

Assessment of Undergraduate Student Alcohol Behaviors by Greek and non-Greek Affiliation

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Introduction

Drinking patterns in young adults are associated with a variety of risky behaviors with both acute and long-term consequences. Some of the negative consequences associated with binge drinking patterns include suboptimal academic performance, increased risk of bodily harm, and an elevated risk for many health complications. A minority of campuses in the United States have adopted a dry campus organization for a number of reasons, including an attempt at decreasing the number of students participating in binge drinking by eliminating the possibility of consuming alcohol on campus. Oklahoma State University (OSU) is one such university.

Unfortunately, there is a lack of data available to describe the behavior of students attending dry campuses, so the validity of a dry campus organization can not be affirmed. By collecting data from dry campuses, the legitimacy of such an approach to reduce undergraduate alcohol consumption can be determined. This information could lead to the opportunity to enhance resources for alcohol education or identify specific student populations that may be at an increased risk for participation in heavy drinking. In this study, the primary focus is simply to assess the amount of alcohol consumed and in what frequency to assess the rate of binge drinking occurring at OSU, but also to identify certain demographic and other factors, such as fraternity/sorority affiliation, that have been previously implicated as risk factors for consuming excess alcohol. An increased understanding of the factors contributing to excess alcohol consumption is vital to properly understanding the etiology of excess alcohol consumption, the extent of student binge drinking occurring, and what areas of student life can be addressed to alleviate this issue.

Literature Review

Heavy drinking on American college campuses is described as a “national public health crisis in research, media coverage, and by many government agencies” (Taylor et al., 2006). Binge drinking is a complicated public health issue contributing to morbidity and mortality in the United States and is present at a disproportionately high rate among the college student population. Binge drinking is widespread with more than 6 million full-time college students in the United States and 44% of this student population self-reports participation in heavy episodic drinking (Wechsler et al., 1995). Alcohol consumption as once considered a right of passage for college age students, but it has developed into a serious issue as more than 20% of college students report binge drinking more than three times in a two-week time period, leading to a significant increase in risk for a myriad of health complications (Wechsler et al., 1995). Not only is binge drinking a concern for students participating in such behavior, but it affects the students that do not participate in this episodic heavy drinking. In fact, binge drinking is so prevalent in college students that college attendance is cited as a risk factor for bingeing, as college students have a higher rate of episodic drinking than their non-college peers (Wechsler et al., 1995)

Many factors contribute to student involvement in substantial alcohol consumption including age, alcohol prices, whether or not a given campus allows alcohol on site, fraternity or sorority membership, and past alcohol consumption. Being twenty-one or older appears to have no effect on bingeing, making the most important public policy to control young adult drinking patterns to appear ineffectual in curbing alcohol consumption (Wechsler et al., 1995).

Harsh crack-downs on underage drinking are a potential area to work towards ameliorating this issue. As far as alcohol prices go, there are mixed conclusions regarding its influence on alcohol consumption. Drinking patterns of males appear to be unaffected by alcohol prices, but underage female drinking rates are statistically significantly lowered by inflated alcohol prices (Chaloupka et al., 1996). While the results were statistically significant, the researcher reported questioning whether they were biologically or socially significant enough numbers to be an efficacious method of decreasing underage female bingeing (Weitzman et al., 2003). A contributor may be the organization of college campuses themselves. Some campuses allow for alcohol consumption on university property such as dormitories, which may promote the drinking culture that has developed in American universities. "Wet" settings such as dorms or Greek housing that allow alcohol consumption are strongly associated with an increased risk of bingeing, potential due in part to the higher availability and reduced risk of consequences when compares to campuses with "dry" settings (Weitzman et al., 2003). Even participation in Greek life itself may influence drinking behaviors.

A major contributor to early onset binge drinking, occurring during freshman year of college and during high school, appears to be largely associated with complacent parental alcohol attitudes (Weitzman et al., 2003). Unfortunately, education regarding alcohol risks appears to have no affect on binge drinking pattern prevalence (Weitzman et al., 2003). Some intervention policies such as strict, widely publicized drunk driving policies specifically targeting youths reduce overall drinking among college students, but do not affect the binge drinking population (Chaloupka et al., 1996). There are significant association with demographic factors such as sex and race (Wechsler et al., 1995). While demographics may contribute, a survey of

140 campuses revealed the biggest contributors to be living in a fraternity or sorority house, a party-centered lifestyle and reported participation in other risky behaviors (Wechsler et al., 1995). According to this survey, the most significant determinants of college binge drinking participation are “participation in a fraternity or sorority, living on campus, and the ready availability of alcoholic beverages” (Wechsler et al., 1995). Regrettably, these are highly general contributors and difficult to isolate with targeted interventions. In an NIAAA discussion forum, students expressed their that they either witnessed their peers studying or drinking because there were limited other activities to partake in. As such, a simple solution may be to increase the number of activities to do that are not related to substance consumption (Eastman, 2002). Binge drinking can either be acquired or avoided when entering college, but an emphasis placed on minimizing alcohol availability to students, increasing alcohol prices, and promoting substance free environments could improve rates of student participation in frequent heavy drinking binges (Weitzman et al., 2003). The risks for participation in alcohol consumption are difficult to assess and quantify due to the multifactorial nature of this behavior.

Administrators are constantly attempting to reduce rates of alcohol consumption on their campuses in many ways. One method of doing this is implementing a “dry campus” organization in which all campus property is a “dry” zone where alcohol cannot be present or consumed regardless of age. The affect of dry campus policies is poorly explored and its role in reducing binge drinking behavior is not well understood (Taylor et al., 2006). Current data suggests that a dry campus organization limits the drinking that takes place on campus but does not prevent previously identified demographic trends in alcohol consumption (Taylor et al., 2006). Specifically, a banning alcohol consumption on campus has no significant affect on

decreasing student self-reporting of alcohol related issues (Taylor et al., 2006). This finding certainly contradicts the goals of administrators when implementing anti-alcohol policies on campus and the logic of a dry campus reducing alcohol availability to students. While very little research has been performed surrounding the topic of dry campuses, the available data does show a slight decrease in alcohol consumption occurring on campus (Taylor et al., 2006). These researchers (Taylor et al., 2006) recorded a 10% decrease in student binge drinking occurring on campus property when compared to self-reported data of drinking occurring on campus property where alcohol consumption is allowed. Some of this may be attributed to students attempting to avoid punishment from breaking anti-alcohol policies, but further research is needed to test this reasoning. The current research does show promising benefits to students attending universities with anti-alcohol policies. Students on dry campuses report fewer incidences of second hand alcohol related consequences such as assault, injury, and general disturbances from drunken students (Taylor et al., 2006). This reduction in second hand issue for sober students could be due to students drinking more off campus rather than on campus. There is too little research available for any sort of conclusion to be performed, but the current data does suggest that the same demographic trends pervade across both dry and wet campuses when characterizing students that drink heavily, but there is a generally lower rate of consumption across all on-campus populations on dry campuses (Taylor et al., 2006).

One area of university student alcohol consumption that has been extensively studied is the association between fraternity and sorority affiliation correlating with an increase in alcohol consumption behavior (Cashin et al, 2007; Sirhal, M., 2000; Weitzman, E. R., et al, 2003). Fraternities and sororities were founded roughly 200 years ago on the premise of providing a

more intimate and opening environment to build lasting friendships and to promote scholastic excellence, but they have not remained static since their origination and the accumulation of social traditions have transformed these organizations into a sort of party hub on American college campuses (Sirhal, 2000). Administrators often blame the Greek community, the collective sororities and fraternities on a given campus, for binge drinking related issues. With more than 65 national fraternities, 26 national sororities, and over a million active collegiate members across 80,000 chapters nationwide, the Greek community comprises a sizeable portion of the American university population (Sirhal, 2000). The Greek system has a reputation for benefitting its members both socially and academically, but are currently; under siege by institutional administrators, with some universities electing to eliminate their Greek communities in an attempt to ameliorate negative consequences associated with student alcohol abuse (Sirhal, 2000). After the 1993 Harvard School of Public Health College Alcohol Study that asserts that 44% of college students are binge drinkers, but that 80% of fraternity members are bingers, administrators began to target the Greek community in an attempt to reduce the liability associated with high rates of college student alcohol consumption (Sirhal, 2000). Since this initial publication, many studies have confirmed this alarming rate of binge drinking present in Greek student populations (Sirhal, 2000). Other alarming data have come from similar studies, such as that the rates of student athlete binge drinking participation are 78% (Sirhal, 2000). Despite the identification of other associations, the Greek community remains the primary target of research, preventive policies, and general attention. Some researchers and policy makers believe that administrators have scapegoated the Greek system

and fear that eliminating the Greek system will lead to a rise in alcohol consumption (Sirhal, 2000).

A study surveying over 25,000 students with the Core Alcohol and Drug Survey reported that Greek students consume a higher number of drinks, have a higher frequency of alcohol ingestion, and tend to suffer more negative alcohol-related consequences than their non-Greek counterparts (Cashin et al., 1996). This rise could occur due to a reduction in control over student populations and accountability for their actions, as Greek houses tightly monitor the behavior of their members (Sirhal, 2000). Essentially, data suggests that the Greek population is at an increased risk of participation in heavy episodic drinking, but eliminating the Greek system may actually exacerbate the issue rather than alleviate it. Ultimately, it is very difficult to determine whether fraternities and sororities themselves create a culture of drinking or simply recruit members that place an increased importance on social activities, which leads to a higher rate of Greek student binge drinking on a campus with an already elevated alcohol consumption rate relative to the general population. Due to the strong association between Greek membership and heavy alcohol consumption, many administrators target alcohol education and prevention strategies at the Greek community. Interestingly there appear to be isolated student populations that reduce their alcohol consumption without any sort of formal intervention necessary.

Students that exhibit a sort of “self-intervention” by reducing their alcohol consumption without treatment or formal intervention are an interesting area of study in order to model effective prevention and reduction programs for implementation at university campuses (Vik et al., 2003). A dramatic drop in drinking is seen following graduation in all college student

populations, but a select group of students reduce their consumption rates while still in college attendance (Vik et al., 2003). 21% of students that self-reported high school episodic drinking also self-reported no alcohol consumption in the past 3month period (Viket al., 2003). This is alarming because there is a very strong correlation between binge drinking in high school and ac continuation or magnification of that alcohol behavior in college. Non of the students that self-reported a reduction in alcohol consumption described ay participation in a formal intervention or treatment for substance abuse (Vik et al., 2003). Based on the survey data collected, it appears as though bingers that initiate such behavior at a younger age accumulate more negative experiences, so before they reach college graduation they have a personally meaningful appraisal of their life choices and make a conscious decision to cease or dramatically reduce their alcohol consumption (Vik et al, 2003). Such natural recovery patterns are relatively commonly observed in substance abuse, but have not specifically been studied in college binge drinkers in the past (Vik et al, 2003). Students that increase their drinking in college report a general ambivalence to alcohol, friends that encourage their drinking behavior, and an elevated priority place on the importance of partying (Vik et al, 2003). There were not significant demographic differences between the groups of students that naturally reduced their alcohol consumption and those that continued frequent binge drinking (Vik et al., 2003). Natural reductions in alcohol consumption were associate with a transition period in student lives characterized by major occurrences such as engagements, marriages, and professional obligations that are not compatible with frequent episodic drinking (Vik et al., 2003).

Differences in attitudes may also contribute to some students' ability to reduce their alcohol intake. Attitudes regarding alcohol are of particular interest, with chronic bingers more

likely to report viewing alcohol as beneficial to their social life and overall college experience (Vik et al., 2003). Unfortunately, these associations are difficult to isolate and promote change in, making the designing of a beneficial program to adequately address binge drinking highly difficult. Some preventative educational programs focus on positive alcohol associations. One such program targeted specifically at Greek students, "Talking about Alcohol and Drugs Among Greeks (TAAD)" has not been highly effective (Harrington et al., 1999). Reviews of TAAD suggest that a focus on the tendency of alcohol to cause students to deviate from the goals of fraternities and sororities, negatively affecting the perception of their individual chapter and Greek students as a whole may be more effective in inciting change in student behavior (Harrington et al, 1999). The same prevention and intervention methods may not be applicable to Greek and non-Greek students alike; a more targeted approach may be necessary to yield significant changes. This is an area that demands further research to supplement the current data, as the rates of binge drinking are highly alarming and have many associated consequences.

The consequences associated with binge drinking are both long and short term. Students that participate in binge drinking self-report experiencing one or more alcohol-related issue in college and report more alcohol related issue than non-binge drinkers (Jennison, 2004). Epidemiological studies associate heavy episodic drinking with a "substantially higher risk of acute health problems such as serious injury, especially resulting from auto crashes; unplanned and unsafe sex; assault and aggressive behavior, and a spectrum of of drinking-related social and psychological problems" (Wechsler et al., 1995). Binge drinking is associated with increased in academic attrition in general. Cross-campus studies show an equal rate of binge drinking

across the four years of college, which is problematic to health (Wechsler et al., 1995). After four years of binge drinking behavior, energy balance is disrupted and other negative health consequences are increased. Adverse health effects are known to be associated with long-term alcohol bingeing, so public health advisories focused on the deleterious long-term effects may curb binge drinking in the short term (Wechsler et al., 1995). Binge drinking behavior and high rates of alcohol consumption pose an increased risk for alcohol dependence and addiction ten years following graduation, regardless of gender (Jennison, 2004). People that participate in college binge drinking report a more permissive attitude regarding the legal age for consumption and report inflated definition of what excessive consumption is, which propagates the troubling behavior (Weitzman et al., 2003). Continuing such a *laissez-faire* attitude towards alcohol in to adulthood could increase the risk of dependence or continued abuse following college graduation. The younger students begin drinking alcohol, the more likely they are to participate in binge drinking patterns in college. The earlier in life that alcohol is consumed, the higher the risk of dependence, addiction, and disruption to normal brain development. This identifies youth as an extremely important target audience for intervention, prevention, and alcohol education.

The Greek community is another important target audience. Studies correlate Greek membership with a higher rate of excessive alcohol consumption but do not show an association between Greek members and post-college heavy alcohol consumption (Sher et al., 2001). Studies continue to associate Greek membership with a higher rate of heavy alcohol consumption even after pre-college drinking patterns are controlled for, so it remains an important target audience even if post-college risk of alcoholism does not appear to be an issue

(Sher et al., 2001). Ultimately, further research needs to be performed to increase the pool of data and eventually lead to the development of an efficacious method of alleviating this public health issue and its associated negative consequences.

In the past there have been many single-school wet campus studies and multi-campus studies performed based on convenience rather than randomly selected population from randomly selected schools, which hampers the generalizability of the data (Wechsler et al., 1995). Consistently across binge drinking studies, binge drinking itself is defined as five or more drinks in one episode for men and four or more for women (Wechsler et al., 1995). It is important to use this definition to account for gender differences in body mass and ethanol metabolism. A drink is defined as 12 ounces of beer, 6 ounces of wine, a single shot or a wine cooler (Wechsler et al., 1995). According to this definition 44% of college students binge drink, with 50% of men and 39% of women identifying as bingers (Wechsler et al., 1995). Students with lower alcohol consumption can “serve as the nucleus of an effort to lower drinking” in the student population as a whole (Goodwin, 2016).

College students that abstain from binge drinking are an important area of future study in order to understand differences in the bingeing and non-bingeing populations of students. There are currently a number of observational studies published that have expanded the scope of knowledge surrounding this issue, but the isolation of specific contributing factors and the efficacy of implemented prevention strategies has not been widely done. Much of the current data is also self-reported, which leads to an inherent bias. It is key to rely more on objective data in the future. A strong correlation between bingeing in high school and continuing the behavior in college has been established, so further studies assessing the risk factors for

commencing binge drinking behaviors in high school should be performed (Wechsler et al., 1995). These more targeted studies could reduce the number of college binge drinking by reducing the number of high school bingers. Binging is at a higher rate in high school and college students than in any other age group, so it may be advantageous to examine the developmental transition periods and milestone to assess any sort of correlation of critical control point of intervention to prevent alcohol consumption and its associated complications.

Methodology

A simple random sample of 5,000 undergraduate students at Oklahoma State University's Stillwater (OSU-STW) campus was collected via an online Qualtrics survey (Appendix A). The survey was only sent to undergraduate sophomores, juniors, and seniors attending the OSU-STW campus. Freshman were excluded because this survey was administered in the fall, so they have not had adequate time in college to normalize their alcohol consumption patterns. For this exact reason first year transfer students were also excluded. Also, Greek organizations often include a "dry pledge ship" or period of time before official membership in which students are unable to drink alcohol. This would significantly affect the answers of freshman that were involved in one such fraternity or sorority. Students at other OSU campuses were not included in an attempt to reduce confounding variables in the responses due to campus location or makeup.

The survey was administered via a broadcast email facilitated through the OSU information technology office and sent to the students' university email addresses. The email addresses were provided by the Office of Institutional Research and Information Management following Institutional Review Board Approval of Human Subjects Research application. The

Students received an email inviting them to participate in the survey (Appendix B) and a second email 7 days later reminding them of the opportunity to participate (Appendix B). 7 days following the second email, the survey closed to responses. In totality, the survey remained open for two weeks with 2 emails inviting students to respond. The emails were the only form of subject recruitment. No follow-up procedures were used and once the survey closed all data was exported to a spreadsheet for analysis with no identifying information included.

The survey itself was adapted from the Core Alcohol and Drug survey, which has been frequently used in research on college alcohol consumption in the past. The adaptation used in this instance focused on assessing the amount of alcohol students consume. There were also questions inquiring about fraternity/sorority (Greek) affiliation, personal identification of frequency of alcohol-related consequences, and observation of alcohol-related consequences in peers. This variation of the Core Alcohol and Drug Survey excluded questions regarding religious affiliation, family history of alcohol abuse, and mental health, as such questions are beyond the scope of this study.

Results

Of the 5,000 OSU-STW undergraduates sampled, 812 (16%) completed the survey. As explained in the methods, none of the participants were freshman, but 22% (171) were sophomores, 34.5% (269) were juniors, 42% (328) were seniors, and 1.4% (11) identified as “other”. The “other” category could include non-traditional students such as those returning for a second degree or those beyond the fourth year of study for their undergraduate degree. Self-reported ages of participants ranged from 18-56, with 94.4% in the age range of 18-25. This places a vast majority of responders in the category of young adults.

Only 10.1% (79) of responders indicated that they lived in a fraternity or sorority house, with the other 89.9% claiming their residence outside of Greek-affiliated housing. 39.9% of people participated in the Greek recruitment process, but only 32% identified as a currently active member of a fraternity or sorority. That places 32% of active Greek responders currently living in a fraternity or sorority house.

For the purpose of this study, the following questions were analyzed. They inquire details about both drinking and binge drinking behaviors. 1) Do students' drinking frequency and behaviors vary based on the number of hours the student works per week? 2) Do students' drinking frequency and behaviors vary based on their reported cumulative GPA at the time of the study? 3) Do students' drinking frequency, binge drinking behaviors, and associated outcomes vary based on their status as an active member or non-member of a Greek organization? 4) Do students who participated in sorority recruitment or fraternity rush but are not currently an active member vary from their peers that did not participate in the recruitment process in terms of drinking and binge drinking behaviors?

Work Hours. To address the question, "Do students' drinking and binge drinking behaviors vary based on the number of hours the student works per week?" a one-way ANOVA was used.

Table #. *Alcohol consumption based on hours work per week.*

	Less than 20 hrs.	20-40 hrs.	Do not work
Mean	1.47	1.76	1.31
N	302	102	315
Std. Dev.	1.11	1.19	1.13
Range	4	4	4
F	6.49*		
df	718		

*p<.05

GPA. To address the question, “Do students’ drinking and binge drinking behaviors vary based on their reported cumulative GPA at the time of the study?” a one-way ANOVA was used.

Table #. Daily alcohol consumption based on grade point average.

	1.5	2.0	2.5	3.0	3.5	4.0
Mean	.00	1.37	1.29	1.19	1.01	.78
N	1	19	62	196	276	113
Std. Dev	-	.83	1.29	1.12	1.04	.98
Range	0	3	4	4	4	4
F	3.36*					
df	666					

*p<.05

Organizational Affiliation. To address the question, “Do students’ drinking, binge drinking behaviors, and associated outcomes vary based on their status as an active member or non-member of a Greek organization?” a t-test was used to examine several outcome variables.

Table #. Greek Active

	Active	Inactive
<i>Alcohol Consumption</i>		
Mean	1.61	1.36
N	233	487
Std. Dev.	1.06	1.17
t	2.70*	
df	718	
<i>Daily Alcohol Consumption</i>		
Mean	1.31	.94
N	219	448
Std. Dev.	1.09	1.06
t	4.17*	
df	665	
<i>Average Alcohol Consumption</i>		
Mean	7.86	5.01
N	224	449
Std. Dev.	9.33	8.35
t	4.02*	
df	671	

*p<.05

When asked ' "The following is a list of occurrences commonly associated with alcohol consumption. Please select the option that best reflects how frequently you have personally experienced these situations. (never, rarely, sometimes, often, very often)." Students who reported being an active member of a Greek organization were significantly more likely to report:

- feeling hungover (t=4.04, p=.000)
- having damaged property (ex: pulled a fire alarm, ruined personal property such as clothing, made a mess, thrown up in an uber, etc.) (t=2.14, p=.032)
- getting into an argument or fight (t=2.08, p=.038)
- getting nauseated or vomited (t=3.56, p=.000)
- having broken a law (t=2.86, p=.004)
- having missed a class (t=2.08, p=.038)
- having had memory loss (a "blackout" or "brownout") (t=5.51, p=.000)
- having done something that was later regretted (t=4.18, p=.000)
- having been hurt or injured (in a trip/fall or some other incident) (t=2.52, p=.012)
- Please review this same list of occurrences commonly associated with alcohol consumption and indicate how many times you have observed these situations in other people.
 - seen someone hungover (t=4.03, p=.000)
 - seen someone perform poorly on a test, exam, or assignment (t=2.44, p=.015)
 - seen someone receive disciplinary action (t=2.71, p=.007)
 - seen someone get into an argument or fight (t=2.63, p=.009)
 - seen someone nauseated or vomited (t=4.45, p=.000)
 - seen someone break a law (t=3.39, p=.001)
 - seen someone miss a class (t=3.82, p=.000)
 - seen someone criticized by a friend or family member (t=2.31, p=.021)
 - seen someone experience memory loss (a "blackout" or "brownout") (t=6.02, p=.000)
 - seen someone do something that was later regretted (t=3.93, p=.000)
 - seen someone get hurt or injured (in a trip/fall or some other incident) (t=2.71, p=.007)
 - seen someone kicked out of a bar or other establishment (t=3.54, p=.000)

Recruitment and Rush. To address the question, "Do students who participated in sorority recruitment or fraternity rush but are not currently an active member vary from their peers on drinking and binge drinking behaviors?" a t-test was used. Results indicate that

students who had gone through rush but were not an active member of a Greek organization reported higher rates of drinking overall ($t=2.90$, $p=.004$) and higher rates of binge drinking ($t=3.10$, $p=.002$) than their peers who did not participate in recruitment or rush.

Additional information revealed that 65% of the sample consumed their first alcoholic beverage prior to the age of 18. Consequently, it is reasonable to conclude that the majority of the sample had access to and chose to partake of alcohol prior to becoming a college student. Finally, a t-test ($t=4.28$, $p=.000$) revealed that active members of Greek organizations were significantly less likely than their non-Greek peers to believe that being involved in a fraternity or sorority increased one's risk of abusing alcohol.

Conclusions

According to the results of the one-way ANOVA performed, students that work more hours on average consume more alcohol. This does not, however, indicate an increased rate of binge drinking in employed students. This contradicts with the available literature, as it is postulated that students with increased participation in activities, such as work, that are not related to alcohol should exhibit a pattern of lower alcohol consumption (Eastman, 2002). The higher alcohol consumption exhibited by employed students does not implicate employment status as a root cause of the high rates of binge drinking seen in university populations. It more likely that this increased frequency of drinking is a reflection of moderate alcohol consumption.

The data showed a negative correlation between cumulative grade point average (GPA) and the drinking behaviors of students. This suggests that increased drinking is associated with a lower GPA. On average, students that reported having a 4.0 GPA drank half as much as those

reporting a 2.0 average. This supports the long-suggested association between alcohol consumption and impaired academic performance (Johnsons et al, 2006). Interestingly, the Greek system has a reputation for benefitting its members academically but also are notorious for encouraging alcohol consumption (Sirhal, 2000).

Students that identified as active members of a Greek organization exhibited statistically significant higher alcohol consumption rates over a two-week period, higher alcohol consumption daily average, and a higher consumption overall. Even students that are not currently active members, but participated in the sorority recruitment or fraternity rush process exhibited higher rates of alcohol consumption than their non-Greek affiliated peers that did not participate in the recruitment process. This may be because students that were once members but are no longer active may be on probation or have been asked to resign for behavioral issues. It may also be reflective of the social makeup of an individual desiring to join a fraternity or sorority for social reasons, as much of binge drinking can be associated with a perceived increase in sociability (Weitzman, et al., 2003).

Beginning alcohol education and awareness interventions to prevent binge drinking behavior in college is too late, according to this set of data. With a majority of the sample indicating that they had consumed alcohol before entering college, it is not the university setting itself that is solely responsible for the formation of a “drinking culture” in which heavy alcohol consumption is tolerated. To make a true impact on rates of binge drinking education and awareness programs should target younger audiences. This is especially critical with literature suggesting that the earlier an individual commences alcohol consumption, the higher the likelihood they will come to abuse alcohol (Jennison, 2004).

Literature implicates participation in a fraternity or sorority as the biggest contributor to binge drinking patterns (Wechsler et al., 1995). It is not shocking that the OSU-STW Greek population appears to consume more alcohol than the non-Greek student population. It is difficult to determine if the dry campus organization of OSU influences the alcohol consumption of its students, as there is not data from a comparable wet campus to compare this collection to. Further research comparing campuses with similar regional and demographic controls with different campus organizations would be helpful in determining the validity of a dry campus organization. More work focusing specific on the reasons behind the increased alcohol consumption of Greek students would also be helpful for university administrators as they move forward and determine the most advantageous approach to addressing alcohol consumption rates in the future.

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Appendices

Appendix A

Your decision to participate in this survey is entirely voluntary and you have the right to refuse to partake in this research project or terminate your participation in the survey at any time. Please answer all questions honestly, as complete anonymity of responses is maintained.

You will receive no direct benefits as a result of involvement in this thesis study, but your responses may help us to better understand the alcohol consumption behavior and patterns of students on the OSU-Stillwater campus.

There are no anticipated risks that will result from partaking in this research study and all responses will be saved in a secure document without any sort of personal identifying information attached to your results. Nobody will know that your responses belong to you or whether or not you even participated in the survey.

If at any time during the survey or following participation in the survey you have any questions regarding the content of the survey or the goals of this research, feel free to contact Annelise Poss at annelise.poss@okstate.edu.

If you have questions about your rights as a research volunteer, you may contact the Oklahoma State University Institutional Review Board (IRB) Chair, Dr. Hugh Crethar at 223 Scott Hall, Stillwater, OK 74078, [405-744-3377](tel:405-744-3377) or irb@okstate.edu.

If you wish you may choose to print a hardcopy of this consent for your own personal records.

By continuing on to the content of this survey you attest to the fact that the following information is true:

- You have thoroughly read and understand the above material
- You willingly decide to participate
- You are 18 years of age or older

GENERAL INFORMATION

- Classification
 - Freshman
 - Sophomore
 - Junior
 - Senior
 - Other
- Gender
 - Male
 - Female
 - Other
- Age
- Current place of student residence
 - On campus
 - Off campus
 - Greek housing (fraternity/sorority housing)

- Working
 - Part-time (less than 20 hours)
 - Full-time (20-40 hours)
 - Not working/ not employed
- Approximate cumulative grade point average
 - 4.0 (A)
 - 3.5
 - 3.0 (B)
 - 2.5
 - 2.0 (C)
 - 1.5
 - 1.0 or below

Please respond to the following questions based on your experiences as a student at OSU-Stillwater

GREEK AFFILIATION

- Even if not currently a member, did you participate in the sorority/fraternity recruitment process?
- Are you currently an active member of a fraternity/sorority?

DRINKING BEHAVIOR

For the purposes of this survey a “drink” is defined as a 12 ounces of beer, 6 ounces of wine, a wine cooler, a shot glass full of liquor, or a mixed drink.

- At what age did you first consume alcohol? If you have never consumed alcohol please respond with “never”.
- In the last 14 days on how many days have you consumed alcohol?
 - 1-14 scale
- Think back over the last 14 days. On how many days have you consumed four or more drinks, as defined above?
 - 1-14 scale
- What is the average number of drinks you consume in a typical 7 day period?
- Please fill in the following sentence with the response that best reflects your opinion of your own drinking behavior. “I drink _____ often compared
 - Significantly more
 - More
 - The same
 - Less
 - Significantly less
- Is alcohol allowed on the OSU-Stillwater campus?
 - Yes
 - No

- Not sure
- Do you think that fraternity/sorority members are at a greater risk of abusing alcohol?
- The following is a list of occurrences commonly associated with alcohol consumption. Please select the option that best reflects how frequently you have personally experienced these situations. (never, rarely, sometimes, often, very often)
 - Felt hungover
 - Performed poorly on a test, exam, or assignment
 - Received disciplinary action
 - Damaged property (ex: pulled a fire alarm, ruined personal property such as clothing, made a mess, thrown up in an uber, etc.)
 - Got into an argument or fight
 - Got nauseated or vomited
 - Broken a law
 - Missed a class
 - Been criticized by a friend or family member
 - Thought you may have a drinking problem
 - Had memory loss (a “blackout” or “brownout”)
 - Have done something that was later regretted
 - Have been hurt or injured (in a trip/fall or some other incident)
 - Been kicked out of a bar or other establishment
- Please review this same list of occurrences commonly associated with alcohol consumption and indicate how many times you have observed these situations in other people.
 - Felt hungover
 - Performed poorly on a test, exam, or assignment
 - Received disciplinary action
 - Damaged property (ex: pulled a fire alarm, ruined personal property such as clothing, made a mess, thrown up in an uber, etc.)
 - Got into an argument or fight
 - Got nauseated or vomited
 - Broken a law
 - Missed a class
 - Been criticized by a friend or family member
 - Thought you may have a drinking problem
 - Had memory loss (a “blackout” or “brownout”)
 - Have done something that was later regretted
 - Have been hurt or injured (in a trip/fall or some other incident)
 - Been kicked out of a bar or other establishment
- What strategies have you used to minimize risks while drinking alcohol?
 - A taxi service (ex: Uber)
 - A designated driver
 - Making sure not to walk home alone
 - Do not employ strategies to minimize risks
- What strategies have you seen others use to minimize risks while drinking alcohol?

- A taxi service (ex: Uber)
- A designated driver
- Making sure not to walk home alone
- Do not employ strategies to minimize risks

Thank you for your participation in this study. If you feel as though you need to further discuss any of the subjects presented in this survey or seek help regarding an alcohol related issue, please contact the University Counseling Services Alcohol and Substance Abuse Center at 405-744-2818.

INITIAL RECRUITMENT EMAIL:

You are receiving this email because you are a full time undergraduate student at the OSU-Stillwater campus. We invite you to participate in a survey regarding student alcohol consumption behavior. Participation is by no means mandatory but is greatly appreciated. **The survey will be open for two weeks.**

This data collected from this survey is entirely anonymous and will be used for a Wentz Undergraduate Research Project in conjunction with an Honors Thesis conducted in the department of Nutritional Sciences.

Below is a link to the survey:

https://okstateches.az1.qualtrics.com/SE/?SID=SV_40IVrJYj4fq1oRn

Thank you very much for your participation,
Annelise Poss
Student, Nutritional Sciences

Whitney Bailey, PhD
Associate Professor, HDFS

EMAIL SENT ONE WEEK BEFORE SURVEY CLOSED:

You are receiving this email because you are a full time undergraduate student at the OSU-Stillwater campus. This is a reminder that you have been invited to participate in a survey regarding student alcohol consumption behavior. Participation is by no means mandatory but is greatly appreciated. **The survey will remain open for one more week.**

This data collected from this survey is entirely anonymous and will be used for a Wentz Undergraduate Research Project in conjunction with an Honors Thesis conducted in the department of Nutritional Sciences.

If you have already participated in this research survey, thank you very much. If you have not here is a link to the survey:

https://okstateches.az1.qualtrics.com/SE/?SID=SV_40IVrJYj4fq1oRn

Thank you very much for your participation,

Annelise Poss
Student, Nutritional Sciences

Whitney Bailey, PhD
Associate Professor, HDFS

