Greeks self-reported binge drinking. The Pearson Chi-Square is 237.105 and this is significant at the $p < .001$ level.

Table 2
Chi-Square- Proportion of Students Reporting Binge Drinking

	Greek Affiliation		
Binge Drinking	0 (No)	1 (Yes)	Total
0 (No)	59.5%	37.1%	56.7%
1 (Yes)	40.5%	62.9%	43.3%
Pearson Chi-Square	237.105***		

*p<.05; **p<.01; ***p<.001

Analysis for the logistic regression models are presented in Tables 3 (total sample), 4 (Greeks only), and 5 (non-Greeks only). For each of the logistic regression tables, Model 1 is referred to as the baseline model and contains the control variables only, Model 2 represents the social norms model which adds the social norm variables to the baseline model, Model 3 represents the drinking motives model which adds the motive variables to the baseline regression model, and Model 4 represents the complete model which adds both the social norm and motive variables to the baseline model.

The regression models for the total sample are presented in Table 3. In the baseline model, the control variables Greek, male, white, Hispanic, younger, never married, athlete, lower

grades and high school binge drinker were found to be significant predictors of binge drinking. Only the variable live off campus was not found to be a significant predictor of binge drinking. High school binge drinkers were almost six times as likely to report binge drinking (O.R. = 5.70) and Greek members were twice as likely to report binge drinking (O.R. = 2.23).

In the social norms model, all of the social norm variables were found to be significant predictors of binge drinking. Parties' importance was the strongest predictor of binge drinking (O.R. = 2.61). With the addition of the social norm variables, the coefficient for Greek affiliation reduced from 0.80 to 0.50 but remained significant.

In the drinking motives model, the motive variables to relax/relieve tension, to get drunk, to have a good time with friends, to celebrate, to be comfortable with the opposite sex, and because it's cheap were all found to be significant predictors of binge drinking in the expected direction. The strongest predictor of binge drinking was the variable to get drunk (O.R. = 1.75). With the addition of the motive variables to the baseline model, the coefficient for Greek affiliation reduced from 0.80 to 0.64 but remained significant.

Finally, in the complete model, all of the social norm variables were significant with the exception of the variable parents drink. The strongest social norm predictor of binge drinking was party importance (O.R. = 1.72). The following drinking motives variables were found to be significant predictors of binge drinking: to relax/relieve tension, to get drunk, to have a good time, to celebrate, to feel comfortable with the opposite sex, and because it's cheap. The strongest motives predictor of binge drinking was to get drunk (O.R. = 1.56). The coefficient for the variable Greek affiliation reduced from 0.80 in the baseline model to 0.47 in the complete model. A comparison of models 2 and 3 reveal that the social norm variables appear to be better predictors of binge drinking than the motive variables due to their higher R Square value (social

norms model = 0.43, motives model = 0.40) and a greater reduction in the coefficient for the variable Greek affiliation (social norm model = 0.50, motives model = 0.64). The complete model, which combines the social norms and motives variables, is the model that contains the best predictors for binge drinking. The R Square value for this model is the highest of all the other models (0.44) and the coefficient for the variables Greek affiliation is reduced the greatest in this model (0.47).

Table 3
Logistic Regression for Total Sample

	Model 1			Model 2			Model 3			Model 4		
Greek Affiliation	0.80***	(0.07)	[2.23]	0.50***	(0.08)	[1.65]	0.64***	(0.08)	[1.89]	0.47***	(0.09)	[1.59]
Male	0.10*	(0.05)	[1.10]	-0.06	(0.06)	[0.94]	-0.02	(0.06)	[0.98]	-0.08 ***	(0.06)	[0.92]
White	0.91***	(0.07)	[2.47]	0.76***	(0.07)	[2.15]	0.82***	(0.08)	[2.26]	0.74***	(0.09)	[2.10]
Hispanic	0.33**	(0.10)	[1.40]	0.24*	(0.12)	[1.27]	0.32**	(0.12)	[1.38]	0.28*	(0.13)	[1.32]
Age	0.22*	(0.09)	[1.24]	-0.38***	(0.09)	[0.68]	-0.06	(0.10)	[0.94]	-0.40***	(0.10)	[0.67]
Never Married	1.12***	(0.11)	[3.07]	0.49***	(0.12)	[1.63]	0.59***	(0.13)	[1.80]	0.26	(0.13)	[1.30]
Live Off Campus	0.01	(0.05)	[1.01]	0.25***	(0.06)	[1.28]	0.02	(0.06)	[1.03]	0.18**	(0.06)	[1.20]
Athlete	0.34***	(0.07)	[1.40]	0.12	(0.07)	[1.13]	0.32***	(0.08)	[1.38]	0.18*	(0.08)	[1.20]
G.P.A.	-0.26***	(0.05)	[0.77]	-0.22***	(0.05)	[0.81]	-0.15**	(0.06)	[0.86]	-0.14*	(0.06)	[0.87]
H.S. Binge Drinker	1.74***	(0.05)	[5.70]	1.41***	(0.06)	[4.09]	0.97***	(0.06)	[2.65]	0.94***	(0.07)	[2.55]
Approve of 6 Drinks				0.63***	(0.06)	[1.88]				0.27***	(0.07)	[1.31]
Number of Close Friends				0.05**	(0.02)	[1.06]				0.11***	(0.02)	[1.11]
Time Socializing				0.11***	(0.02)	[1.12]				0.10***	(0.02)	[1.11]
Parties Important				0.96***	(0.03)	[2.61]				0.54***	(0.04)	[1.72]
Parents Drink				0.26***	(0.05)	[1.29]				0.01	(0.06)	[1.01]
Legal Drinking Age				0.20***	(0.02)	[1.22]				0.08***	(0.02)	[1.08]
Get Away from Troubles							-0.02	(0.05)	[0.98]	0.03	(0.05)	[1.03]
Relax/Relieve Tension							0.09*	(0.04)	[1.09]	0.11*	(0.04)	[1.12]
To Get Drunk							0.56***	(0.04)	[1.75]	0.45***	(0.04)	[1.56]
Have Good Time							0.35***	(0.04)	[1.42]	0.26***	(0.04)	[1.30]
To Celebrate							0.43***	(0.04)	[1.54]	0.32***	(0.04)	[1.37]
Help Get Work Done							0.19	(0.10)	[1.20]	0.14	(0.11)	[1.15]
Fit In With Friends							-0.31***	(0.06)	[0.74]	-0.31***	(0.07)	[0.74]
Comfort With Opp. Sex							0.17**	(0.05)	[1.18]	0.15**	(0.05)	[1.16]
Everyone Else Is							0.02	(0.06)	[1.02]	0.02	(0.06)	[1.02]
Because It's Cheap							0.49***	(0.06)	[1.63]	0.44***	(0.06)	[1.55]
Chi-Square	2102.258			3670.805			2811.326			3046.958		
-2 Log likelihood	11511.204			9450.562			8253.899			7623.164		
Nagelkerke R Square	0.255			0.426			0.396			0.436		

a. *p<.05; **p<.01; ***p<.001
b. Unstandardized coefficient reported with standard error in parenthesize and odds ratio in brackets
c. Sample size is 10,904

Table 4 includes the regression analysis for Greeks only. In the baseline model the variables male, white, Hispanic, never married, low grades and high school binge drinker were found significant predictors of binge drinking for Greek members. High school binge drinkers are almost four times as likely to report binge drinking (O.R. = 3.90). In the social norms model, the variables students approve of six drinks, parties important, and lower legal drinking age were found to be significant predictors of binge drinking. The variable parties important was found to be the best predictor of binge drinking (O.R. = 2.50). In the drinking motives model, the variables to get drunk, to have a good time, and to celebrate were significant in the expected direction. The variable to get drunk was found to be the best predictor of binge drinking (O.R. = 1.76). Finally, in the complete model the only social norm variable that was found to be significant was the variable parties important (O.R. = 1.81). The motive variables to get drunk, to have a good time, and to celebrate were found to be significant in the expected direction. The variable to get drunk was found to be the best predictor of binge drinking (O.R. = 1.52). A comparison of models 2, 3, and 4 reveal that the social norm model (R Square = 0.39) and the complete model (R Square = 0.39) were the best models for predicting binge drinking for Greek members.

Table 4
Logistic Regression for Greek Members only

	Model 1			Model 2			Model 3			Model 4		
Male	0.40**	(0.14)	[1.49]	0.16	(0.16)	[1.17]	0.36*	(0.18)	[1.43]	0.31	(0.19)	[1.36]
White	1.02***	(0.20)	[2.77]	0.75**	(0.23)	[2.12]	0.65**	(0.25)	[1.92]	0.55*	(0.27)	[1.73]
Hispanic	0.64*	(0.32)	[1.89]	0.57	(0.37)	[1.77]	0.30	(0.41)	[1.35]	0.34	(0.43)	[1.40]
Age	0.25	(0.31)	[1.28]	-0.32	(0.33)	[0.73]	0.21	(0.34)	[1.24]	-0.11	(0.35)	[0.90]
Never Married	0.87*	(0.38)	[2.37]	-0.02	(0.42)	[0.98]	0.40	(0.43)	[1.49]	-0.10	(0.45)	[0.91]
Live Off Campus	-0.17	(0.13)	[0.84]	-0.10	(0.15)	[0.91]	-0.18	(0.16)	[0.83]	-0.14	(0.17)	[0.87]
Athlete	0.33	(0.18)	[1.39]	0.19	(0.20)	[1.21]	0.51*	(0.23)	[1.67]	0.33	(0.23)	[1.40]
G.P.A.	-0.45**	(0.14)	[0.64]	-0.41**	(0.15)	[0.67]	-0.36*	(0.16)	[0.70]	-0.34*	(0.17)	[0.71]
H.S. Binge Drinker	1.36***	(0.18)	[3.90]	1.32***	(0.18)	[3.76]	0.95***	(0.18)	[2.60]	0.99***	(0.19)	[2.69]
Approve of 6 Drinks				0.41*	(0.18)	[1.51]				-0.06	(0.22)	[0.94]
Number of Close Friends				0.09	(0.06)	[1.10]				0.10	(0.07)	[1.11]
Time Socializing				0.10	(0.05)	[1.10]				0.07	(0.06)	[1.07]
Parties Important				0.91***	(0.10)	[2.50]				0.60***	(0.12)	[1.81]
Parents Drink				0.28	(0.15)	[1.31]				0.01	(0.18)	[1.01]
Legal Drinking Age				0.12*	(0.05)	[1.13]				-0.01	(0.06)	[0.99]
Get Away from Troubles							-0.22	(0.14)	[0.80]	-0.22	(0.15)	[0.80]
Relax/Relieve Tension							0.16	(0.13)	[1.18]	0.21	(0.13)	[1.24]
To Get Drunk							0.56***	(0.12)	[1.76]	0.42**	(0.13)	[1.52]
Have Good Time							0.33**	(0.11)	[1.38]	0.26*	(0.11)	[1.29]
To Celebrate							0.52***	(0.12)	[1.68]	0.38**	(0.13)	[1.46]
Help Get Work Done							-0.26	(0.27)	[0.77]	-0.10	(0.28)	[0.91]
Fit In With Friends							-0.57**	(0.17)	[0.57]	-0.60**	(0.18)	[0.55]
Comfort With Opp. Sex							0.17	(0.13)	[1.19]	0.16	(0.13)	[1.17]
Everyone Else Is							0.01	(0.16)	[1.01]	0.01	(0.17)	[1.01]
Because It's Cheap							0.19	(0.16)	[1.21]	0.18	(0.16)	[1.19]
Chi-Square		225.294			397.628			310.651			340.666	
-2 Log likelihood		1404.082			1183.634			1036.173			970.234	
Nagelkerke R Square		0.228			0.386			0.350			0.388	

a. *p<.05; **p<.01; ***p<.001
b. Unstandardized coefficient reported with standard error in parenthesize and odds ratio in brackets
c. Sample size is 1,339

Table 5 includes the regression analysis for all non-Greek college students. In the baseline model the control variables white, Hispanic, younger, never married, athlete, lower grades and high school binge drinker were found to be significant predictors of binge drinking for non-Greek members. High school binge drinkers were found to be almost six times as likely to report binge drinking (O.R. = 5.78). In the social norms model, all of the social norms variables were found to be significant predictors of binge drinking. The variable parties important was found to be the best predictor of binge drinking (O.R. = 2.64). In the drinking motives model, the variables to get drunk, to have a good time with friends, to celebrate, to help get work done, to be comfortable with the opposite sex, and because it's cheap were found to be significant predictors of binge drinking. The variable to get drunk was found to be the best predictor of binge drinking (O.R. = 1.76). Finally, in the complete model the social norm variables students approve of six drinks, number of close friends, time socializing with friends, parties important, and lower drinking were found to be significant. The variable parties important was the best predictor of binge drinking in this model (O.R. = 1.72). The motive variables to relax/relieve tension, to get drunk, to have a good time with friends, to celebrate, to be comfortable with the opposite sex, and because it is cheap are significant predictors of binge drinking for non-Greek members. The variable because it is cheap was the best predictor of binge drinking in this model (O.R. = 1.62). A comparison of models 2, 3, and 4 reveal that the complete model (R Square = 0.43) contains the variables that best predict binge drinking.

Table 5
Logistic Regression for Non-Greek Members only

	Model 1			Model 2			Model 3			Model 4		
Male	0.06	(0.05)	[1.06]	-0.08	(0.06)	[0.92]	-0.07	(0.06)	[0.93]	-0.14*	(0.07)	[0.87]
White	0.90***	(0.07)	[2.45]	0.77***	(0.08)	[2.15]	0.85***	(0.09)	[2.33]	0.77***	(0.09)	[2.15]
Hispanic	0.30**	(0.11)	[1.34]	0.19	(0.12)	[1.21]	0.33*	(0.13)	[1.39]	0.27*	(0.14)	[1.31]
Age	0.21*	(0.09)	[1.24]	-0.39***	(0.10)	[0.68]	-0.09	(0.10)	[0.92]	-0.43***	(0.11)	[0.65]
Never Married	1.15***	(0.12)	[3.15]	0.53***	(0.13)	[1.71]	0.60***	(0.13)	[1.83]	0.29*	(0.14)	[1.34]
Live Off Campus	0.04	(0.05)	[1.04]	0.31***	(0.06)	[1.36]	0.05	(0.06)	[1.06]	0.24***	(0.07)	[1.27]
Athlete	0.34***	(0.07)	[1.41]	0.10	(0.08)	[1.11]	0.30**	(0.09)	[1.34]	0.15	(0.09)	[1.17]
G.P.A.	-0.23***	(0.05)	[0.79]	-0.19**	(0.06)	[0.83]	-0.12*	(0.06)	[0.89]	-0.10	(0.06)	[0.90]
H.S. Binge Drinker	1.76***	(0.06)	[5.78]	1.42***	(0.07)	[4.13]	0.97***	(0.07)	[2.64]	0.92***	(0.07)	[2.52]
Approve of 6 Drinks				0.67***	(0.07)	[1.94]				0.31***	(0.08)	[1.37]
Number of Close Friends				0.05*	(0.02)	[1.05]				0.10***	(0.02)	[1.11]
Time Socializing				0.11***	(0.02)	[1.12]				0.11***	(0.02)	[1.12]
Parties Important				0.97***	(0.04)	[2.64]				0.54***	(0.04)	[1.72]
Parents Drink				0.26***	(0.06)	[1.29]				0.01	(0.06)	[1.01]
Legal Drinking Age				0.21***	(0.02)	[1.24]				0.09***	(0.02)	[1.09]
Get Away from Troubles							-0.00	(0.05)	[1.00]	0.05	(0.05)	[1.05]
Relax/Relieve Tension							0.08	(0.04)	[1.08]	0.10*	(0.05)	[1.10]
To Get Drunk							0.57***	(0.04)	[1.76]	0.46***	(0.05)	[1.58]
Have Good Time							0.35***	(0.04)	[1.42]	0.26***	(0.04)	[1.30]
To Celebrate							0.42***	(0.04)	[1.52]	0.31***	(0.05)	[1.36]
Help Get Work Done							0.25*	(0.11)	[1.28]	0.17	(0.12)	[1.19]
Fit In With Friends							-0.27***	(0.07)	[0.76]	-0.27***	(0.07)	[0.77]
Comfort With Opp. Sex							0.17**	(0.05)	[1.19]	0.15**	(0.06)	[1.17]
Everyone Else Is							0.02	(0.06)	[1.01]	0.01	(0.06)	[1.01]
Because It's Cheap							0.54***	(0.07)	[1.72]	0.49***	(0.07)	[1.62]
Chi-Square	1669.021			3082.259			2380.873			2597.932		
-2 Log likelihood	10095.585			8247.966			7188.351			6620.189		
Nagelkerke R Square	0.234			0.414			0.389			0.431		

a. *p<.05; **p<.01; ***p<.001
b. Unstandardized coefficient reported with standard error in parenthesize and odds ratio in brackets
c. Sample size is 9,450

CHAPTER FIVE: CONCLUSION

The present research clearly demonstrates that Greek members are at a greater risk for binge drinking and experiencing binge drinking related problems than non-Greek students. The present study found that 63% of Greeks reported binge drinking in the past two weeks while only 41% of non-Greeks reported binge drinking (*see* Table 2). Also, in the regression model presented in Table 3, the variable Greek affiliation remains significant throughout all four models. Therefore, the hypothesis that Greek members binge more than non-Greek members was supported.

With regard to predicting binge drinking through social norms and motive variables, certain variables were better predictors of binge drinking than others. The best social norms predictor of binge drinking is the variable parties important. This variable remained significant in Tables 3, 4, and 5 and was consistently the best social norm predictor of binge dinking. Other social norms variables that were consistently found to be significant predictors of binge drinking are the variables students approve of six drinks and lower legal drinking age. The motives variable to get drunk was consistently the best motives predictor of binge drinking. Other motives variables that were consistently found to be significant predictors of binge drinking are to have a good time and to celebrate. Therefore, students who endorse drinking at an earlier age, approve of binge drinking, think parties are important and who drink to get drunk, have a good time and/ or to celebrate are at a higher risk for binge drinking regardless of whether they are a Greek member.

A closer look at Tables 4 and 5 reveal, however, that Greeks and non-Greeks have varying social norms and motives variables related to their binge drinking practices. For Greek

members, the variables number of close friends, time spent socializing with friends, and parents drink are not significant predictors of binge drinking. This is an interesting finding which helps support the hypothesis that Greeks have higher levels of binge drinking due to their unique peer networks. These findings suggest that the cohesion of the Greeks' friendship network (as it is measured in the CAS) is not a predictor of this group's binge drinking behaviors. Unlike Greeks, these variables were significant predictors of binge drinking for non-Greeks. This suggests that there is a unique environment for Greek members in which social norms that endorse elevated binge drinking levels are present, but those norms are not measured in this study. With regard to the motives variables, the variables to feel comfortable with the opposite sex and because it is cheap were found to be significant predictors of binge drinking for non-Greeks but not for Greeks. Due to the paucity of literature on motives for binge drinking of Greek members, it is difficult to determine what this difference in findings suggests about Greeks' motives for binge drinking other than they are not likely to binge drink for these reasons.

In-depth discussion of the regression models will begin with the findings from analysis with the total sample, shown in Table 3. The social norm variables presented in Model 2 are all significant predictors of binge drinking. This finding supports previous research that indicates social norm variables are important predictors of binge drinking (Borsari and Carey, 2001; Perkins, 2002; Prentice and Miller, 1993; Rimal and Real, 2003). The social norms predictor with the largest odds ratio was the variable parties important (O.R. = 2.66), thus students who view parties as being an important aspect of college life are more likely to binge drink. This is an important finding because parties have the ability to demonstrate and reinforce binge drinking norms and also present the opportunity for students to drink alcohol for enhancement and social motives. Also, respondents who have more friends (O.R. = 1.06) and spend more time

socializing with their friends (O.R. = 1.12) are more likely to binge drink. This is an important finding because past research has determined that friends' attitudes and behaviors have a significant impact on the respondent's own behaviors (Arata et al., 2003; Borsari and Cary, 2001; Carter and Kahnweiler, 2000; Thombs et al., 1997). Finally, students whose parents also drink (O.R. = 1.33) and who think the drinking age should be lower (O.R. = 1.24) are also more likely to binge drink. These findings are important because parents who drink present drinking norms to children at an early age and therefore some students begin drinking at an early age. The desire to lower the legal drinking age demonstrates that students wish to drink alcohol sooner than the law allows and suggests that they are already drinking despite the fact that it is illegal. There is only partial mediation of the relationship between Greek affiliation and binge drinking because the variable Greek affiliation remains significant in this model. The unstandardized coefficient for Greek affiliation was reduced by 36% from 0.80 in Model 1 to 0.51 in Model 2.

Most of the drinking motives variables presented in Model 3 are significant predictors of binge drinking. Past research suggests that persons who drink for coping reasons were more likely to become binge drinkers (Cooper, 1994). In this model the coping variable to relax/relieve tension was a significant predictor of binge drinking (O.R. = 1.09). Past research also states that persons who drink for enhancement reasons are more likely to binge drink (Cooper et al., 1995). This research partially replicated this finding. The enhancement variables drink to get drunk (O.R. = 1.75) and because it is cheap (O.R. = 1.63) were both significant predictors of binge drinking. Past research states that persons who drink alcohol for social reasons are more likely to binge drink (Cooper et al., 1995). This study replicated this finding in that all three social motives for drinking, to have a good time with friends (O.R. = 1.42), to celebrate (O.R. = 1.54), and to feel comfortable with the opposite sex (O.R. = 1.18), were all significant predictors of

binge drinking. Past research also suggests that persons who drink alcohol for conforming reasons are not likely to binge drink (Cooper, 1994) and this study demonstrated this finding because both conforming variables, to fit in with friends and because everyone else is, were not significant predictors of binge drinking. The drinking motive variable with the largest odds ratio was the motive drink to get drunk (O.R. = 1.75). In this model, the relationship between Greek affiliation and binge drinking was only partially mediated because the variable Greek affiliation remained significant. The unstandardized coefficient for Greek affiliation was reduced by 20% from 0.80 in Model 1 to 0.64 in Model 3.

When comparing the results from Model 2 and Model 3, the Nagelkerke R square value for the social norm regression model was 0.461 while the Nagelkerke R square value for the motive regression model was 0.396. Therefore, we can see that the social norm variables are better predictors of binge drinking than the motive variables because more of the variance in the dependent variable, binge drinking, is explained by the social norm variables. Also the social norms variables mediate more of the relationship between binge drinking and Greek affiliation than the drinking motives variables.

In the baseline model of Tables 4 and 5, the variable gender is significant for Greeks only and the variables younger and athletes are significant for non-Greeks only. In the social norms models of Tables 4 and 5 all of the social norms variables are significant for non-Greeks while only the variables students approve of six drinks, parties important, and lower legal drinking age are significant for Greeks. In both tables, however, the variable parties important is the strongest social norm predictor of binge drinking. In the motives regression models of Tables 4 and 5 the variables to get drunk, to have a good time, and to celebrate were found to be significant predictors of binge drinking. In addition, the variables to help get work done, to feel comfortable

with the opposite sex, and because it is cheap are significant predictors of binge drinking for non-Greeks. In both tables, however, the variable to get drunk is the strongest motives predictor of binge drinking.

The varying findings for Greeks and non-Greeks demonstrate that these two groups of students have different norms and motivations related to their binge drinking practices. The CAS currently uses measures that are better predictors of the binge drinking norms and motives of non-Greek members. The difference in findings suggests that there are additional binge drinking norms and motives for Greek students which the CAS does not currently measure. The current study, therefore, can not fully explain the difference in findings for Greek and non-Greek students but rather simply report that there are varying findings. Additional data and measures would be necessary to better explain the difference in findings for Greek and non-Greek students.

Although the present study's findings are preliminary in explaining the binge drinking practices of college students, the findings can be used to create unique prevention programs for college students. Some past research has found that norm education helps to reduce drinking on college campuses. A study conducted by Barnett, Far, Mauss, and Miller (1996) found that drinking practices changed after alcohol norms were corrected through norm education. The norm education was found to change perceptions, attitudes, and finally behaviors among students who had elevated drinking norms (Barnett et al., 1996). A separate study conducted by Haines and Spear (1996) found that norm education lead to a 18.5% decrease in students who believed binge drinking to be the norm and 8.8% fewer students self-reported binge drinking. The decrease in the Haines and Spear (1996) study occurred only after adjusting the education

program from a traditional program to a media based program focused on changing student perceptions.

Other studies, however, have found that traditional norm education may not change the attitudes and behaviors of college students. A review of the 1997, 1999, and 2001 College Alcohol Study found that of the 118 schools participating in the study, 57 schools had social norm marketing campaigns and 61 schools did not (Wechsler, Nelson, Lee, Seibring, Lewis, and Keeling, 2003). While 68.2% of all students reported receiving information about drinking norms on campus, trend analysis found no decrease in drinking rates at any of the schools surveyed. In fact, social norm marketing schools had higher rates of alcohol use on 13 of the 21 tests (Wechsler et al., 2003). Therefore, it is evident that on a national level, traditional social norm programs may not be working as intended. It may be beneficial to target high risk groups with social norm programs in order to ascertain whether these programs will have better results for this group of students. One challenge with attempting to correct drinking norms among Greek students is that fact that fraternity and sorority members tend to accurately compare their level of alcohol consumption with normative levels (Carter and Kahnweiler, 2000). It has been found that fraternity and sorority members correctly identified themselves as binge drinkers 70% of the time (Carter and Kahnweiler, 2000). Therefore, if Greeks are aware of campus drinking levels and are aware that they are drinking alcohol at extreme levels as compared to other college students, then interventions focused on correcting misperceived norms within the Greek community will render useless. Education Programs designed to correct norm misperceptions must therefore be designed differently for Greek students. Harrington et al. (1999) suggest that programs for Greek students should demonstrate how their elevated drinking levels and drinking

norms jeopardize the goals of their organization and Greeks must therefore adopt new conservative, low-risk drinking norms.

Research has also been conducted with regard to changing motives for drinking. Because of the different motivations for drinking found in this study for Greek and non-Greek students, a process similar to Cox and Klinger's motivational counseling program (Cox and Klinger, 1988) would be beneficial. Cox and Klinger's counseling program first identifies the respondent's drinking motivation and then diverts the person's alcohol motivation to a non-chemical coping item which produces positive effects for the subject (Cox and Klinger, 1988). Keeping in line with their program, a college campus would be able to evaluate students' motivations for drinking and then administer appropriate education and programs to fit the students' drinking style. Because Greeks and non-Greek students have different motives for drinking alcohol, a more specific program could be used for Greeks because their motives tend to be for enhancement or social reasons while a more general program would be needed for non-Greek students. Because some motives lead to lower levels of drinking while other motives lead to higher levels of drinking, distinct programs must be created to address these motives separately.

What has not been a focus up to this point, however, are programs that target students' social norms and motives for drinking alcohol. In light of the findings reported in the previous sections, it stands to reason that a combination of motivation counseling and non-traditional social norm education may yield better results at lowering alcohol consumption levels than either approach could alone for both Greek and non-Greek students.

One limitation of the present study is the inability to directly measure the social norms and motivations of Greek members. It would have been beneficial to have additional demographic information regarding Greek members like the size of their fraternity/sorority, the

number of new members accepted each year, the average age of new members, the actual Greek organization that the respondent is a part of, and who Greeks spend the majority of their time with. It is important to know the structural characteristics of the Greek environment in order to determine if a different friendship network exists for Greeks and non-Greeks. If Greek members spend the majority of their time with each other in a dense friendship network then it could be that the actual friendship network is a variable that is predictive of binge drinking as well. It is also possible that the size of the organization and the number of new member accepted each year could affect binge drinking behaviors. In addition, it could be the case that only certain Greek organizations on university campuses are responsible for excessive drinking. A second limitation of this study is the inability to accurately measure respondents' perceptions about close friends' drinking norms and the inability to directly measure of peer alcohol use and binge drinking. More emphasis on this topic should be included in future versions of the CAS. It is likely that if friends view drinking as a normative behavior then, the respondent will as well. Finally, the dependant variable, binge drinking, is operationalized in a manner that places the respondent as a binge drinker or not a binge drinker based on their drinking within an unestablished time period. The CAS does not clearly define what constitutes a sitting and therefore some students may consider a setting a few hours and others may consider a sitting an entire day. In reality, there are varying degrees of alcohol use and binge drinking which are unable to be accounted for in this study.

Future research is needed with regard to drinking norms and motives of Greek students. It is clear that Greeks are drinking at higher levels than other students, but it is not clear why this is happening. Future research should look at the friendship networks and social structures of Greek organizations to determine if Greeks have different types of peer networks that foster different

norms and motivations for drinking among members. Dana Haynie (2001) conducted research to determine if the structure of peer networks facilitated delinquent behavior among members. What is unique about her research is that she was able to evaluate the respondents' as well as the respondent's peers with regard to their delinquent behaviors. She found that respondents engaged in delinquent behaviors not only because of their friends' influences but also because of the respondent's location (centrality and population) within the friendship network and the density of the network. This is an important finding in that it suggests that Greek members are a part of a friendship network that has different structural characteristics than non-Greek friendship networks do and this may relate to some of the differences in social norms and motives predictors of binge drinking between these two groups of students. Haynie's findings also coincide with the theories of differential association and differential opportunity previously discussed. Some students, such as Greeks, associate with others who can facilitate and offer opportunities for binge drinking behaviors. Future research into the structural characteristics of college students', especially Greek members', friendship networks may help to better explain differences in binge drinking practices as well as help to develop more suitable educational programs to combat binge drinking. This can be done by building upon the CAS data with measures that look at the structure of the respondent's peer network as well as the specific characteristics of the Greek organizations which are being studied.

LIST OF REFERENCES

Arata, C.M., Stafford, J., & Tims, M.S. (2003). High school drinking and its consequences. *Adolescence,* 38, 567-579.

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.

Barnett, L.A., Far, J.M., Mauss, A.L., & Miller, J.A. (1996). Changing perceptions of peer norms as a drinking reduction program for college students. *Journal of Alcohol and Drug Education,* 41, 39-62.

Borsari, B., & Carey, K.B. (1999). Understanding fraternity drinking: Five recurring themes in the literature, 1980-1998. *Journal of American College Health,* 48, 30-38.

Borsari, B., & Carey, K.B. (2001). Peer influences on college drinking: A review of the research. *Journal of Substance Abuse,* 13, 391-424.

Carey, K.B. & Correia, C.J. (1997). Drinking motives predict alcohol-related problem in college students. *Journal of Studies on Alcohol,* 58, 100-106.

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.

Cooper, M.L. (1994). Motivations for alcohol use among adolescents: Development and validation of a four-factor model. *Psychological Assessment,* 6, 117-128.

Cooper, M.L., Frone, M.R., Russell, M., & Mudar, P. (1995). Drinking to regulate positive and negative emotions: A motivational model of alcohol use. *Journal of Personality and Social Psychology,* 69, 990-1005.

Cooper, M.L., Russell, M., Skinner, J.B., & Windle, M. (1992). Development and validation of a three-dimensional measure of drinking motives. *Psychological Assessment,* 4, 123-132.

Cox, M., & Klinger, E. (1988). A motivational model of alcohol use. *Journal of Abnormal Psychology,* 97, 168-180.

Dawson, D.A., & Archer, L. (1992). Gender differences in alcohol consumption: Effects of measurement. *British Journal of Addiction,* 87, 119-123.

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.

Globetti, G., Globetti, E., Lo, C., & Brown, C.L. (1996). Alcohol and other drug use among African-American students in a southern university. *Journal of Multicultural Counseling and Development,* 24, 118-128.

Grenier, C.E., Borskey, E.J., & Folse, D.W. (1998). A survey analysis of alcohol use at a black university in the deep south. *Journal of Child and Adolescent Substance Abuse,* 7, 79-92.

Durkin, K.F., Wolfe, T.W., & Clark, G.A. (2005). College students and binge drinking: An evaluation of social learning theory. *Sociological Spectrum,* 25, 255-272.

Haines, M., & Spear, S.F. (1996). Changing the perception of the norm: A strategy to decrease binge drinking among college students. *Journal of American College Health,* 45, 134-140.

Harrington, N.G., Brigham, N.L., & Clayton, R.R. (1997). Differences in alcohol use and alcohol-related problems among fraternity and sorority members. *Drug and Alcohol Dependence,* 47, 237-246.

Harrington, N.G., Brigham, N.L., & Clayton, R.R. (1999). Alcohol risk reduction for fraternity and sorority members. *Journal of Studies on Alcohol,* 60, 521-527.

Haynie, D.L. (2001). Delinquent peers revisited: Does network structure matter? *American Journal of Sociology,* 106, 1013-1057.

Jennison, K.M. (2004). The short-term effects and unintended long-term consequences of binge drinking in college: A 10-year follow-up study. *The American Journal of Drug and Alcohol Abuse,* 30, 659-684.

Johnson, L.D., O'Malley, P.M., Bachman, J.G., & Schulenberg, J.E. (2005). *Monitoring the future national survey results on drug use, 1975-2004. Volume II: College students and adults age 19-45.* (NIH Publication No. 05-5728). Bethesda, MD: National Institute on Drug Abuse.

Lo, C.C., & Globetti, G. (1993). A partial analysis of the campus influence on drinking behavior: Students who enter college as non-drinkers. *Journal of Drug Issues,* 23, 715-725.

Nagoshi, C.T., Wood, C.J., Cote, C.C., & Abbit, S.M. (1994). College drinking game participation within the context of other predictors of alcohol use and problems. *Psychology of Addictive Behaviors,* 8, 203-213.

National Panhellenic Conference website. Retrieved April 10, 2006, from http://www.npcwomen.org/about/an_members.php

National Pan-Hellenic Council, Inc. website. Retrieved April 10, 2006, from http://www.nphchq.org/about.htm

North-American Interfraternity Conference website. Retrieved April 10, 2006, from http://www.nicindy.org/

Paschall, M.J., Flewellinh, R.F., Faulkner, D.L. (2000). Alcohol misuse in young adulthood: Effects of race, educational attainment, and social context. *Substance Use and Misuse,* 35, 1485-1506.

Perkins, W.H. (2002). Social norms and the prevention of alcohol misuse in collegiate contexts. *Journal of Studies on Alcohol Supplement,* 14, 164-172.

Perkins, W.H., Haines, M.P., & Rice, R. (2005). Misperceiving the college drinking norm and related problems: A nationwide study of exposure to prevention information, perceived norms and student alcohol misuse. *Journal of Studies on Alcohol,* 66, 470-478.

Perkins, W.H., Meilman, P.W., Leichliter, J.S., Cashin, J.R., & Presley, C.A. (1999). Misperceptions of the norms for the frequency of alcohol and other drug use on college campuses. *Journal of American College Health,* 47, 253-258.

Perkins, W.H., & Wechsler, H. (1996). Variation in perceived college drinking norms and its impact on alcohol abuse: A nationwide study. *Journal of Drug Issues,* 26, 961-974.

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.

Rimal, R.N., & Real, K. (2003). Understanding the influence of perceived norms on behaviors. *Communication Theory,* 13, 184-203.

Sutherland, E.H. (1947). *Principles of Criminology*, 4th ed. Philadelphia: J.B. Lippincott.

Thombs, D.L., Wolcott, B.J., & Farkash, L.G.E. (1997). Social context, perceived norms, and drinking behavior in young people. *Journal of Substance Abuse,* 9, 257-267.

Warr, M. & Strafford, M.C. (1991). The influence of delinquent peers: What they think or what they do? *Criminology,* 29, 851- 866.

Wechsler, H. (1996). Alcohol and the American college campus. *Change,* 28, 20-25.

Wechsler, H. (2005). *Harvard School of Public Health College Alcohol Study, 2001* [Computer file]. ICPSR04291-v1. Boston, MA: Harvard School of Public Health [producer], 2005. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2005-08-08.

Wechsler, H., & Dowdall, G.W. (1998). Changes in binge drinking and related problems among American college students between 1993 and 1997. *Journal of American College Health,* 47, 57-68.

Wechsler, H. Dowdall, G.W., Davenport, A., Castillo, S. (1995a). Correlates of college student binge drinking. *American Journal of Public Health,* 85, 921-926.

Wechsler, H., Dowdall, G.W., Davenport, A. & Rimm, E.B. (1995b). A gender-specific measure of binge drinking among college students. *American Journal of Public Health,* 85, 982-985.

Wechsler, H., Kuh, G., Davenport, A.E. (1996). Fraternities, sororities and binge drinking: Results from a national study of American colleges. *National Association of Student Personnel Administrators,* 33, 260-279.

Wechsler, H., Lee, J.E., Kuo, M., & Lee, H. (2000). College binge drinking in the 1990s: A continuing problem. *Journal of American College Health,* 48, 199-210.

Wechsler, H., Lee, J.E., Kuo, M., Seibring, M., Nelson, T.F., and 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, 2003-217.

Wechsler, H., & Nelson, T.F. (2001). Binge drinking and the American college student: What's five drinks? *Psychology of Addictive Behaviors,* 15, 287-291.

Wechsler, H., Nelson, T.F., Lee, J.E., Seibring, M., Lewis, C., & Keeling, R.P. (2003). Perception and reality: A national evaluation of social norms marketing interventions to reduce college students' heavy alcohol use. *Journal of Studies on Alcohol,* 64, 484-494.

Weitzman, E.R. (2004). Social developmental overview of heavy episodic or binge drinking among U.S. college students. *Psychiatric Times,* (February 1, 2004), 57-60.

Weitzman, E.R., Nelson, T.F., & Wechsler, H. (2003). Taking up binge drinking in college: The influences of person, social group, and environment. *Journal of Adolescent Health,* 32, 26-35.

Williams, A. & Clark, D. (1998). Alcohol consumption in university students: The role of reasons for drinking, coping strategies, expectancies and personality traits. *Addictive Behaviors,* 23, 371-378.

Young, A.M., Morales, M., McCabe, S.E., Boyd, C.J., & D'Arcy, H. (2005). Drinking like a guy: Frequent binge drinking among undergraduate women. *Substance Use and Misuse*, 40, 241-267.