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COLLEGE STUDENT BINGE DRINKING: ENVIRONMENTAL  
AND STRUCTURAL PREDICTORS

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## **Abstract**

Alcohol abuse and binge drinking have become one of the leading problems on college campuses nationwide. Students engaging in dangerous drinking behaviors are causing destruction and harm to both themselves and their university environments. I examine the effects of college student drinking as an institutional problem. After reviewing several hypotheses about potential indicators and influences on college students' propensity to binge drink, I test a number of variables that measure the effects of the perceived norms of college student drinking, individual predictors of alcohol abuse, environmental predictors of alcohol abuse, peer influence to abuse alcohol, and the lack of quality alcohol education for college students. Finally, I discuss the implications of my findings and what they mean for the future possibility of limiting this dangerous occurrence of alcohol abuse on college campuses.

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## Chapter 1

Alcohol consumption on college campuses nationwide has been a growing problem for over 60 years, and many University officials have stated that alcohol abuse has become one of the leading problems at their campuses (Presley, Meilman, Philip, Leichter, Jami, 2002). Young adults, arriving on college campuses across the nation, are falling into dangerous drinking patterns and are abusing alcohol at alarmingly high rates. This pattern of alcohol consumption among college students has received a tremendous amount of attention both by researchers and in the popular press. Problems that arise from these elevated drinking rates range from alcohol overdoses resulting in hospitalization to criminal offenses, including public drunkenness, disorderly conduct, underage consumption and D.U.I charges.

In this study, I examined predictors of binge drinking behaviors, focusing on predictors of binge drinking on one University campus. There has been a plethora of research studies examining the effects that both environmental influences and behavioral characteristics have on a college student's propensity to binge drink; however, few of these studies have directly compared the two contributions of environmental and behavior characteristics on propensity to binge drink. Data for this study came from a convenience sample of students at a large northeastern university. Students were surveyed via the web. The questions focus on the student's perceptions of drinking among their peers, their own consumption levels, the effects that several environmental factors have on their drinking behaviors, and demographic and behavioral variables. For the purpose of this study, binge drinking was defined as consuming five or more drinks during one sitting for a male and four or more drinks for a female. This is the most commonly used definition of binge drinking in the research literature (Weitzman et al, 2003).

I expect the effects of the environmental factors to be strongly related to students' propensity to both drink alcohol, and to do so at binge levels. The environmental factors which I analyzed include the availability, accessibility, and affordability of alcohol in the college town where the data were gathered. I measured how each variable affects both students' desires to drink and actual drinking levels. The phenomenon of living in a 'College Town' has brought alcohol to the forefront of the economic landscape and many businesses capitalize on the marketability of alcohol to college students. The number of bars, ease of access, and cheapness of alcohol have been found to affect the consumption rates of students (Weitzman et al, 2003).

Another environmental factor that is influential in a college student's decision to consume alcohol is the prevalence of peer influence. Peer influence can come in a variety of forms including active offers of alcohol, modeling of others' drinking and the perceived drinking norms of the campus (Borsari & Carey, 2001). The college social setting presents many opportunities for peer influence to play a role in decisions to drink alcohol, and the level at which it is consumed. Drinking to feel accepted, drinking as part of a hazing or inclusionary ritual, participating in drinking games, and being persuaded to go out when not planning on drinking are all different forms of peer influence and all have an influence on college students' decisions to drink.

The behavioral characteristics that I measured were the perceptions students have of the drinking environment at one University, students' perceived drinking norms, and how these influenced students' drinking behaviors.

One behavioral characteristic that influences students' drinking behavior is the drastic misperception that students adopt of campus drinking norms (Crawford & Novak, 2006). While

part of this misperception is fueled by environmental factors, such as the party reputation of a school, it was considered a behavioral factor for the purpose of this study since it is their belief that many more of their peers engage in binge drinking behaviors than actually do that influence their own consumption behaviors. Due to this belief that binge drinking is a prevalent activity on their college campuses, students may be more inclined to model their drinking off of these perceived norms and may view their drinking as unproblematic in relation to the perceived elevated consumption rates by their peers (Borsari & Carey, 2001).

Many students view college as a transitional period between adolescence and adulthood. They see their time in college as one with limited responsibilities and social constraints and feel as though this is the best time in their lives to live freely without the threat of serious repercussions for negative behavior (Crawford & Novak, 2010). Drinking becomes one variable in the college experience.

This evaluation of the influences and factors that contribute to a college student's propensity to drink alcohol and engage in binge drinking behavior is an important issue because of the vast number of social problems that have arisen over collegiate alcohol abuse today. Students have begun to adopt an isolated view of college from the normal constraints of society and view their time of higher education as one with limited responsibility to their community (Crawford & Novak, 2010).

There are many problems that can arise from these alarming rates of alcohol consumption. The most obvious is the health issues that can develop for these individuals abusing alcohol. Both short term problems such as alcohol poisoning, black outs, stomach ulcers and liver infections, as well as long term effects including memory loss, liver disease, and

alcoholism are serious health issues. Furthermore, the increase in drinking often times leads to an increase in crime causing additional costs for the community in order to maintain control of those abusing alcohol. The most important reason that it is imperative to understand what factors influence drinking behaviors the most is so that educational programs can be amended to provide impactful messages with significant and true research findings in order to properly inform incoming college students of the dangers of alcohol abuse.

### College Student Drinking as an Institutional Problem

Excessive drinking by college students has long been an issue of concern for college administrations. A majority of college and university presidents have identified that alcohol abuse is a major problem at their campuses. Some went as far as to identify this abuse as the greatest threat to the quality of campus life. On college campuses, alcohol has been cited as a factor in the occurrence of many sexual assaults, campus violence, and personal injuries and deaths (Presley et al, 2002). An even greater concern for university administrators than the levels of heavy drinking among college students is the large number of psychological, social, and behavioral problems that students experience as a result of their alcohol use (Fenzel, 2005). Binge drinking is associated with many negative consequences including passing out and blacking out. Findings from one study showed that 92% of binge drinkers had become emotionally unstable because of drinking; 86% reported that alcohol abuse had interfered with their job or performance in school and 72% reported that they had become aggressive or violent after binge drinking (Fenzel, 2005).

Studies have found that between 44 and 49 percent of full-time students engage in binge drinking behaviors. Weitzman et al (2003) reported similar findings as their research found that



two fifths of all college students binge drink and a quarter of them do so frequently, bingeing three or more times in a two week span. The researchers also reported that binge drinking was more prevalent for males, students, involved with Greek organizations, athletes, younger students, those with a family history of problem drinking, and students who consider religion to be less important to them (Weitzman et al, 2003).

### Norms and College Student Drinking

One of the biggest social-psychological factors that contribute to binge drinking on college campuses is the fact that many students believe that binge drinking is both more common and more accepted at their school than it actually is (Crawford & Novak 2010). It is because of this misconceived belief that binge drinking is more prevalent that students raise their own levels of consumption to dangerous levels which in turn causes others to find these behaviors as more acceptable (Crawford & Novak, 2010).

Weitzman et al (2003) reported that students who believed that more than half of their friends binge drink were at an elevated risk of excessive drinking as compared to those students who believed that fewer of their friends abused alcohol. Furthermore, many college students overestimate the amount of alcohol consumed by their peers. Those who overestimate these consumption rates are much more likely to consume more alcohol themselves than those who more accurately estimate the drinking behavior of their peers (Reis & Riley, 2000).

Reis and Riley (2000) also found support for the influence of perceived peer drinking behavior on individual drinking. The focus of the research was to identify why young adults engage in binge drinking and what can be done to curb this behavior. Findings showed the expectations about the effects of alcohol and the perceived peer norms for alcohol consumption

varied greatly between groups identified as heavy and light drinkers. Those who were identified as heavier drinkers had much more positive expectations about the effects of alcohol than did the lighter drinkers. Reis and Riley (2000) also found that the psychological factors of perceived peer norms of consumption and the expectations about the consequences of alcohol use were most strongly correlated with the propensity to begin binge drinking in college.

Studies have shown that the perceptions of consumption levels of peers really do affect a student's propensity to engage in dangerous drinking behaviors. Crawford and Novak (2010) found that respondents to their survey who perceived that students on their campus drank heavily were more likely to drink heavily themselves. In fact, students who believe that drinking heavily is something students should do were found to be more vulnerable to the misperception that binge drinking is a common and accepted activity on their campus (Crawford & Novak, 2010). This finding was strongest for those who viewed binge drinking as an integral part of the student role.

#### The Perception of the Role of a Student

A second social-psychological factor that may add to the high rates of binge drinking on college campuses is the fact that many view the student role as one that is separated from adult roles. Many view the time spent at college as a middle period between adolescence and adulthood, a time when students are largely segregated from the broader community and the normative societal constraints. Since there are few formalized rites of passage associated with passing from adolescence to adulthood, students have created their own "rituals" which often involve alcohol use and many times, misuse (Crawford & Novak, 2010). Students feel free from the standards of conduct that govern adult behavior and express their 'freedom' through abusing

alcohol and while intoxicated, conducting themselves in ways that would not be acceptable outside of the college atmosphere (Crawford & Novak, 2010). This feeling is illustrated in many signs, posters and t-shirts that are seen on college campuses. One t-shirt displays the message “After college, it’s considered alcoholism”. Paraphernalia depicting these messages show that many college students do recognize that their behavior would not be accepted in other social settings, and that it would be inappropriate in the ‘real world’. However, these students still continue to hold onto the feeling that they are in fact separated from society in this liminal stage of passage to adulthood (Crawford & Novak, 2010). Crawford & Novak (2010) described this liminal stage of passage as one in which the “individuals are segregated from and perceived as distinct from the broader community, and the normative constraints characteristic of society lose much of their regulatory power” (Crawford & Novak 2010, 70).

Students who engage in binge drinking do so because they feel it is a part of the ritual of the college experience. They also feel as though college is the time in which they have the freedom and flexibility to drink heavily while having few negative consequences. College is viewed as a transitory time period of which to enjoy life before becoming an adult (Crawford & Novak, 2006).

#### Individual Predictors of Alcohol Abuse

Fenzel (2005) examined factors related to students’ attitudes, perceptions, and behaviors that were potential indicators of psychosocial risk for alcohol abuse. He theorized that students with low self-esteem, symptoms of anxiety or depression, high peer affiliation compared to low parental control or support, and involvement in other problem behaviors such as other drug use would place them at a higher risk to engage in binge drinking behavior. Fenzel (2005) also

predicted that the risk of binge drinking would be reduced when protective factors, such as high religiosity, positive adult relationships, and involvement in pro-social behaviors like community service activities or student government were a part of a student's life. Findings showed that the risk factors examined contributed much more to the prediction of drinking behavior than did the protective factors. However, these protective factors are related to less frequent binge drinking among students. These results show that encouraging students to become involved in community service and college service activities may lead to a reduction in binge drinking frequency. These activities would also expose students to peers who model lower levels of binge drinking and would help to lower the overall misperception that so many students drink heavily (Fenzel, 2005).

Crawford and Novak (2006) found in their study that males, those who drank in high school, belonged to a Greek organization, had heavy drinking friends, and believed that alcohol use is a common campus activity all held the perception that binge drinking is a primary role of students. This orientation however, did not account for these individuals' high levels of alcohol consumption. This may lead one to believe that despite having all of these characteristics, there was a larger, more powerful factor that influenced these students to engage in binge drinking behaviors. This factor may have been a more encompassing environmental predictor such as the general accessibility that these students had to alcohol.

#### Environmental Predictors of Alcohol Abuse

By comparing students who began binge drinking in college versus those who did not, Weitzman et al (2003) found that those who begin to binge drink in college, rather than in high school, may be a more receptive audience for alcohol abuse prevention. Weitzman et al (2003)

stated that these impressionable youth may be swayed from binge drinking by controlling the environmental factors which may influence a student to engage in binge drinking behaviors. Environmental risk factors include cheaply available alcohol in bars and stores and high densities of alcohol availability surrounding college areas (Weitzman et al, 2003).

Environmental factors that were identified as protectors against binge drinking include living in substance-free residential areas and “exposure to community norms that reflect high levels of social capital, or patterns of civic engagement and trust (Weitzman et al, 2003, 27). One of the biggest environmental factors that contribute to binge drinking behavior is the ease at which many college students, regardless of age, can procure alcohol. The affordability of such alcohol also contributes to the uptake of binge drinking (Weitzman et al, 2003).

A common view of the problem of binge drinking on college campuses is that those who have issues with alcohol abuse do so because of some genetic or character defect and that if educated properly about the effects and dangers of alcohol use, the abuse would fade away. However Presley et al (2002) concluded that “education is the cure to the extent that ignorance is the disease” (82). Presley et al (2002) posit that student characteristics might not be the leading cause of alcohol abuse and examined environmental aspects of colleges which may lead toward a higher propensity for students to engage in binge drinking behavior. This study examined the organizational, physical, behavioral, and campus community property variables as they relate to binge drinking occurrence. Students attending all black colleges and all women institutions were found to engage in binge drinking at lower rates than the national average. Additionally, students belonging to Greek organizations were shown to be more likely to drink alcohol, drink more frequently, and have higher rates of heavy drinking when compared to non-Greek members. Those students involved in athletics are also identified as being at a higher risk of

engaging in the misuse of alcohol (Presley et al, 2002). Another variable found to influence drinking behavior is type of residence where students live. Those students that live at home and commute have the lowest tendency to engage in heavy drinking, while those living off campus with peer roommates and in particular in fraternity or sorority houses were found to have the highest levels of alcohol consumption and binge drinking episodes (Presley et al, 2002). An interesting point identified in the literature was that particular regions of the country had institutions with higher levels of consumption and binge drinking episodes. The Northeast area of the United States was found to have the highest levels of both consumption and binge drinking episodes followed closely by the North Central region of the country (Presley et al, 2002).

Presley et al (2002) also identified environmental factors that largely affect alcohol consumption and binge drinking rates. These factors included the availability and affordability of alcohol, the density of bars, clubs and liquor stores in the area surrounding the campus, the social settings where drinking takes place, and campus customs. Solutions that lead to a decrease in alcohol consumption included an increase in cost of alcoholic beverages and raising other costs associated with drinking such as the time spent obtaining alcohol and the legal costs associated with drinking-related behavior could help to curb the misuse of alcohol (Presley et al, 2002). Another factor found to influence binge drinking is the venue at which consumption occurs. Students have been found to engage in problematic drinking behaviors at bars, parties and Greek organization events, and thus, if the number of these venues were to be decreased, it would help lower the number of episodes of problematic drinking (Presley et al, 2002).

The study done by Weitzman et al (2003) also found support for the idea that environmental factors influence binge drinking. Their findings showed that college students who reported being exposed to environments which included social, residential, and market

surroundings where drinking was prevalent and alcohol cheap and easily accessible were more likely to engage in binge drinking behaviors when compared to students who were not exposed to the same factors. Weitzman et al (2003) concluded that the best way to limit the start of binge drinking behaviors for college students was to limit the accessibility, availability, and affordability of alcohol, while also making attempts to provide more substance free environments and organizations.

Another environmental factor which may influence binge drinking is the reputation of the college or university. Students may select a school because of its party reputation (Fenzen, 2005). In order to reduce binge drinking on these campuses, it would be beneficial for these known 'party schools' to find a way to control the social environment that encourages binge drinking to one that minimizes these risks. Ways to accomplish this goal would be to encourage or require students to engage in more community service activities, or internship and externships experiences so that students would feel more connected with the community and feel more constrained to normative societal constraints (Fenzen, 2005).

### Peer Influence and Drinking

The work of Borsari and Carey (2001) showed that peer influence has a profound effect on the propensity of college students to begin using alcohol. Peer influence is especially strong during the college years since many students view college as a place to drink excessively and there is an abundance of alcohol-based social opportunities (Borsari & Carey, 2001). Furthermore, students who live around others with binge drinking habits where alcohol is both prevalent and readily available were more likely to engage in binge drinking behaviors (Borsari & Carey, 2001).

According to Borsari and Carey (2001), peer influences to drink can come in several different forms, either through active offers of alcohol, modeling of others' drinking and the perceived drinking norms of others. At many collegiate social gatherings, drinking is very common and being present at such functions without having a drink will often result in offers of alcohol. Additionally, there are many types of drinking games that are played in social settings that require participants to drink large quantities of alcohol quickly (Borsari & Carey, 2001). New students or those wanting to develop new friendships and adapt to college life are much more likely to accept offered drinks from peers because they feel it will help them to fit in and be a part of the crowd (Borsari & Carey, 2001).

In a modeling study done by Borsari & Carey (2001), findings showed that participants in their study matched their drinking consumption rate with that of their fellow drinkers. This modeling effect is one of the three types of peer influence to drink that they identified. When applied to a college drinking setting, this would predict that many students will try to model their consumption rates off of others at their social functions. This may lead many students to consume much more alcohol than they are comfortable with at an accelerated pace, thereby leading them into a quick state of intoxication.

Borsari and Carey (2001) developed a number of conclusions based on their research findings. Students who perceived others as heavy drinkers or felt that others approve of binge drinking, were more inclined to do so themselves. Those students with higher perceptions of drinking norms raised their own personal consumption levels, often to the point of binge drinking behavior. People were more likely to base their drinking perceptions off of close acquaintances such as family and friends than they are to base their perceptions off of institutions such as government officials and health authorities' norms (Borsari & Carey, 2001).



Students frequently overestimate the quantity and frequency of alcohol consumption of their peers and believe their close friends and the typical college student drinks more than they do (Borsari & Carey, 2001). These assumed high rates of consumption that are accepted as the norm by many students are likely to falsely lead them to believe that their own drinking behaviors are not problematic, therefore reducing the chances of them taking steps to reduce their own consumption levels (Borsari & Carey, 2001).

### Alcohol Education

While both environmental and behavior characteristics are strong predictors of binge drinking behavior, alcohol education programs may not be taking advantage of the findings and integrating them into alcohol consumption reduction policies. The Weitzman et al (2003) study produced evidence that college alcohol education should more effectively balance normative prevention with more environmentally focused approaches, including minimizing easy access to cheap alcohol. In their study, Reis and Riley (2000) found it to be imperative that universities focus on addressing the expectations of alcohol use and the perceived peer norms of consumption in order to effectively dissuade students from engaging in dangerous drinking behaviors.

According to Weitzman et al (2003), many of the factors that influence college students to begin binge drinking are environmental, and can be controlled in some way. These students that begin binge drinking once they arrive at college for the first time may be a highly impressionable audience and ideal candidates for alcohol education. If they are reached before being exposed to the drinking environment of their college, they may not begin abusing alcohol at all. Students come to college with the perception that they will have more personal freedoms

than responsibilities and find themselves engaging in more dangerous drinking behaviors. Institutions would therefore find it advantageous to even out this imbalance by increasing student responsibilities such as having higher expectations or requirements for involvement in community service (Fenzen, 2005).

Even more troubling is the fact that a higher proportion of students who reported having attended lectures, meetings, or workshops on alcohol were likely to begin binge drinking in college (Weitzman et al, 2003). Findings showed that students who identified as being at the highest risk of abusing alcohol also reported having very high levels of exposure to alcohol education programs. These findings may indicate that it is very difficult to change the behaviors of college students, and that it may be more effective to focus on controlling the environmental aspects of binge drinking such as the accessibility, density, and affordability of alcohol in the area.

In a study done by Crawford and Novak, (2010) the potential effectiveness of associating more societal constraints with the student status was examined. By exposing students to more restrictive sets of “adult role expectations through service requirements” Crawford and Novak (2010, 78) found that the lack of constraints associated with the liminal period before adulthood could be rectified. They also pointed out that previous studies found that students who attend universities with a high rate of volunteerism were at a much lower level of risk to participate in binge drinking (Crawford & Novak, 2010). One way that universities could encourage these societal links and restraints would be to drop some of their general education requirements for students, and instead require them to complete a certain number of community service hours throughout their two or four years as an undergraduate. Another factor that could aid in controlling alcohol abuse would be to raise the educational and legal risks associated with this

behavior. Through more strict, severe, and certain penalties, fines, suspensions, and expulsion threats, law enforcement and university officials could aid in deterring this growing problem.

## Hypotheses

The following hypotheses were examined in this study.

1) Students, who are male and belong to a Greek organization will be more likely to binge drink frequently than their counterparts. This research is supported by the findings of Crawford and Novak (2006) who reported that these groups had the highest likelihood of binge drinking.

2) I expect that students who are involved in sports at either the club or varsity level will be more likely to binge drink than those not involved. Presley et al (2002) found those students involved in athletics as being at a higher risk of engaging in the misuse of alcohol than those not involved in athletics.

3) The more accessible and affordable a student perceives alcohol to be, the higher their propensity to binge drink. Weitzman et al (2003) found that one of the biggest environmental factors that contribute to binge drinking behavior is the ease at which many college students, regardless of age, can procure alcohol.

4) Students who believe that the number of bars, liquor stores, beer distributors and bottle shops makes alcohol easily accessible and affordable will be more likely to binge drink than those who think that the number of places selling alcohol does not make alcohol more accessible. Weitzman et al (2003) found that environmental risk factors including cheaply available alcohol

in bars and stores and high densities of alcohol availability surrounding college areas led to a higher propensity for students to binge drink.

5) White college students are expected to be more likely to binge drink than students of other races. Presley et al (2002) found that students attending all black colleges were found to engage in binge drinking at lower proportions than the national average.

6) Those students who have or have had a family member with any type of drinking problem will be more likely to binge drink than respondents whose family members do not have drinking problems. Weitzman et al (2003) reported that binge drinking was more prevalent for those with a family history of problem drinking than for those whose family did not have drinking problems.

7) Those who reported that religion is an important part of their lives will binge drink less frequently as compared to those who do not report that religion is important in their lives. Fenzel (2005) predicted that the risk of binge drinking would be reduced when protective factors, such as high religiosity were a part of a student's life.

8) Students who live off campus will binge drink more frequently than those living on campus or at home. The type of residence that students live in was found to have an impact on engagement in heavy drinking (Presley et al, 2002). Presley et al (2002) concluded that those students living at home and commuting will have the lowest tendency to engage in heavy drinking, while those living off campus with peer roommates and in particular in fraternity or sorority houses will have the highest levels of alcohol consumption and binge drinking episodes.

9) Students involved in pro-social activities such as honor societies, service organizations, or student government will binge drink less frequently than those not involved in

these same types of activities. Fenzel (2005) predicted that the risk of binge drinking would be reduced when protective factors, such as involvement in pro-social behaviors like community service activities or student government were a part of a student's life.

10) Students who attended a higher number of alcohol education classes will be more likely to binge drink frequently than those who have attended few alcohol education classes. Weitzman et al (2003) found that students who identified as being at the highest risk of abusing alcohol also reported having very high levels of exposure to alcohol education programs.

11) Those students who reported having experiences of peer influence to drink will be more likely to binge drink frequently than those not exposed to peer influence. The work of Borsari and Carey (2001) shows that peer influence has a profound effect on the propensity of college students to begin using alcohol.

12) Students who thought that the average student at their university consumes large amounts of alcohol and binge drinks frequently will be more likely to binge drink frequently themselves as compared to their counterparts. This hypothesis is supported by the research of Crawford and Novak (2006) who state that one behavioral characteristic that influences students' drinking behavior is the drastic misperception that students adopt of campus drinking norms. Borsari and Carey (2001) found that students model their drinking off of their perceived norms and may view their drinking as unproblematic in relation to the perceived elevated consumption rates by their peers. Furthermore, Reis and Riley (2000) reported that those who overestimate these consumption rates are much more likely to consume more alcohol themselves.

13) Students who think that drinking is a desirable and acceptable part of college life because they have less responsibilities than they will as an adult are more likely to binge drink

frequently than their counterparts. This is supported by the research of Crawford & Novak (2010) who state that many adolescents see their time in college as one with limited responsibilities and social constraints and feel as though this is the best time in their lives to live freely without the threat of serious repercussions for negative behavior.

14) Students who worry less about the legal risks, university sanctions, and academic risks of their drinking are more likely to binge drink frequently than those who worry more. Crawford and Novak (2010) found that the lack of constraints associated with adolescents in college led to higher propensities of these youth to abuse alcohol.

## **Chapter 2: Methods**

### **Sample**

The data that I used for my research were gathered from a nonrandom convenience sample of students at a large Northeastern University in the spring of 2012. The sample consisted of 428 undergraduate students from a criminology class and three sociology classes. Instructors gave permission for data to be gathered in their classes. The students in two out of the four classes surveyed received extra credit for participating in the research or completing an alternate assignment. The on-line survey took approximately 10 minutes to complete and was approved by the Institutional Review Board; participation was voluntary and since no identification information was included as part of the survey, the data are anonymous.

### **Survey**

The questionnaire was self-administered by the respondents and consent was indicated by agreeing to continue with the survey after being presented with the full consent form on the first page of the on-line questionnaire. The purpose of the study was to gather information about the factors which may influence binge drinking among college students. The survey included a variety of questions about basic demographic information, perceived drinking norms of college students, individual drinking statistics, effects of environmental influences on drinking, the effects of peer influence to drink and the perception of the role of the college student.

### **Sample Description**

Of the 428 respondents, 42.6% were male and 57.6 % were female. The sample was 77.5% White, 7.5% Black, 6.3% Asian, 5.2% Hispanic/Latino, and 3.5% other races; 30.1% were first year students, 23.4% second year students, 29.7% third year students, 14.3% fourth year students, and 2.8% were fifth year students or more.

## Independent Variables

The frequencies for all variables used in this model can be found in Appendix A. The independent variables that are hypothesized to affect students' propensity to drink alcohol are involvement in a Greek organization, whether or not the respondent was involved in varsity or club level athletics at the university, the respondent's perceived level of general accessibility to alcohol, the respondent's perceived level of availability and affordability of alcohol at bars, liquor store, beer distributors, and bottle shops, the race of the respondent, whether or not the respondent has or had a family member with a drinking problem, the level of importance religion plays in the respondent's life, the location of the respondent's current residence, whether or not the respondent participates in pro-social activities, the number of alcohol education classes the respondent has attended, whether or not the respondent has been influenced in any way by peers to drink alcohol, the respondent's perceived level of alcohol consumption among their peers, the respondent's perceived level of desirability to drink alcohol during the college years, and the respondent's level of concern for the consequences of their drinking behavior.

Involvement in a Greek organization was measured in three categories (1 = yes, 2 = no, 3 = no, but I would like to join one) and recoded into two categories (1=yes and 2=no). Respondents that indicated they had a desire to join a Greek organization were included in the yes category as the majority of those wishing to join a Greek organization were actively pursuing membership through Greek recruitment or "rushing". Involvement in athletics (at the club or varsity level) was measured in two categories (1 = yes, 2 = no). The race of the respondent was measured by five categories (1 = white, 2 = black, 3 = Asian, 4= Hispanic/Latino, 5= other) and recoded into two categories (1=white and 2=non-white). The race variable was recoded into two categories because of the small number of minorities in the sample.



The level of importance religion plays in the respondent's life was measured by asking them whether they considered religion "Very important", "Somewhat important", "Not very important", or "Not at all important" in their lives. The location of the respondent's current residence at college was measured in six categories (1 = On campus dorms, 2 = On campus apartments, 3 = Off campus apartment, 4 = Off campus house, 5 = In a fraternity house, 6 = at home with parents) and recoded into three categories (1=on campus, 2=off campus, 3=at home with parents). Whether or not the respondent participates in pro-social activities (that is honor societies, service organizations, or student government) was measured in two categories (1=yes, 2=no).

The respondent's perceived level of general accessibility to alcohol was measured by creating a scale of the responses to five combined questions from the survey that respondents answered by choosing the level to which they agreed or disagreed with the following statements: It is very easy for me to obtain alcohol here at this university; If it was harder for me to obtain alcohol here at this university, I would drink less and/or drink less often; If alcohol cost MORE here, I would not buy as much or as often as I currently do; The number of fraternity/house/apartment parties here at this university makes drinking readily accessible to me; If there were LESS fraternity/house/apartment parties here at this university, I would not drink as often as I do now. Responses to the questions were coded from 1-4 with the answer indicating the highest level of accessibility equal to four for each question. A scale was developed by adding together the responses to all of the items. This scale was then recoded into three categories of accessibility (1=low, 2=average, and 3=high).

The respondent's perceived level of availability and affordability of alcohol at bars, liquor store, beer distributors, and bottle shops was measured by creating a scale of the responses

to seven combined questions from the survey: The number of bars here at this university makes drinking readily accessible to me; If there were LESS bars here at this university, I would not drink as often as I do now; The number of liquor stores/beer distributors/bottle shops here at this university make it easy to obtain alcohol when I want it; If there were LESS liquor stores/beer distributors/bottle shops here at this university, I would not drink as often as I do now; If alcohol cost LESS here, I would buy more of it or more often than I currently do; Bar specials, happy hours, and cheaply priced drinks make going out seem affordable to me; and If bars did not have nightly specials, happy hours, or some cheap drinks, I would not go out as often as I do now. Each of the responses to the questions were coded from 1-4 with the answer indicating the highest level of accessibility equal to four for each question. A scale was developed by adding together the responses to each of the items. This scale was then recoded into two categories of accessibility (1=low and 2=high).

Respondents indicating they were not of legal drinking age did not respond to these items and were not included in the analysis. Whether or not the respondent has or had a family member with a drinking problem was measured in two categories (1=yes, 2=no). The number of alcohol education classes the respondent has attended was measured in four categories (1=one, 2=two, 3=three, 4=four or more) and was recoded into two categories (1=1-2, 2=3 or more). Whether or not the respondent has been influenced in any way by peers to drink alcohol (that is through simple encouragement to come out, play a drinking game, or any type of hazing activity) was measured in two categories (1=yes, 2=no). The respondent's perceived level of alcohol consumption among their peers was measured by creating a scale of the responses to three combined questions from the survey: In your opinion, what is the AVERAGE number of alcoholic drinks student's at this university consume in an AVERAGE week?; In your opinion,

what is the AVERAGE number of alcoholic drinks students at this university consume during one sitting?; and In your opinion, how many times in the past 30 days has the AVERAGE student at this university binge drank?. These items were used to create a simple additive scale. This scale was then recoded into three categories of perceived consumption (1=low, 2=medium, 3=high).

The respondent's perceived level of desirability to drink alcohol during the college years was measured by creating a scale of the responses to four questions from the survey: Most students at this university think it's okay to get drunk at parties; Drinking is considered to be a desirable activity on this campus; College is the best time in your life for drinking, because after graduation there will be more responsibilities and social constraints; and Drinking allows college students to live life to the fullest and offers some of the best memories of college life. Each of the responses to the questions were coded from 1-4 with the answer indicating the highest level of desirability equal to one for each question. A simple additive scale was created from these items. The scale was then recoded into three categories of desirability (1=high, 2=medium, and 3=low).

Lastly, the respondent's level of concern for the consequences of their drinking behavior was measured by creating a scale of the responses to three questions from the survey: I worry about the legal risks of my drinking including the possibility of receiving such citations as underage drinking, public intoxication, disorderly conduct, etc. and the possible consequences associated with these charges; I worry about the university sanctions related to my drinking including the possibility of being placed on probation or being expelled from the school; and I worry about the academic risks of my drinking including doing poorly in class, failing an exam, or getting bad grades. Each of the responses to the questions were coded from 1-5 with the

answer indicating the lowest level of concern equal to one for each question. A simple additive scale was created and this scale was then recoded into three categories of concern (1=little concern, 2=some concern, and 3=high concern).

#### Dependent Variable

The dependent variable represented in the current research was the frequency at which the respondent has binge drank in the past 30 days. Frequency was measured in seven categories (1=don't drink, 2=1-2 times, 3=3-4 times, 4=5-6 times, 5=7-8 times, 6=9-10 times, and 10= more than ten times) and recoded into three categories (1=Never, 2=1-4 times, and 3=5 or more times).

#### Analysis

I tested the recoded independent variables against binge drinking frequency using cross tabulations. These crosstabs show the relationship between two categorical variables and are presented in tables displaying the joint frequency distributions of the two variables. Because I used cross-tabulations as the analysis technique, I recoded many of my independent and dependent variables into a limited number of categories. This reduction in cells may have influenced statistical power. The Pearson Chi-square test was applied to all crosstabs to determine whether or not a significant relationship existed between any set of variables. This relationship was identified as being at the .05, .01, or .001 level.

### Chapter 3: Findings

Table 1 presents the first cross tabulation identifying the relationship between membership in a fraternity or sorority and binge drinking frequency. This table also includes gender of the respondent as a control variable. My hypothesis that males belonging to a Greek organization would binge drink more frequently than their counterparts was supported as 60.7% of male fraternity members indicated that they had binge drank five or more times over the past 30 days compared to just 33.1% of those not in a fraternity. This relationship for males was significant at the .05 level. The variance in binge drinking frequency was also evident for females involved in Greek life compared to those who were not as 54.8% of women in a fraternity or sorority indicated that they had binge drank five or more times in the past 30 days compared to 29.6% of those not in Greek life. This relationship for females was significant at the .01 level.

**Table 1:** Cross tabulation of membership in a fraternity or sorority and binge drinking frequency over the past 30 days when controlling for gender.

		Member of Fraternity or Sorority		
		Males	Yes	No
Number of times binge drinking over past 30 days	<b>Never</b>	Count	1	24
		%	3.60%	15.90%
	<b>1 to 4 times</b>	Count	10	77
		%	35.70%	51.00%
	<b>5 or more times</b>	Count	17	50
		%	60.70%	33.10%
	<b>Total</b>	Count	28	151
		%	100%	100.00%

		Member of Fraternity or Sorority		
		Females	Yes	No
Number of times binge drinking over past 30 days	<b>Never</b>	Count	3	39
		%	7.10%	19.20%
	<b>1 to 4 times</b>	Count	16	104
		%	38.10%	51.20%
	<b>5 or more times</b>	Count	23	60
		%	54.80%	29.60%
	<b>Total</b>	Count	42	203
		%	100%	100.00%

The findings for my hypothesis that students involved in sports at the club or varsity level would be more likely to binge drink than those not involved is presented in Table 2.

Involvement in athletics had virtually no effect on binge drinking frequency. Thirty-four percent of those involved in athletics indicated that they had binge drank five or more times during the past 30 days while 35.4% of those not involved in athletics indicated the same. Approximately half of both groups indicated that they had binge drank between one and four times in the past 30 days. This relationship was not found to be significant.

**Table 2:** Cross tabulation of participation in athletics at the club or varsity level at the university and binge drinking frequency over the past 30 days.

		Club or Varsity Level Athlete		
		Yes	No	
Number of times binge drinking over past 30 days	<b>Never</b>	Count	7	60
		%	13.20%	16.10%
	<b>1 to 4 times</b>	Count	28	181
		%	52.80%	48.50%
	<b>5 or more times</b>	Count	18	132
		%	34.00%	35.40%
	<b>Total</b>	Count	53	373
		%	100%	100.00%

The relationship of respondent’s perceived level of general accessibility to alcohol and binge drinking frequency was examined in Table 3. This table identifies the effect of perceived accessibility to alcohol (low, average, high) on binge drinking frequency. Over forty-five percent of respondents who felt that alcohol was highly accessible indicated that they had binge drank five or more times in the past 30 days compared to only 35% of those who perceived alcohol to be of average accessibility and just 18.3% of those who perceived alcohol to be of low accessibility. This relationship was significant at the .001 level.

**Table 3:** Cross tabulation of general accessibility to alcohol and binge drinking frequency over the past 30 days.

		Perceived Level of General Accessibility to Alcohol			
			Low	Average	High
Number of times binge drinking over past 30 days	<b>Never</b>	Count	12	29	24
		%	20.00%	11.30%	22.90%
	<b>1 to 4 times</b>	Count	37	138	33
		%	61.70%	53.70%	31.40%
	<b>5 or more times</b>	Count	11	90	48
		%	18.30%	35.00%	45.70%
	<b>Total</b>	Count	60	257	105
		%	100.00%	100.00%	100.00%

Table 4 displays the relationship of perceived accessibility and affordability of alcohol at bars, liquor stores, beer distributors and bottle shops and binge drinking frequency. This table includes data from only those respondents who were 21 years of age and older. This table identifies the effect of perceived accessibility to alcohol (low and high) on binge drinking frequency. Over thirty percent of respondents who felt that alcohol was highly accessible indicated that they had binge drank five or more times in the past 30 days compared to only 22.2% of those who perceived alcohol to be of low accessibility. While this relationship was not

statistically significant it was observed that just 18 (11.5%) of the respondents indicated that they perceived alcohol to be at a low level of accessibility and affordability at bars and stores.

**Table 4:** Cross tabulation of perceived level of Accessibility to Alcohol at bars and stores

		Perceived Level of Accessibility: Alcohol at Bars and Stores		
			Low	High
Number of times binge drinking over past 30 days	<b>Never</b>	Count	4	17
		%	22.2%	12.3%
	<b>1 to 4 times</b>	Count	10	78
		%	55.6%	56.5%
	<b>5 or more times</b>	Count	4	43
		%	22.2%	31.2%
	<b>Total</b>	Count	18	138
		%	100.00%	100.00%

The relationship between race and binge drinking frequency is presented in Table 5.

White students were significantly more likely than non-white students to binge drink with 40.6% of the white students indicating they had engaged in binge drinking five or more times over the past 30 days compared to just 16% of non-white students ( $p < .001$ ).

**Table 5:** Cross tabulation of race and binge drinking frequency over the past 30 days.

		Race		
			White	Non-White
Number of times binge drinking over past 30 days	<b>Never</b>	Count	41	26
		%	12.40%	27.00%
	<b>1 to 4 times</b>	Count	155	54
		%	47.00%	56.00%
	<b>5 or more times</b>	Count	134	16
		%	40.60%	17.00%
	<b>Total</b>	Count	330	96
		%	100.00%	100.00%



The effect of having a family member with a current or past drinking problem and binge drinking of the student is examined in Table 6. No relationship was found with this variable and binge drinking frequency as 37.8% of those with a family member suffering from a drinking problem indicated that they had binge drank five or more times in the past 30 days compared to 33.8% who responded that they did not have a family member with a drinking problem.

**Table 6:** Cross tabulation of problem drinkers within family and binge drinking frequency over the past 30 days.

		Has/Had a family member with a drinking problem		
			Yes	No
Number of times binge drinking over past 30 days	<b>Never</b>	Count	23	44
		%	15.50%	15.80%
	<b>1 to 4 times</b>	Count	69	140
		%	46.60%	50.40%
	<b>5 or more times</b>	Count	56	94
		%	37.80%	33.80%
	<b>Total</b>	Count	148	278
		%	100%	100.00%

Importance of religion in respondents' lives was also examined as an independent variable with binge drinking as the dependent variable. Table 7 shows that those who consider religion to be 'very important' in their life were less likely to binge drink frequently than those who considered religion to be 'somewhat important', 'not very important', or 'not at all important. About 18 percent of respondents indicating religion to be 'very important' binge drank five or more times in the past 30 days compared to 44.8% of respondents indicating religion to be 'not very important' and 33.3% of respondents indicating religion to be 'not at all important' ( $p < .001$ )

**Table 7:** Cross tabulation of level of importance religion is in life and binge drinking frequency over the past 30 days.

		Level of importance religion plays in life				
		Very Important	Somewhat Important	Not very important	Not at all important	
Number of times binge drinking over past 30 days	<b>Never</b>	Count	25	25	9	8
		%	31.60%	15.20%	7.80%	12.10%
	<b>1 to 4 times</b>	Count	40	77	55	36
		%	50.60%	47.00%	47.40%	54.40%
	<b>5 or more times</b>	Count	14	62	52	22
		%	17.70%	37.80%	44.80%	33.30%
	<b>Total</b>	Count	79	164	116	66
		%	100.00%	100.00%	100.00%	100.00%

Table 8 displays the relationship of respondents' location of current residence with binge drinking frequency. As hypothesized, those students living in off campus housing were more likely to binge drink frequently than those living on campus, while those living at home with their parents being the least likely to binge drink frequently. No respondents living at home with their parents indicated that they had binge drank at all in the past 30 days while 32.5% of students living on campus and 38.3% of students living off campus indicated that they had binge drank five or more times in the past 30 days. This relationship was significant at the .001 level.

**Table 8:** Cross tabulation of residence location and binge drinking frequency over the past 30 days.

		Location of current residence			
		On campus	Off Campus	At home (with parents)	
Number of times binge drinking over past 30 days	<b>Never</b>	Count	34	29	4
		%	16.30%	13.60%	100.00%
	<b>1 to 4 times</b>	Count	107	103	0
		%	51.20%	48.10%	0.00%
	<b>5 or more times</b>	Count	68	82	0
		%	32.50%	38.30%	0.00%
	<b>Total</b>	Count	209	214	4
		%	100.00%	100.00%	100.00%

My hypothesis that students involved in pro-social activities such as honor societies, service organizations, or student government would binge drink less frequently than their counterparts was not supported (Table 9). Over 50% of those involved in these pro-social activities indicated that they had binge drank between one and four times in the past 30 days and 32.3% indicated that they had binge drank five or more times compared to 47.% and 36.9% of their respective counterparts.

**Table 9:** Cross tabulation of participation in pro-social activities (honor societies, service organizations or student government) and binge drinking frequency over the past 30 days.

		Participates in pro-social activities		
			Yes	No
Number of times binge drinking over past 30 days	<b>Never</b>	Count	24	43
		%	15.20%	16.00%
	<b>1 to 4 times</b>	Count	83	126
		%	52.50%	47.00%
	<b>5 or more times</b>	Count	51	99
		%	32.30%	36.90%
	<b>Total</b>	Count	158	268
		%	100.00%	100.00%

The relationship between number of alcohol education classes taken by respondents and binge drinking frequency was presented in Table 10. The results to this question may have been slightly skewed as it was discovered that the university where this study was conducted requires all incoming freshman to take part in at least one alcohol education program. No respondents indicated that they had never attended an alcohol education class. Of those respondents who had participated in one to two classes, 34.4% indicated they had engaged in binge drinking five or more times in the past 30 days as compared to 37.5% of those that had attended three or more classes. This relationship was not found to be statistically significant.

**Table 10:** Cross tabulation of number of alcohol education classes attended and binge drinking frequency over the past 30 days.

		Number of alcohol education classes attended		
			1-2	3 or more
Number of times binge drinking over past 30 days	<b>Never</b>	Count	61	4
		%	15.70%	12.50%
	<b>1 to 4 times</b>	Count	194	16
		%	49.90%	50.00%
	<b>5 or more times</b>	Count	134	12
		%	34.40%	37.50%
	<b>Total</b>	Count	389	32
		%	100.00%	100.00%

Table 11 displays the relationship of peer influence and binge drinking frequency. Respondents were asked if they had ever been influenced in any way by their peers to drink alcohol, and of those replying ‘yes’, 38.5% indicated that they had binge drink five or more times over the past 30 days compared to just 28.6% of those who had not been exposed to any form of peer influence to drink alcohol. These results were significant at the .05 level.

**Table 11:** Cross tabulation of presence of peer influence on drinking and binge drinking frequency over the past 30 days.

		Have been influenced in some way by peers to drink alcohol		
			Yes	No
Number of times binge drinking over past 30 days	<b>Never</b>	Count	38	29
		%	13.30%	20.70%
	<b>1 to 4 times</b>	Count	138	71
		%	48.30%	50.70%
	<b>5 or more times</b>	Count	110	40
		%	38.50%	28.60%
	<b>Total</b>	Count	286	140
		%	100.00%	100.00%

The next crosstab, displayed in Table 12, shows the relationship of the perceived level of alcohol consumption among peers (low, medium, and high) and frequency of respondent binge drinking. My hypothesis was supported ( $p < .001$ ) as 56.8% of students indicating a high level of perceived peer consumption binge drank five or more times over the past 30 days compared to just 37.5% who perceived a medium level of peer consumption and 13.1% who perceived a low level of peer consumption.

**Table 12:** Cross tabulation of perceived levels of alcohol consumption among peers and binge drinking frequency over the past 30 days.

		Perceived level of alcohol consumption among peers			
		Low	Medium	High	
Number of times binge drinking over past 30 days	<b>Never</b>	Count	21	39	6
		%	21.20%	15.10%	9.40%
	<b>1 to 4 times</b>	Count	65	123	21
		%	65.70%	47.50%	32.80%
	<b>5 or more times</b>	Count	13	97	37
		%	13.10%	37.50%	57.80%
	<b>Total</b>	Count	99	259	64
		%	100.00%	100.00%	100.00%

The relationship of respondents' perceived level of desirability of drinking alcohol during the college years and binge drinking frequency is shown in Table 13. This table shows that 47.8% of respondents indicating a high level of desirability to drink alcohol in college binge drank five or more times over the past 30 days compared to just 29.3% of those indicating a medium level of desirability and 8.1% of those indicating a low level of desirability ( $p < .001$ ).

**Table 13:** Cross tabulation of perceived desirability to drink alcohol during college years and binge drinking frequency over the past 30 days.

		Perceived level of desirability to drink alcohol during college years			
		High	Medium	Low	
Number of times binge drinking over past 30 days	<b>Never</b>	Count	8	46	12
		%	4.50%	22.10%	32.40%
	<b>1 to 4 times</b>	Count	85	101	22
		%	47.80%	48.60%	59.50%
	<b>5 or more times</b>	Count	85	61	3
		%	47.80%	29.30%	8.10%
	<b>Total</b>	Count	178	208	37
		%	100.00%	100.00%	100.00%

The final relationship examined focused on respondents' indicated level of concern for the consequences about their drinking behavior and binge drinking frequency. The results for this analysis were actually opposite of what I had hypothesized as respondents who indicated at least some level of concern were more likely to binge drink frequently than those indicating that they had 'little concern' over the possible consequences of their drinking behavior. Of those indicating a high level of concern 56.4% binge drank one to four times in the past 30 days and 30.9% binge drank five or more times over the same period. Fifty percent of respondents indicating that they had 'some concern' over these consequences binge drank one to four times and 45% binge drank five or more times over the past 30 days while 44.10% of those indicating that they had 'little concern' over these consequences binge drank one to four times and 26.3% binge drank five or more times. This relationship was significant at the .001 level.

**Table 14:** Cross tabulation of level of concern for consequences of drinking behavior and binge drinking frequency over the past 30 days.

		Level of concern for consequences of drinking behavior			
		Little Concern	Some Concern	High Concern	
Number of times binge drinking over past 30 days	<b>Never</b>	Count	45	9	12
		%	29.60%	5.00%	12.80%
	<b>1 to 4 times</b>	Count	67	90	53
		%	44.10%	50.00%	56.40%
	<b>5 or more times</b>	Count	40	81	29
		%	26.30%	45.00%	30.90%
	<b>Total</b>	Count	152	180	94
		%	100.00%	100.00%	100.00%

## Chapter 4: Discussion

The focus of this study was predictors of binge drinking at one college campus in the northeast. The hypotheses tested examined both individual predictors of drinking and structural predictors including norms theory. Clearly binge drinking is an issue as 83.3 percent of students on this campus indicated they binge drank at least one time in the past month. Although much empirical research has been done on issues and effects of binge drinking, this research shows that the issues persist and that more research needs to be conducted to establish trends in binge drinking and to further develop policy implications.

My first hypothesis, that male students belonging to a Greek organization would be more likely to binge drink frequently than their counterparts was supported by the data. A majority of past literature on binge drinking, including the work of Crawford and Novak (2006), has identified Greek participation as one of the strongest predictors of binge drinking. The findings from my research identified the same pattern for women as for men. Women in Greek organizations are significantly more likely to drink than their non-Greek counterparts.

The findings in this study were not consistent with the findings of Presley et al (2002) which stated that students involved in athletics would be at a higher risk of engaging in the misuse of alcohol than those not involved in athletics. My study showed no significance difference between involvement in athletics and binge drinking frequency. One reason for the discrepancy of my findings and the work of Presley et al (2002) is that I collected a convenience sample that was non-representative of the University as a whole. Only 53 (12.4%) respondents indicated that they were involved in athletics at either the club or varsity level. This may not be an accurate representation of the actual proportion of student athletes at this university, and due



to the lack of randomization in selecting my sample, may not be truly representational of the student athlete population. Additionally, Presley et al (2002) may have only included varsity athletes in their study.

As stated by Weitzman et al (2003), one of the biggest environmental factors that contribute to binge drinking behavior is the ease at which many college students, regardless of age, can procure alcohol. The majority of my sample was not over the legal age-limit to purchase alcohol, yet the results for this scale of accessibility showed a strong relationship with binge drinking frequency. Students who perceived that alcohol was easily accessible were significantly more likely to binge drink than their counterparts.

I also examined the relationship between perceived accessibility and affordability of alcohol at bars and liquor stores and binge drinking. This analysis included only those respondents age 21 and over as only those students can legally purchase alcohol. The results show that the number of locations available for college students to purchase alcohol and the affordability of this alcohol due to bar specials and cheaply priced beer and liquor has an impact on the frequency with which these college students binge drink. These findings support the work of Weitzman et al (2003) which found that environmental risk factors including cheaply available alcohol in bars and stores and high densities of alcohol availability surrounding college areas led to a higher propensity for students to binge drink. If college towns such as the one where this study was completed were to lower the available number of places students can procure alcohol or raise the cost of this alcohol by eliminating bar specials, I would expect that the frequency with which these students binge drink would drop dramatically.

While no pre-existing data was examined that directly stated that white college students would binge drink more frequently than students of other races, Presley et al (2002) did find that students attending all black colleges engaged in binge drinking at lower rates than the national average. Based on this research, I hypothesized that white students would be more likely to binge drink than black students, and students of other races. This hypothesis was supported by my findings. The university that this study was completed at was predominately white, and it is reasonable to assume that there are a greater number of social outlets for whites to engage in dangerous drinking behaviors than nonwhite students.

My hypothesis that students who have or have had a family member with any type of drinking problem would be more likely to binge drink than respondents whose family members do not have drinking problems was not supported by my findings. Weitzman et al (2003) reported that binge drinking was more prevalent for those with a family history of problem drinking than for those whose family did not have drinking problems. It is possible that Weitzman et al (2003) may have been clearer in defining exactly what exactly was meant by “a family history of problem drinking” while my questionnaire simply asked if respondents had a family member with a “drinking problem”. It is possible that many students may also not classify their family as problem drinkers when indeed they might very well be according to a strict definition of problem drinking. In future studies, it would be beneficial to clearly indicate what is meant by “problem drinking” or “having a drinking problem”.

The prediction that the risk of binge drinking would be reduced by protective factors such as high religiosity was examined since norms of religiosity discourage inappropriate behavior. Fenzel (2005) supported this idea that such protective factors limit binge drinking behavior. I found a strong relationship between religiosity and binge drinking. Those who consider religion

to be “very important” in their lives were less likely to binge drink frequently than those considering religion to be “not very important” or “not at all important”.

Evaluating the effect that the type and location of student residences had on binge drinking frequency supported my hypothesis that students who live off campus will binge drink more frequently than those living on campus or at home. This hypothesis was also supported by the previous work of Presley et al (2002) which concluded that students living off campus with peer roommates and in particular in fraternity or sorority houses will have the highest levels of alcohol consumption and binge drinking episodes. I found that off campus residency results in significantly higher frequencies of binge drinking rates among students. Only four respondents indicated that they lived at home, but none of these students had engaged in binge drinking behaviors at all in the past 30 days. It is difficult to identify the causal direction of this relationship. Students may not binge drink because they live with their parents which acts as a suppressor, or students who are not interested in drinking may be more likely to move back home with their parents.

I also examined the relationship between involvement in pro-social activities such as honor societies, service organizations, or student government and binge drinking frequency. My findings are not consistent with those of Fenzel (2005) who found that these pro-social activities served as “protective factors” against the risk of binge drinking. Again, since my study used a convenience sample, it is impossible to tell if it was truly representational of the university as a whole, and a representational study may have yielded different results. It is possible that many students involved in the pro-social activities may also be involved in other organizations on campus that do promote dangerous drinking behaviors. A potential measure to include in future

studies would be to analyze the results for those students who are *only* involved in these types of pro-social activities and no other organizations on campus.

Weitzman et al (2003) found that students who identified as being at the highest risk of abusing alcohol also reported having very high levels of exposure to alcohol education programs and I hypothesized that students who had attended a higher number of alcohol education classes would be more likely to binge drink frequently than those who had attended fewer classes. My findings were inconclusive. The results may have been influenced by the alcohol education program at the university where this study was conducted. All incoming freshman are required to take part in at least one alcohol education program. All of the respondents had taken an alcohol education on-line class so there was no comparison group of students who had not had an alcohol education experience.

My next hypothesis, that students who reported being influenced by their peers to drink alcohol would be more likely to binge drink than their counterparts was supported by my findings. Students are influenced in many different ways by their peers to drink alcohol. This influence can range from simple encouragement to come out drinking to forcing peers to drink large quantities of alcohol as part of drinking games or hazing activities. The work of Borsari and Carey (2001) showed that peer influence has a profound effect on the propensity of college students to begin using and abusing alcohol and my findings supported this claim as respondents who indicated that they had been influenced by their peers were the most likely to have binge drank five or more times in the past 30 days.

I also expected that respondents who believed that their peers consumed high levels of alcohol would be more likely to binge drink than those students who believed students drank at a

lower level. This hypothesis was supported by my findings. The research and findings of Crawford and Novak (2006), Borsari and Carey (2001), and Reis and Riley (2000) all reported that one of the strongest behavioral characteristics that influences students' drinking behavior is the drastic misperception that students adopt of campus drinking norms. This is due to the fact that many students may be more inclined to model their drinking off of their perceived norms and may view their drinking as unproblematic in relation to the perceived elevated consumption rates by their peers. This will lead those who overestimate these consumption rates to be much more likely to consume more alcohol themselves. This finding does support the norms theory research findings

The research of Crawford & Novak (2010) found that many adolescents see their time in college as one with limited responsibilities and social constraints and feel as though this is the best time in their lives to live freely without the threat of serious repercussions for negative behavior. This was the basis for my hypothesis that students who feel that drinking is a desirable and acceptable part of college life will binge drink more frequently than their counterparts. Many students feel that they have fewer responsibilities in college than they will as an adult and this lack of constraints translates to a heightened acceptability of reckless drinking behaviors. My findings strongly supported the findings from previous research and indicate that there is indeed a lack of social constraint among college students who feel that this is the best time of their lives to drink without having to worry about the repercussions of their actions.

My final hypothesis, students who worry less about the legal risks, university sanctions, and academic risks of their drinking are more likely to binge drink than those who worry more, was not supported by my findings. That data showed a statistical relationship between concern for sanctions and binge drinking frequency; however, this relationship was in the opposite

direction of what I had hypothesized. Crawford and Novak (2010) found that the lack of constraints associated with adolescents in college led to higher propensities of these youth to abuse alcohol. My findings indicated that those who worried *more* about the possible ramifications of their drinking behaviors actually binge drank more frequently than those who worried less. One possible explanation to this outcome is that those who binge drink less frequently do not worry about the possible sanctions and ramifications of their actions because they do not abuse alcohol very frequently. Those that do binge drink more frequently may worry about the ramifications of their actions because they are abusing alcohol more and have more chances of being caught and punished.

#### Policy Implications

My research is just one of many empirical studies that have been conducted on the predictors of binge drinking behavior. While data continues to be gathered on the dangerous effects of this activity, it does not appear to reduce the widespread drinking problem on college campuses nationwide. My findings identify several predictors of binge drinking that could aid in future policy implications to help curb this type of alcohol abuse. If college towns, such as the one where this study was completed, were to lower the available number of places students can procure alcohol or raise the cost of this alcohol by eliminating weekly bar specials, I would expect that the frequency with which students binge drink would drop dramatically.

Furthermore, cities, townships, and boroughs could become involved in helping to alleviate this problem by passing stricter noise and party ordinances in their areas of jurisdiction. As availability and accessibility to alcohol and places to consume alcohol were some of the strongest predictors of binge drinking frequency, passing ordinances which would help to curb

this high level of accessibility would certainly help to cut down on the rate at which students binge on alcohol.

Another way to help solve the problem of collegiate alcohol abuse would be to raise the perceived level of social responsibility. Many adolescents see their time in college as one of passage between childhood and adulthood. They view their collegiate experience as one without social constraints and feel that this is the best time of their lives to engage in reckless behavior with minimal ramifications for their actions. This notion is supported by the findings of Crawford and Novak (2010) which stated that adolescents in college feel that they can live freely without the threat of serious repercussions for negative behavior. If colleges and universities were to impose requirements for students to engage in some type of service during their collegiate years, these students would feel as though they were more a part of the community and would feel a stronger sense of social constraint. Another idea would be for colleges to require students to obtain some form of internship or co-op within the community where the college is located to give students a sense of additional responsibilities outside of the classroom setting.

A final way that universities can attempt to curb binge drinking frequency would be to make a stronger effort to educate students on the dangers of the widespread misperception that students have about campus drinking norms. Crawford and Novak (2006), Borsari and Carey (2001), and Reis and Riley (2000) studied this effect extensively. They reported that one of the strongest behavioral characteristics that influence students' drinking behavior is the misperception that their peers abuse alcohol. Those who overestimate peer consumption rates are much more likely to consume more alcohol themselves and to view their drinking as unproblematic. If colleges made a stronger effort to educate students of the fact that average collegiate consumption rates are not as high as many perceive them to be, then students, armed

with this knowledge, would be able to make smarter, more educated decisions about their own drinking behaviors.

## Conclusion

While my findings supported many of my hypotheses for predictors of binge drinking frequency, there is much that could be done to improve my research. A representational sample of students at this northeastern university would have given much better insight into the drinking behaviors of the campus as whole compared to the convenience sample of students that I used to examine drinking behaviors. Also, by gathering data from more than one university, my findings would be able to be generalized to a much broader group. Future research could also be done at colleges of various geographical locations, public and private institutions, and universities of various sizes. The University that these data were gathered at has been known to rank highly among party schools nation-wide and this could have had a strong effect on the highly reported levels of binge drinking frequency.

Even though there has been a tremendous amount of research in this area, binge drinking remains a social problem and creates issues for the campuses and communities where these people are students. The effects and ramifications of alcohol abuse can be much greater than many students believe them to be. It causes harm to not only themselves, but also to those around them. The misperceptions of peer drinking norms lead many freshman to fall into this cycle of overestimating peer consumption rates and then consuming large quantities of alcohol themselves. This dangerous behavior may even create lifelong drinking problems for some students, although longitudinal panel research would be needed to further examine this pattern. Binge drinking is a problem on college campuses across the nation and unless university



administrators take a strong stand to curb this dangerous behavior, students will continue to drink excessively.

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## Appendix A

### Frequencies of Respondent Characteristics and Responses

	Frequencies (Percentages)
<b>Gender</b>	
Male	181 (42.4%)
Female	246 (57.6%)
<b>Belong to Greek Organization</b>	
Yes	70 (16.4%)
No	356 (83.6%)
<b>Club or Varsity level athlete</b>	
Yes	53 (12.4%)
No	374 (87.6%)
<b>Perceived Level of General Accessibility to Alcohol</b>	
Low	60 (14.2%)
Average	257 (60.9%)
High	105 (24.9%)
<b>Perceived Level of Accessibility: Alcohol at Bars and Stores</b>	
Low	32 (20.6%)
High	123 (79.4%)
<b>Race</b>	
White	331 (77.5%)
Non-white	96 (22.5%)
<b>Has/had a family member with a drinking problem</b>	
Yes	149 (34.9%)
No	278 (65.1%)
<b>Importance of Religion</b>	
Very Important	79 (18.5%)
Somewhat Important	164 (38.5%)
Not very important	117 (27.5%)
Not at all important	66 (15.5%)
<b>Location of current residence</b>	
On campus	209 (48.8%)
Off campus	215 (50.2%)
At home (with parents)	4 (.9%)
<b>Participates in pro-social activities</b>	
Yes	158 (37.0%)
No	269 (63.0%)
<b>Number of alcohol education classes attended</b>	
1-2	390 (92.4%)

3 or more	32 (7.6%)
<b>Influenced by peers to drink alcohol</b>	
Yes	194(46.0%)
No	228 (54.0%)
<b>Perceived level of alcohol consumption among peers</b>	
Low	99 (23.5%)
Medium	259 (61.4%)
High	64 (15.1%)
<b>Perceived level of desirability to drink alcohol during college years</b>	
High	178 (42.1%)
Medium	208 (49.2%)
Low	37 (8.7%)
<b>Level of concern for consequences of drinking behavior</b>	
Little Concern	152 (35.7%)
Some Concern	180 (42.3%)
High Concern	94 (22.1%)

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