Alcohol Beliefs versus Alcohol Behaviors

By

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Alcohol use and abuse has historically been viewed as a problem on college campuses. It has been indicated that 80% to 90% of all college students drink alcohol; with 40 to 45 % engaging in binge drinking that is drinking five or more drinks in an evening (Haines & Spear, 1996; Cage, 1992). Alcohol use is associated with negative behaviors and consequences, such as vandalism, vomiting, missing classes, earning lower grades, and impaired social relationships (McKee, 1996). Many educational techniques have been used to try to lessen the binge drinking of college students.

The purpose of this study is to look at the beliefs that the student has regarding alcohol use and the negative consequences that may happen due to the use of alcohol. The questions for the survey were taken from the Core Alcohol survey. Data analysis was done using t – tests, Pearson product-moment correlation coefficients and ANOVA 's.

The results found a significant correlation between alcohol beliefs and negative behaviors related to alcohol use. Differences in alcohol related beliefs and behaviors between students' class in school, age (below or above legal drinking age), gender, grade point average, amount of binge drinking, and amount of alcohol consumed per week were also examined.

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Chapter I: Introduction

Alcohol use and abuse has historically been viewed as a problem on college campuses. It has been indicated that eighty to ninety percent of all college students drink alcohol, with forty to forty five percent engaging in binge drinking, i.e., drinking five or more drinks in an evening (Haines & Spear, 1996; Cage, 1992). Alcohol use is associated with negative behaviors and consequences, such as vandalism, vomiting, missing classes, earning lower grades, and impaired social relationships (McKee, 1996). Alcohol is still the drug of choice on many campuses. No other population in the United States has a higher proportion of alcohol users than the college student population (Duitsman & Cychosz, 1997).

The belief that alcohol use enhances the college experience is not new. There are historical references to the use of alcohol as far back as 1734. This is the year that Harvard passed the resolution that "no college resident should drink or serve distilled spirits or mixed drinks, and that no undergraduate should keep by him brandy, rum, or other distilled spirituous liquors" (Weschler & Wuethrich, 2002, p.27). This was the first attempt to slow the use of alcohol by college students.

The 1800's saw more frequent alcohol difficulties. In 1832 a student at Southern and Western Theological Seminary, later to become Maryville College, was expelled for "acts of immorality most nefarious and unbecoming" (Weschler & Wuethrich, 2002, p.27). Drinking was amongst these acts. After appealing his expulsion and having numerous fellow students appear in his support, the expulsion was overturned.

Even Thomas Jefferson in the 1820's complained about the drinking of students at the University of Virginia. The students at the University of Virginia annually threw a large spring party they called " Easters". This party was set to coincide with Jefferson's birthday on April 13th. The party went on for almost 165 years beginning in 1825, even though the university cut of official support in 1983. Even though the Easters party was discontinued, the University of Virginia students continued with another drinking ritual, called the Fourth – Year Fifth. This is where a fourth year student celebrates homecoming by downing a fifth of alcohol. After the death of a student following this ritual in 1997, some of her fellow students have marked the day with a five-kilometer Walk for Life (Weschler & Wuethrich, 2002).

Some universities have rituals that mark the beginning and end of the academic year. These rituals often involve drinking. For Ithaca College in New York the ritual involves jumping into the college's fountain on the last day of classes. In 1999 approximately 100 students were treated for alcohol related injuries and illnesses (Weschler & Wuethrich, 2002). For the University of Michigan in Ann Arbor it's the Naked Mile. After an evening of celebrating the end of the spring semester the students shed their inhibitions and their clothes to run at midnight. This brings out many spectators, including those with cameras (Weschler & Wuethrich, 2002).

Statement of the Problem

According to ABC News in a report published December 14, 2004, the culture of heavy drinking is so ingrained that it has been extremely difficult to break. Each year drinking in college contributes to fourteen hundred student deaths, five hundred thousand injuries, and seventy

thousand cases of sexual assault, according to the National Institute on Alcohol Abuse and Alcoholism (ABC News, 2004). In the past few months student deaths related to alcohol have occurred at the University of Oklahoma, New Mexico State University and Virginia Polytechnic Institute and State University (ABC News, 2004). While many studies have investigated the incidence of binge drinking on college campuses, little investigation has been done on the beliefs of college students related to drinking.

Purpose of the Study

The purpose of this study is to investigate if the higher the level of alcohol intake, the greater the level of negative consequences (i.e. difficulties with police, hangover) the student will experience. Also, the study will investigate whether the greater the positive belief system the student has regarding drinking of alcohol (i.e. alcohol makes women sexy, alcohol facilitates male bonding) the higher level of negative consequences they will experience.

Null Hypotheses

H_{01} - There will be no significant correlation between the scores on the alcohol beliefs questions and the number of negative consequences of alcohol use within the entire sample.

H_{02} -There will be no significant difference in the alcohol beliefs and negative behaviors associated with alcohol use between the students' class in school (freshman through senior).

H_{03} - There will be no significant difference in the alcohol beliefs and negative behaviors associated with alcohol use between students' who are of legal drinking age and those who are not.

H_{04} - There will be no significant gender differences in the alcohol beliefs and negative behaviors associated with alcohol use.

H_{05} - There will be no significant difference in the alcohol beliefs and negative behaviors associated with alcohol use related to the student grade point average at the University.

H_{06} - There will be no significant difference in the alcohol beliefs and negative behaviors associated with alcohol use regarding the number of times the student participated in binge drinking.

H_{07} - There will be no significant difference in the alcohol beliefs and negative behaviors associated with the number of alcohol drinks the student consumes per week.

Assumptions/ Limitations

Assumptions of the study are that the subjects will answer the survey honestly. Another limitation is the size of the sample and the limited scope of the sample the students being from one small Midwest College.

Definition of Terms

Drink: one serving of alcohol, twelve ounces of beer, four to five ounces of wine or one point five ounces of liquor.

Binge Drinking: men consuming of five drinks in a row and women consuming four drink in a row.

Chapter II: Literature Review

Chapter two will be a literature review of the prevalence and danger of, as well as the beliefs, behaviors, and negative consequences associated with college alcohol use and binge drinking. Also, it will look at some of the current methods being used to combat alcohol use and binge drinking on college campuses.

Alcohol use has become a ritual that is infused into the entire college experience. From college athletics to the ritual of pledging a fraternity or sorority, alcohol use has become routine (Wechsler & Wuethrich, 2002).

As deaths and injuries have become public knowledge, some universities have tried to curb the use of alcohol. Other universities have had to be pushed into dealing with alcohol difficulties. At MIT in 1997 a fraternity recruit fell into a coma and died after an evening of drinking, and watching the movie Animal House. This was a tradition to welcome the new members to the fraternity; the student had been given a bottle of spiced rum by his fraternity big brother. When he was found the next morning in a coma his blood alcohol level was .42. He died two days later (Wechsler & Wuethrich, 2002).

In 1992 two MIT students had pledged and then de-pledged this same fraternity and written a fifty-page booklet detailing the alcohol use in the fraternity. They described the hazing, and peer pressure that characterized the fraternity's alcohol use and sent it to the university administration (Wechsler & Wuethrich, 2002). When nothing was done the students again wrote to MIT's president. They wrote " When a student is killed or dies at an MIT fraternity, how will MIT explain its full knowledge of dangerous and illegal practices persisting unchecked over a period of years"

(Wechsler & Wuethrich, 2002, p. 42). This student's death helped convince university administrators of the danger of unchecked drinking, even if their fear is of wrongful death suits (Wechsler & Wuethrich, 2002).

Robert Straus and Seldon Bacon completed the first alcohol study in 1949 at Yale University. They surveyed over six thousand students on twenty-seven campuses. The year of this study the authors saw the death of two students while drinking and the near demise of another at an initiation to a drinking club. The results of this survey provide a valuable comparison as to the reasons and number of students consuming alcohol today (Wechsler & Wuethrich, 2002). When Straus was asked the changes of the drinking patterns in students in the fifty years since his study, he stated,

> "First, the women have caught up with the men. That's pretty dramatic. Second, it's pretty obvious that the number of students drinking in larger amounts have gone up significantly for men and even more so for women. Third, the reasons for drinking have changed. The percent of students who say they drink to get drunk is way up" (Wechsler & Wuethrich, 2002, p 41).

There are many thoughts as to why the college population has such a high rate of alcohol use. One reason is the students' perception of alcohol as a low risk drug (Duitsman & Cychosz, 1997). Many students view alcohol as a safe drug to abuse; this is the society's general perception of the substance in the United States. Many a student has been lured into a risky situation due to this perception of alcohol (Duitsman & Cychosz, 1997). Other reasons for the high rate of alcohol use may be the rationalizations about alcohol and drinking that are prevalent on college campuses.

Myths Regarding Alcohol Behavior

Weschler and Wuethrich (2002) call these rationalizations the myths. They describe nine of these myths in their book about college alcohol use. They state that, "Understanding the reality of those myths or putting them in context can help students make sound decisions that ultimately allow them to be true to themselves" (Wechsler & Wuethrich, 2002, p19).

The first myth is described as "work hard, play hard". While some students may be proud of this ethic, studies find that those who play hard are less likely to work hard. In fact it is found that drinking reduced the number of hours spent studying each day. Each drink is related to the missing of classes and lower class grades. "In the Core Drug and Alcohol Survey conducted by the Center for Alcohol and Drug Studies at Southern Illinois University –Carbondale, it was found that students who reported D and F grade point average consumed an average of eleven alcoholic drinks per week, while those who earned mostly A's consumed only three drinks a week" (Wechsler & Wuethrich, 2002, p 20).

The second myth is "as an individual; it's up to me to drink responsibly. I'm in control. I can handle my liquor" (Weschsler & Wuethrich, 2002). Unfortunately students who buy into this myth forget the physiological effects of alcohol. It has nothing to do with intent or how good the person is; alcohol is a drug with addictive properties that actually changes the brain chemistry making the person dependent on alcohol (Wechsler & Wuethrich, 2002).

Myth number three is "that everybody does it". This is frequently heard on college campuses and many students are pressured to drink to fit in. Wechsler &

Wuethrich (2002) state that up to fifty six percent of students do not binge drink and that twenty percent of students do not drink at all. Binge drinking is not a problem at all schools. One fourth of campuses experienced a binge-drinking rate of thirty-three percent or lower, while at one in three schools the rate is above fifty-one percent (Wechsler & Wuethrich, 2002).

The fourth myth is that "smart people don't binge drink"; academically demanding schools are safe from binge drinking. High test scores or Ivy League schools do not protect a student from binge drinking. The amount of binge drinking is not linked to the schools average SAT score. One student at an Ivy League school wrote, "Everyone is working so hard academically, they're busting their ass academically, and when Friday night comes, you got to let the lead out. That's a spaz. It teaches that extremes are good in life and they're not. Contrasts are healthy, but not extremes" (Wechsler & Wuethrich, 2002 p 22).

The fifth myth is "alcohol is not that harmful"; there are lots of things that are worse. After all, it's only beer. Weschler and Wuethrich (2002) found that the heaviest drinkers make up seventy-two percent of the beer consumed by college students, accounting for eighty percent of the dangerous drinking. They reported that fifty nine percent of frequent binge drinkers drive after drinking. This can be compared to the eighteen percent of students who drink but don't binge drink. Nearly eleven hundred students die each year from alcohol related car crashes (Wechsler & Wuethrich, 2002).

The sixth myth is "my drinking is my own business; it doesn't hurt anyone else". Another student's drinking has negatively affected almost seventy-five percent of all college students. Sixty one percent of students who are on campus do not binge drink, but

they have been affected by others drinking behavior. Many have had sleep and/or study time interrupted. Fifty percent have taken care of a drunken friend and twenty-nine percent have been insulted or humiliated by a drunken student (Weschler & Wuethrich, 2002). The monetary costs are also very high, reaching into the billions of dollars for damage from intoxicated students.

Myth number seven is that "alcohol increases sex drive and sex appeal". Alcohol use among college student has led to many instances of young women and men having sexual relations without forethought. Drinking has also led to more instances of forced or nonconsensual sex (Wechsler & Wuethrich, 2002).

The eighth myth is "that most students are dead set against any college efforts to restrict alcohol on campus". Many students support measures to stop binge drinking. These include supporting consequences for hosts who throw alcohol parties for underage students, cracking down of fraternity parties, and banning kegs from campuses.

Myth number nine is that drinking is a rite of passage. Boys will be boys. They'll grow out of it. This is an excuse and many have used it to rationalize bad behavior. Many do grow out of it, but many students develop long-term alcohol problems. Others suffer injuries, trauma and educational loss due to their drinking habits.

Many colleges have numerous myths that surround the drinking of alcohol. By understanding the rationalizations that surround these myths a student can make positive decisions about their alcohol use.

Consequences of Alcohol Use

It is estimated that between twenty to twenty-five percent of the student population experience some problem due to their drinking (Flynn & Brown, 1991). The

College Alcohol study has documented that the more that students drink, the more difficulties they will experience (Wechsler & Wuethrich, 2002). These problems include: suicidal thoughts, decreased academic performance, hangovers, loss of memory, blackouts, broken friendships, peer criticism, property damage, fighting, lower self-concept, injury, missed classes, car accidents, and job loss (Flynn & Brown, 1991).

Students who binge drink are more likely to fall behind in school, be injured, and to damage property. They are more likely to drink and drive, endangering themselves and others. Wechsler & Wuethrich (2002) report that fifty seven percent of frequent binge drinkers, forty percent of occasional binge drinkers, and nineteen percent of non binge drinkers have driven while drunk (Wechsler & Wuethrich, 2002).

While drinking on college campuses is on the rise, college drinking cannot be separated from society's use of alcohol. Every year over one hundred thousand deaths are caused by excessive alcohol use in the United States. The alcohol industry disputes it, but men who consume more than two drinks a day increase their risk of cardiovascular disease, cancer, accidents, and violence. The nation's leading cause of long-term illness and death from liver disease is long-term alcohol abuse (Weschsler & Wuethrich, 2002). Drinking alcohol has also been linked to mental health issues such as low self-esteem, depression, stress and state anxiety and trait anxiety (Williams, Thomas, Buboltz & McKinney, 2002)

Current Alcohol Education

The Department of Education reports that over sixty million dollars have been spent on college drinking prevention programs since 1991(ABC News,2004). Even with the financial support the number of binge drinkers has not changed.

Many campuses have made alcohol education programs a means of preventing the undesirable behaviors associated with drinking (Meacci, 1990). Even more campuses have used alcohol education as a follow up to campus alcohol offenses or underage citations. The number of colleges offering alcohol education increased from 69 to 88% from 1979 to 1985 (Meacci, 1990). Duitsman and Cychosc (1997) state that drug educators are still searching for the most effective method or methods to lower, and ideally eradicate, contraindicated substance abuse behavior. To be effective, an alcohol education program must change the students' attitudes towards drinking, as well as providing knowledge about alcohol (Look & Rapaport, 1991). There has been a significant increase in students receiving information regarding alcohol between 1993 and 2001. More than half of students report receiving information about college rules regarding alcohol use, penalties for breaking the rules and where to get help for alcohol abuse (Weschler, Lee, Kuo, Seibring, Nelson & Lee, 2002). Various methods of alcohol education have been attempted, with little evidence attributing to their success (Flynn & Brown, 1991). This may be one reason that colleges have been slow it implement specific alcohol programs. They tend to be expensive and lack significant evaluations (Williams, Thomas, Buboltz, and McKinney, 2002).

Methods that have been attempted include teaching students refusal skills, clarifying values, rewriting policies, increasing knowledge, peer education, and scare tactics (Haines & Spear, 1996). Some of the most popular educational tools have been the clarification of alcohol rules, and providing of alcohol free activities (Weschler, Lee, Kuo, Seibring, Nelson & Lee, 2002). Other policies include the holding of the hosting student responsible for the problems from alcohol use, banning of alcohol advertisements

on campus, cracking down on drinking in fraternities and sororities, banning of kegs on campus, and the increased enforcement of alcohol policies. Many students are now supporting alcohol-free residence halls, the banning of kegs on campus, and an increase in alcohol free campus activities. Students have become more vocal in their disapproval of alcohol use. In 1993 thirty two percent of students who were non-binge drinkers had asked someone they know to stop drinking. This has increased to thirty five percent in 2001(Weschsler & Wuethrich, 2002).

The rate of binge drinking is remarkably similar in 2001 to the rates from 1993, 1997 and 1999, still being two out of five college students (Weschler, Lee, Kuo, Seibring, Nelson & Lee, 2002). There has been a decrease in binge drinking in some student groups. Fewer fraternity and sorority houses now engage in binge drinking, and the rate of binge drinking has decreased in Hispanic and Native American Student groups (Weschler, Lee, Kuo, Seibring, Nelson & Lee, 2002). In all there is an increase of awareness of binge drinking as a major contributor to the difficulties among college students. Overall students may be far ahead of college administrators in the supporting of college drinking policies (Weschler, Lee, Kuo, Seibring, Nelson & Lee, 2002).

One of the newer trends of alcohol education is the Social Norm Program. This program involves surveying the students on their drinking behaviors, as well as what they believe is the "normal" amount of alcohol consumed by the "average" student on the campus (Wechsler & Wuethrich, 2002). The programs operate on the assumption that a student will match the drinking pattern of his/her campus and that the student will believe the norm is higher than it is, causing them to drink more. So if the student is informed that the norm is lower, they will drink less. The difficulty with this theory seems to be

with the perception of the norm. Unfortunately the student's perceived norm is usually higher that the actual normal drinking rate (Perkins, 1997).

Health Educators have been trying to find a way to avoid negative messages; social norms avoid scare tactics and long statistical messages that usually turn students off. Unfortunately social norm just tries to change perceptions, it does not change policy, accessibility, price or college drinking customs (Wechsler & Wuethrich, 2002).

When looking at the amount of binge drinking at American colleges, it is important to look at the influences of alcohol manufacturers and distributors. Even though many college and universities have banned or limited the use of advertisements for alcohol, they are still viewable on many campuses. "Big Alcohol has learned from Big Tobacco's Mistakes" (Weschsler & Wuethrich, 2002,p 134). The alcohol industry supports Alcohol Awareness Week and organizations such as BACCHUS (Boosting Alcohol Consciousness Concerning the Health of University Students) and GAMMA (Greeks Advocating Mature Management of Alcohol). BACCHUS is "an alcohol awareness organization, not an anti-drinking group". BACCHUS, named after a Roman god of wine, who was honored with a wild festival marked with excessive drunkenness, produces pamphlets, posters and other printed material. They also offer an online course for students who violate campus alcohol policies. Ironically BACCHUS and GAMMA receive funding from Anheuser – Busch, Coors and Miller, as well as other liquor companies and government agencies.

Another organization funded by alcohol is the Century Council. They address issues such as responsible decision-making, underage drinking, and drunk driving. They

are also responsible for the creation of the interactive CD – ROM called Alcohol 101. This CD was promoted widely as a tool to be used for alcohol education for schools.

After all the alcohol education programming, students are responsible for their own drinking behavior. No one forces them to put that beer to their lips and drink. However, a student does not become a binge drinker without some assistance. There is enough credit to go around - alcohol industries for providing plenty of cheap alcohol, communities for lacking the enforcement of alcohol policies and minimum drinking age, college administrators for turning a blind eye to the drinking of their students and parents for not checking on what their children are doing while at college (Weschsler & Wuethrich, 2002). These are some of the difficulties that a student faces when coming to college; with greater education students can be prepared to face the challenge of not believing the myths and binge drinking in college. The ability to study and predict the students most likely to suffer negative consequences due to their alcohol beliefs would be a great educational asset.

Chapter III: Methodology

Introduction

This chapter will describe the subjects in the study and how they were selected for the study. In addition the instrument used to collect the information will be discussed as to the validity and reliability, the procedures the students in the sample engaged in, and how the data was analyzed.

Subjects

The participants for the study were students at the University of Wisconsin-Stout. They were asked to participate in the study from three general psychology classes and two upper level classes on the university campus.

Sample Selection

The classes were chosen from five different classes on the University of Wisconsin – Stout campus. Three of the classes were general psychology classes with two being a class with more upper class students in attendance. The students were a random mix of class rank, gender, and age.

One hundred and six students ranging in class rank from freshmen to senior. There was forty-four freshman, sixteen sophomores, seventeen juniors, twenty-six seniors and three graduate students. The gender division was thirty-eight males and sixty-seven females participated. The age category of the respondents five were under eighteen, fifty-eight were nineteen to twenty, twenty-seven were twenty-one or twenty-two, seven were twenty-three to twenty-four and nine were twenty-five and above.

Instrument

The survey questions were taken from the Core Alcohol and Drug Survey. The complete survey was not used due to the length of the survey. The Core Alcohol and

Drug Survey was designed as a self-report instrument to describe behaviors and perceptions of alcohol and drug use (Core Institute, 2005). Questions used were those that focused on alcohol behavior and the consequences of that behavior. Questions that dealt with sexual behavior and consequences were omitted.

Questions were arranged and analyzed to identify the number of men or women, class rank and age. Identified also, were the number of drinks that a student had per week, and the number of times that a student participated in binge drinking, looking at these rates by class, gender and age of the student participant.

The Validity and Reliability figures for the complete Core Alcohol Survey were very high. The interater agreement for item inclusion was .90. The Pearson product-moment correlation was used to determine the relationship between the variables. Test-retest correlations for consequences were very high. The test-retest correlations for the consequence questions are reported in the following table.

Consequence	Test – retest correlations
Hangover	.92
Poor test scores	.62
Trouble with police, etc.	.68
Damaged property, fire alarm	.00
Argument or fight	.84
Nauseated or vomited	.96
Driven while intoxicated	.90
Missed a class	.86
Been Criticized	.68
Thought I had a problem	1.00
Had a memory loss	.59
Later regretted action	.91
Arrested for dwi, dui	.00

Procedures

All subjects were given and appropriate release form and informed of the purpose of the study. They were told that their participation was voluntary and totally anonymous. The subjects were asked to complete the survey, carefully reading all questions, and marking the appropriate answer. They were asked not to place any identifying mark on the survey sheets, and then to turn them in at the front of the classroom. The survey took about ten minutes to complete.

Data Analysis

From the raw scores cross tabulation, frequency counts, percentages, mean and standard deviation were performed for the total group of respondents and for all subsets, including negative behaviors and alcohol beliefs. A t-tests telling if the variation between the two groups was significant was performed for the negative behaviors and alcohol beliefs for twenty and younger and twenty-one and older sub set, and for the gender sub set (males and females).

The Pearson Correlation coefficient was used to obtain correlations for the total groups of negative behaviors and

alcohol beliefs.

ANOVA's were performed for the negative behaviors and alcohol beliefs for class rank (freshman, sophomore, junior, senior), grade point average, number of times the student participated in binge drinking, the number of drinks a student consumes per week. Newman – Keuls Multiple range test was used to clarify sources of significance.

Limitations

The methodology may contain the following limitations. The subjects may not honestly answer the questions of the survey. The subjects may not be a true representation of the student population.

Chapter IV: Results

Introduction

This chapter will include the results of this study in relation to the null hypotheses. The results from the data of the alcohol related beliefs and the negative behaviors will be examined in relation to the total sample, the class in college, age of the participant, gender of the participant, grade point average of the participant, number of times participating in binge drinking and number of drinks consumed per week.

Statistics for the total sample include one hundred six samples. Thirty-eight were male and sixty-seven female, with one survey not having the gender marked. In regards to binge drinking, 56.6 % of the respondents participated in binge drinking at least once in the past two weeks. For the twenty and under, below legal drinking age group, 52.4 percent and for the twenty-one and over 62.8 percent participated in binge drinking at least once in the last two weeks. For the males and females in regards to binge drinking behavior, 73.7 % of the males and 46.3 % of the females participated in binge drinking in the past two weeks.

Results

H_{01} - There will be no significant correlation between the scores on the alcohol beliefs questions and the number of negative consequences of alcohol use within the entire sample.

The Pearson correlation coefficient between alcohol related beliefs and negative behaviors for the total group of respondents is significantly correlated with $r = .451$ and $p = < .001$ (see table 1). The results suggest that students with a greater number of

positive alcohol beliefs will experience a greater amount of negative effects as a result of those beliefs. The data suggests that there is a statistically significant relationship between alcohol beliefs and negative behaviors. As a result, the null hypothesis can be rejected. The groups that did not report statistical significance were sophomore class, senior class, the binge drinking categories, and the respondents drinking more than four alcohol drinks per week. The data for binge drinking once in the last two weeks and for binge drinking greater than three times in the last two weeks was close to reaching statistical significance (see table 1).

Table 1
The Pearson Correlation Coefficient Between Alcohol related Beliefs and Negative behaviors

Group	N	r	*P*
Total	102	.451	.000***
Freshman	42	.594	.000***
Sophomore	16	.335	.205
Junior	16	.690	.003**
Senior	25	.340	.096
20 & younger	61	.517	.000***
21 & older	41	.475	.002**
Male	37	.520	.001***
Female	65	.373	.002**
GPA 4.00-3.50	31	.478	.007**
GPA 3.49-3.00	40	.521	.001***
GPA 2.99 or lower	33	.350	.046*
5+ drinks never	46	.366	.012*
5+ drinks Once	13	.484	.094
5+ drinks Twice	16	.127	.638
5+drinks More than 3 times	29	.344	.068
0 drinks / week	11	.266	.430
1-3 drinks / week	47	.496	.000***
4-9 drinks / week	24	-.143	.506
10 + drinks/week	22	.578	.005**

* $p < .05$
** $p < .01$
*** $p < .001$

H_{02} -There will be no significant difference in the alcohol beliefs and negative behaviors associated with alcohol use between the students' class in school (freshman through senior).

The total data for negative behaviors and class rank did not produce any significant differences between groups. The data shows that negative behaviors happen through out the classes and did not change as the student attained a higher-class rank. Therefore the null hypothesis was not rejected (see table 2). The total data for alcohol beliefs and class rank also did not produce a statistically significant difference between groups. Therefore, students' alcohol beliefs did not change as they reached different class rank. As a result the null hypothesis for class rank and alcohol beliefs cannot be rejected (see table 3).

The class rank only had one negative behavior that was significant. The ANOVA for "driving a car while drunk" had a $F= 3.663$ $p<. 05$. While 35.9 % of the total subjects had driven while drunk, a greater percentage of the juniors and seniors had operated a vehicle while under the influence of alcohol. While subjects reported having driven a car after drinking, there were no reports by the subjects of being arrested for drinking while driving (see table 4).

Table 2
ANOVA comparing the negative consequences total score for class rank (freshman, sophomore, junior and senior).

Group	M	SD	df	F	*P*
Freshman	12.82	13.73	98	1.634	.186
Sophomore	10.31	12.547			
Junior	21.24	28.964			
Senior	20.04	22.819			

The only item in the alcohol belief data for class rank that was close to being statistically significant was alcohol makes women sexier F = 2.513, p=.063.

Table 3
ANOVA comparing the alcohol beliefs total score for class rank (freshman, sophomore, junior and senior).

Group	M	SD	df	F	*P*
Freshman	45.45	11.204	95	1.230	.303
Sophomore	44.69	9.576			
Junior	41.38	12.430			
Senior	40.88	9.444			

Table 4
ANOVA comparing the behavior due to drinking: driven a car while drunk.

Group	M	SD	df	F	*P*
Freshman	.52	1.577	99	3.66	.015*
Sophomore	.38	.719			
Junior	2.18	3.795			
Senior	2.00	3.020			

* $p < .05$

H_{03} - There will be no significant difference in the alcohol beliefs and negative behaviors associated with alcohol use between students' who are of legal drinking age and those who are not.

Sixty-three respondents were under the legal drinking age of twenty-one, while forty-three were over twenty-one. Total data for negative consequences reached statistical significance, t= 2.4, $p < .05$, (legal drinking age > under legal drinking age), therefore refuting the null hypothesis (see table 5).

The statistically significant items for negative consequences were having "driven a car while drunk",

t= 3.79, p<. 001 (legal drinking age > under legal drinking age) and due to drinking being "criticized by someone I know", t= 2.67, p < .05 (legal drinking age > under legal drinking age)(see Table 5).

For negative consequences, five items were close to reaching significance. They were "got into an argument or fight" (legal drinking age > under legal drinking age), "got nauseated or vomited"(legal drinking age > under legal drinking age), "thought I may have a drinking problem"(legal drinking age > under legal drinking age),"done something I later regretted"(legal drinking age > under legal drinking age), and "taken advantage of another sexually"(legal drinking age > under legal drinking age).

Table 5
t – test on total of negative consequences for Under 20 and Over 21 sub groups.

Group	M	SD	df	t	P
Under 20	11.14	12.94	55.64	2.4	.020*
Over 21	21.24	25.12			

*p < .05

The alcohol beliefs total did not reach statistical significance. Therefore the null hypothesis for the alcohol beliefs was not rejected (see table 6).

Table 6
t – test on total of alcohol beliefs for Under 20 and Over 21 sub groups.

Group	M	SD	df	t	P
Under 20	43.18	11.017	100	.123	.902
Over 21	42.90	11.360			

H_{04} - There will be no significant gender differences in the alcohol beliefs and negative behaviors associated with alcohol use.

The total number of respondents was thirty-eight males and sixty-seven females. There was no significant difference between genders for negative consequences, so the null hypotheses was not rejected, t= 1.748, p = .083, (see table 7

For individual items for males and females there was only one negative behavior that reached statistical significance. The item that was statistically significant for negative behaviors was, "Due to Drinking trouble with police or other authority", t=2.036, p <.05, (male > female),(see table 7).

Table 7
t – test on total of negative behaviors for Males and Females.

Group	M	SD	df	t	P
Males	19.53	22.686	102	1.75	.083
Females	12.68	16.943			

The total data for alcohol beliefs between the genders did show a significant difference, therefore refuting the null hypotheses, t= 2.461, p < .05, (male > female), (see Table 8).

Items that were statistically significant for alcohol beliefs were "alcohol makes it easier to deal with stress", t=2.058, p<. 05,(male > female), "alcohol facilitates a connection with peers", t=2.607, p< .05,(male > female), "alcohol facilitates male bonding", t= 2.129, p<. 05, (male > female), "allows people to have more fun", t=2.706, p<. 01, (male > female), "makes women sexier", t= 3.649, p< .001, (male > female), "makes me sexier", t= 3.197, p<.01 ,(male > female),and "facilitates sexual opportunities", t= 2.201, p <.05,(male > female).

Table 8
t – test on total of alcohol beliefs for Males and Female.

Group	M	SD	df	t	P
Male	46.57	10.519	100	2.461	.016*
Female	41.08	11.006			

* $p < .05$

H_{05} - There will be no significant difference in the alcohol beliefs and negative behaviors associated with alcohol use related to the student grade point average at the University.

Viewing the data for total grade point average, and items associated with negative behaviors, the students who reported the highest GPA also reported lower negative behavior items, included binge drinking. There were twenty students with a 3.50 to 4.00 GPA reported never having participate in binge drinking and fourteen students having a GPA of 2.99 or lower participated in binge drinking three times or more in the last two weeks. The data did show a trend but did not reach statistical significance. Therefore the null hypothesis was not rejected (see table 9). The Total data for Alcohol beliefs also did not reach statistical significance. As a result the null hypotheses could not be rejected (see table 10).

Items that did attain statistical significance for negative behaviors were due to drinking I: "Missed a class", F= 5.575, p=. 005,(2.99 and lower GPA > 4.00 – 3.50 GPA > 3.49 – 3.00 GPA) had a memory loss, F= 3.135, p= .048, ,(2.99 and lower GPA > 4.00 – 3.50 GPA > 3.49 – 3.00 GPA), (see table 9).

Table 9
ANOVA comparing the negative behaviors total score for grade point average.

Group	M	SD	df	F	*P*
GPA 4.00-3.50	11.52	21.55	102	1.998	.141
GPA 3.49-3.00	13.58	13.76			
GPA 2.99 or less	20.47	22.17			

The subgroup of total grade point average items that were statistically significant for alcohol beliefs. "Alcohol breaks the ice", (3.49 – 3.00 G GPA > 2.99 or lower GPA > 4.00 – 3.50 GPA), F= 3.876, p= .024, "enhances social activity", F=3.484, p=. 034, ,(2.99 and lower GPA > 3.49 – 3.00 GPA > 4.00 – 3.50 GPA),"makes me sexier, F=3.797, p=. 026, ,(2.99 and lower GPA > 3.49 – 3.00 GPA > 4.00 – 3.50 GPA).

Table 10
ANOVA comparing the alcohol beliefs total score for grade point average.

Group	M	SD	df	F	*P*
GPA 4.00-3.50	39.23	13.65	101	2.893	.060
GPA 3.49-3.00	43.23	10.55			
GPA 2.99 or less	45.82	8.55			

H_{06} - There will be no significant difference in the alcohol beliefs and negative behaviors associated with alcohol use regarding the number of times the student participated in binge drinking.

Total data for binge drinking reported that seventeen males and only thirteen females participated in binge drinking three or more times in the past two weeks. The higher the number of binge drinking episodes the greater number of drinks consumed and more times the student reported that they experienced a hangover. The total data refutes the null hypotheses since the data shows a significant difference between level of binge

drinking behavior and negative consequences (see table 11). The total data for alcohol beliefs and binge drinking is also statistically significant, refuting the null hypothesis for alcohol beliefs (see table 12).

The greater the number of times the student participated in binge drinking the more they agreed for "makes me sexier" and "facilitates sexual opportunities". Items that were statistically significant for negative consequences were due to drinking, "I had a hangover" $F = 20.43, p < .001$ (three or more, twice > once, never), "I performed poorly on a test", $F=3.756$, $p < .05$, "trouble with police or other authority", $F=4.483, p < .01$, (three or more > twice, once, never), "damaged property /pulled fire alarm", $F=3.661$, $p < .05$, "criticized by someone I know", $F=7.286$, $p < .001$, (three or more > twice, once, never), "done something I later regretted", $F=11.99$, $p < .001$, *(three or more > twice, once, never),(see table 11).

Table 11
ANOVA comparing the negative behaviors total score for the number of times participated in binge drinking in the last two weeks.

Group	M	SD	df	F	*P*
Never	3.48	6.459	101	23.051	.000***
Once	10.46	9.134			
Twice	21.06	14.843			
3 times or more	32.48	24.464			

*** $p < .001$

Items that were statistically significant for alcohol behavior were "alcohol facilitates male bonding", $F=3.661$, $p <. 05$, (three or more > twice, once, never), "facilitates female bonding", $F=4.942$, $p < .01$, (three or more, twice, once > never), "allows people to have more fun", $F=9.359$, $p < .001$, (three or more, once > twice > never), "makes women sexier", $F=9.331$, $p <. 001$, (once >3 times or more > twice > never), "makes me sexier", $F=6.327, p=. 001$***, (three or more > once > twice > never),

"facilitates sexual opportunities", F=3.425,p < .05, (three or more > once > twice > never).

Table 12
ANOVA comparing the alcohol beliefs total score for the number of times participated in binge drinking in the last two weeks.

Group	M	SD	df	F	*P*
Never	36.96	11.764	100	9.807	.000***
Once	47.00	8.879			
Twice	45.94	4.203			
3 times or more	48.66	9.622			

*** p < .001

H_{07} - There will be no significant difference in the alcohol beliefs and negative behaviors associated with the number of alcohol drinks the student consumes per week.

There was a significant difference in the scores for negative behaviors when compared to the number of drink a student consumed per week. Therefore the null hypothesis was rejected (see table 13). The total data for the alcohol beliefs and number of drinks consumed per week also refuted the null hypothesis (10 drinks or more > 4 – 9 drinks > 1 –3 drinks, never), (see table 14).

The totals found that the older the student, in chronological age and class rank, the greater the number of alcoholic drinks they consumed per week. Men consumed more drinks per week than the women respondents reported they drank. The more drinks the student consumed per week the more they agreed with the alcohol beliefs (i.e. alcohol gives me something to do and people have more fun).

Items that were statistically significant for negative alcohol behavior were due to drinking, "I had a hangover", F = 19.052, P < .001, (10 drinks or more > 4 – 9 drinks > 1

–3 drinks, never), "had trouble with police or other authority", F= 5.415, p < .01, (10 drinks or more > 4 – 9 drinks, 1 –3 drinks, never), "driven a car while drunk", F= 9.168, p < .001, (10 drinks or more > 4 – 9 drinks, 1 –3 drinks, never), "done something I later regretted", F= 17.752, p < .001, (10 drinks or more > 4 – 9 drinks > 1 –3 drinks, never).

Table 13
ANOVA comparing the negative behaviors total score for the average number of drinks consumed in the last week.

Group	M	SD	df	F	*P*
None	.09	.302	101	29.448	.000***
1 – 3 drinks	6.96	8.369			
4 – 9 drinks	16.88	12.949			
10 or more drinks	38.91	25.508			

*** p < .001

In the subgroup of number of alcohol drinks the student consumes per week the items that were statistically significant for alcohol beliefs were: "alcohol breaks the ice", F=16.991, p <. 001, (10 drinks or more > 4 – 9 drinks > 1 –3 drinks, never), "makes it easier to deal with stress", F=3.081,p < .05, (10 drinks or more,4 – 9 drinks > 1 –3 drinks, never), "facilitates a connection with peers", F= 6.329, p < .001, (10 drinks or more, 4 – 9 drinks, 1 –3 drinks > never), "makes women sexier", F=3.949, p < .01, (10 drinks or more, 4 – 9 drinks, 1 –3 drinks > never), "facilitates sexual opportunities", F=3.984, p < .01.

Table 14
ANOVA comparing the alcohol beliefs total score for the average number of drinks consumed in the last week.

Group	M	SD	df	F	*P*
None	32.82	12.719	100	8.576	.000***
1 – 3 drinks	40.26	11.295			
4 – 9 drinks	46.88	8.415			
10 or more drinks	49.05	7.594			

*** p < .001

The data found that in at least one category, negative behavior or alcohol beliefs, five out of the seven null hypotheses were refuted. This suggests that there is a connection between the alcohol beliefs that a student has and the negative consequences that they may experience.

Chapter V : Summary and Conclusion

Summary

The National Council on Alcoholism and Drug Dependence reports that 42 % of college students say they are binge drinkers, and 21% say that the are frequent binge drinkers (NCADD, 2005). The Council on Alcohol-related Injury and Violence reports that 43% of college students state that they binge drink. This includes forty-eight percent of men, and thirty-nine percent of women (Alcohol-related, 2005). Study data reports that 56.6 % of the respondents participated in binge drinking at least once in the past two weeks. For the study group of participants twenty and under, those below legal drinking age, 52.4 % and for the twenty-one and over 62.8 % participated in binge drinking at least once in the last two weeks. Regarding the difference between gender, data shows that 73.7% of the men and 46.3 % of the women have participated in binge drinking in the past two weeks.

Frequent binge drinkers were twenty one times more likely to drive a car after drinking (Alcohol Policies Project, 2005). Fifty nine percent of binge drinkers have driven a car after drinking (Alcohol-Related Injury, 2005). Data shows that 34.9% of the students in the study have reported driving after they have been drinking alcohol.

In 1993 thirty two percent of students who were non-binge drinkers had asked someone they know to stop drinking. This has increased to thirty five percent in 2001. Data reports that 38.7 % of study participants have been criticized by someone they know for their drinking behavior, increasing the number of students who have confronted peers for drinking behavior from the national average (Weschsler & Wuethrich, 2002,p. 217).

Conclusion

The data showed that there was a statistically significant relationship between the alcohol beliefs and negative behavior of the students involved in the study.

The data was not statistically significant for class rank for negative behaviors and for alcohol beliefs. This may be due to the ages of the number of non-traditional students, age of the student being different from the traditional student age (i.e. eighteen year old freshman). The data for grade point average did not show statistical significance for negative behavior or alcohol beliefs.

The data that did show statistical significance was for legal drinking age and negative behaviors. The students that were under the legal drinking age reported less number of the negative behaviors than the students who are over twenty-one. This was interesting since there was a statistical significance for the alcohol beliefs. It may be assumed that the students' behaviors have changed, and the younger students do not experience the amount of negative behaviors that older students have, but that their beliefs regarding alcohol have not changed.

For gender there was a total reversal from legal drinking age results. There was a significant correlation for alcohol beliefs but not for the negative behaviors. This may be due to the number of women in the study and women report that they have experienced a lower number of the negative behaviors, but they still maintain the same alcohol beliefs as their male counterparts.

The data for binge drinking and number of drinks consumed showed that there was a significant relationship between these behaviors and negative consequences and alcohol beliefs. As the binge drinking and number of drinks consumed rose, so did the number of negative consequences. The frequency of binge drinking episodes was equally

spread across the age groups, with men reporting more binge drinking episodes than women.

The number of drinks consumed per week has a direct effect on negative consequences and alcohol beliefs. Students who reported drinking more had a lower grade point average and drinking less had a higher grade point average.
The number of students who reported doing poorly on a test reached 37.7 %, and these students also reported drinking alcohol during the week.

The only item that was constantly significant throughout the data was the one for driving a car while drunk, with sophomores reporting the least drinking while driving followed by freshman, senior and juniors. The percentage of the respondents reported that they had not driven a car while drunk was 64.1%. Therefore 35.9% of the students involved in the study have driven while drunk, and 20.4% have drunk and drive more that two times.

The data shows that alcohol beliefs have a direct effect on negative consequences experienced by the student. Items that have the greatest effect are binge drinking behavior, and number of drinks consumed per week. Gender seems to have some effect with women experiencing less of the negative consequences.

While the data showed that there is a relationship between alcohol beliefs and negative consequences the nature of the relationship has not been determined. The differences in the study data may be due to the number of participants and the greater number of women and freshman involved in the study. While there appears to be a relationship between alcohol beliefs and negative consequences, more study is need to identify the beliefs that lead to the negative behaviors.

Recommendations for Interventions

After all the alcohol education programming, students are responsible for their own drinking behavior. No one forces them to drink. However, a student doesn't become a binge drinker without some assistance. There is enough credit to go around; alcohol industries for providing plenty of cheep alcohol, communities for lacking the enforcement of alcohol policies and minimum drinking age, college administrators for turning a blind eye to the drinking of their students and parents for not checking on what their children are doing while at college. All the programs that rely on warning the students of the consequences of drinking will only be effective if the person who is experiencing the negative outcomes, views the experience as a problem. A drunken student, who behaves obnoxiously in public, may feel no shame, if their peers ignore their behavior. So the side effects of the behavior are not negative to this student. To work, the group that the behavior is to reach must view the consequences as consequences (Perkins, 2002).

Wechsler and Wuethrich (2002) in their book, *Dying to Drink confronting binge drinking of college campus detail a twelve-point plan for colleges to combat their drinking problem*. The points include a:

> College must acknowledge the alcohol problem and the access the scope of the problem.
>
> Beginning a systematic approach to reducing the binge-drinking problem that starts with the college president on down and includes the entire campus and the community, and organizes for the long term.
>
> Provide a rich academic and extracurricular environment for students by encouraging community service and the pursuit of special interests.

> Avoid simple solutions for complex, longstanding problems: if it looks too good to be true, it probably is.
>
> Support student efforts to create alternatives to an alcohol-powered social life.
>
> Work with students to develop and implement a code of conduct and alcohol policy.
>
> Realistically evaluate the influence of Big Alcohol on your campus.
>
> Work with the local community to limit underage drinking and the availability of cheap, high-volume alcohol
>
> Provide alcohol-free living arrangements.
>
> Address problem drinking at fraternities and sororities.
>
> Address problem drinking with athletes and fans.
>
> Encourage problem drinkers to seek the help they need and provide treatment on demand (Wechsler and Wuethrich, 2002,p 222).

Parents and the community also need to be involved in a totally integrated approach to curb alcohol abuse on campus. Similar to the problem of second hand smoke, ridding college campuses of binge drinking will not happen over night. When the surgeon general's report on tobacco came out fifty years ago college classrooms, lecture halls and sports arenas were full of smoke. Now they are smoke free. The same results could be attained for binge drinking, with the help from the administration and the students (Wechsler and Wuethrich, 2002).

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