

Are College Students Playing Hard so That They Can Drink Harder?: Examining Greek Affiliation as a Predictor of Drunkorexia

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Abstract

College student alcohol consumption is linked to more than 1,400 student deaths and 500,000 unintentional injuries each year⁶. Furthermore, more than 60% of college students say they are not getting the recommended amount of physical activity each week¹⁰. This combination of alcohol consumption and decreased physical activity is a major health concern that public universities are not able to combat. College students are not exercising for their health, but compensating for other excessive alcohol consumption³. This compensation for alcohol consumption is known as Drunkorexia¹². Given the strong relationship between participating in a social Greek organization (i.e., fraternity or sorority) and alcohol consumption, it is possible that Greek affiliation would predict Drunkorexia. To extend the literature, this study examined the relationship between Greek affiliation and different aspects of Drunkorexia after controlling for alcohol consumption level. Participants included 534 college students from a mid-sized university in the Midwest. Students were asked to fill out an online survey and had the opportunity to be entered into a chance to win a \$50 gift card. An independent t test determined that members of social Greek organizations ($M=9.35$; $SD=4.12$) have significantly higher social scores on the Alcohol Effects subscale than non-members ($M=8.27$; $SD=2.69$), $t(223)=2.33$, $p=0.02$. However, in a multiple regression, Greek affiliation did not significantly predict Drunkorexia tendencies after accounting for alcohol consumption. Implications will be discussed.

Key words: Drunkorexia, Alcohol, Greek affiliation

1. Introduction

Alcohol is the fourth leading preventable cause of death in the United States⁹. Approximately 88,000 people (70.5% men and 29.5% women) are involved in alcohol related events that result in death each year¹¹. Furthermore, alcohol injury deaths increased by 3% among college students between the years 1998 and 2005⁶. Many college students see drinking as an integral part of their experience while at school and although some students have even developed drinking habits prior to college life; many students have never had a drink before coming to college. Excessive alcohol consumption is a major issue for colleges and universities that not only result in fatalities, but also other negative health related consequences as well. Cardiovascular disease is one of the top three leading causes of death¹⁴. Cardiovascular disease a diet related disease that is often preventable, but more than 60% of college students are not getting the recommended amount of physical activity a week in combination with poor diet¹⁰. By not participating in higher levels of physical activity, lacking a proper diet, and consistently consuming large amounts of alcohol, college students are more at risk for chronic diseases. However, some students actually exceed exercise guidelines or limit food intake as a compensatory measure for alcohol consumption. The combination of these behaviors is known as Drunkorexia. Since Greek Organizations on college campuses are usually seen as being highly selective, students tend to become more aware of their appearance and weight as well as drinking habits in order to fit in to the stereotypes of

these lifestyles. This study aimed to examine the relationship between Greek affiliation and different aspects of Drunkorexia once alcohol consumption level had been controlled. It was hypothesized that a direct correlation exists between Drunkorexic tendencies and those who are affiliated with Greek life.

1.1 Greek Organizations

Greek-letter societies are the oldest form of student self-governance and have been on college campuses in the United States since 1852. Members of these organizations, such as sororities and fraternities, share similar ideals in which they promote scholarship, leadership development, and service to others. Over nine million people nationwide are members of the Greek community⁵. Although organizations of the Greek Community support and raise money for various donations across the country, they are known to participate in various other social settings that increase their risk for excessive alcohol consumption as well as other negatively related behaviors⁸. In comparison to non-Greeks, students that are members of the Greek system averaged more drinks per week, drank heavily more often, and suffered more negative consequences of their acts⁴. Furthermore, sorority and fraternity members viewed alcohol as being a vehicle for friendship, and aiding to promote social activity and involvement as well as sexuality⁴.

1.2 Drunkorexia

College students, in general, tend to participate in social settings where drinking is far more common than students who are not in college. However, their ways of consuming alcohol are not always safe. Drunkorexia refers to one way of risky drinking that involves restricting calories, eliminating eating for a certain period of time, skipping meals, and/or exercising more often in order to get drunk faster or prevent weight gain¹². These behaviors are compensating for excessive alcohol consumption by many college students. In addition, approximately 60% of college women have taken part in dieting or binge eating in extreme measure in order to maintain and control their body weight, shape, and image⁷. Binge drinking and eating disorders are very serious when they occur separately, but they are often combined, which creates even more of a health risk⁷. These behaviors are most common in this age group due to peer pressure of the college environment and one's desire to remain in shape while also adhering the demands of a college social life and drinking atmosphere.

1.3 Physical Activity And Health

Many students enter college with the fear of gaining the "freshmen 15," so they become very dedicated to working out, eating right, and living a healthy lifestyle. The recommended exercise guidelines are 30 minutes of moderate-intensity aerobic activity five days a week, or a combination of 25 minutes of vigorous aerobic activity at least 3 days per week and moderate to high-intensity muscle-strengthening activity the other two days¹. However, more than 60% of college students report not getting the recommended amount of physical activity each week⁹. Engaging in physical activity and exercise has various physical and mental health benefits, and studies show that people who exercise on a regular basis also tend to drink less heavily¹³. However, although some students are showing the initiative of working out to maintain a healthy lifestyle, greater than 35% of men and women report exercising excessively at least 25% of the time before consuming alcohol in order to compensate for the calories from alcohol².

It is hypothesized that because Greek affiliation and alcohol consumption are positively correlated, they will be able to significantly predict Drunkorexia tendencies in college students after accounting for alcohol consumption.

2. Methods

2.1 Participants

Participants of this study were 534 college students from a mid-sized university in the Midwest. Of these participants, 74.5% were female and 24.2% were male. Furthermore, participants between the ages of 17 and 30 were included, but the average age of the sample is 20.2 years old. Of the sample population, 90.1% are Caucasian or white, 4.9% are Asian or Asian American, 2.8% are Hispanic, and 1.9% is African American. When looking at Greek affiliation, 47.6% of students are members of a sorority or fraternity, 5.2% intend to pledge, and 44.4% are no longer members or were never members.

2.2 Procedure

Data was collected by sending out an email to students with a link to an online survey that they were asked to fill out and had the opportunity to be entered into a chance to win a \$50 gift card. The survey began by prompting student participants to answer 30 questions about their current drinking habits. The purpose of these questions were to find out if students have ever drunk alcohol, how many drinks they have on occasion, how many days of the week they typically drink, and how many drinks do they have on a typical day that they do drink. Furthermore, the students were also asked how many times they had gotten drunk or intoxicated in the past 30 days, how many times they binge drank, and what the highest number of drinks they consumed on any one occasion was.

2.3 Measures

2.3.1 alcohol consumption

Participants were asked questions regarding alcohol consumption after being provided with the definition of a standard drink. Such questions were as follows: Have you ever had an alcoholic beverage to drink? In a typical week, on how many days do you have at least one drink containing alcohol; How many drinks do you have on a typical day when you are drinking; During the last 30 days, what is the highest number of drinks that you drank on any one occasion?

2.3.2 drunkorexia

Students' Drunkorexia tendencies were measured using the Compensatory Eating and Behaviors in Response to Alcohol Scale (CEBRACS). This is a 21 question, Likert-scale survey that measures if respondents engaged in compensatory behaviors to make up for calories consumed in alcohol. This includes excessively exercising or restricting what they eat in order to not gain weight or to get drunk faster before, during, and after alcohol consumption. The four Drunkorexia tendencies that participants were scored on were alcohol effects, bulimia, dietary restraint or exercise, and restriction. A scale of 1-5 was used to score these tendencies where 1 indicates "never" engaging in that behavior and 5 indicates "almost all the time" engaging in that certain behavior. The alcoholic effects scale contained seven questions on behaviors used to enhance the feeling of intoxication, such as eating less. The bulimia scale consisted of six items on purging behavior, including questions on use of laxatives and vomiting. The dietary restraint and exercise scale consisted of six questions on changes in food habits such as only eating low fat foods and exercise habits such as increasing the frequency or intensity of physical activity. Lastly, the restriction scale utilized two questions regarding whether or not participants skipped meals or did not eat for a full day on days the participants consumed alcohol.

2.3.3 greek affiliation

In order to determine a participant's affiliation or non-affiliation with Greek Organizations, they were asked whether or not they are a member of a sorority or fraternity. Responses included yes (they are a pledge or initiated member), not yet a member but they intend to pledge, they were a member but deactivated, and not a member of a Greek organization.

3. Results

3.1 Alcohol Consumption

Out of the total 534 participants, 493 (92.1%) reported ever having an alcoholic drink. Furthermore, 428 (80.1%) students reported having 4 or more drinks in one drinking occasion within the past thirty days. The average number of drinks students consumed during a typical day drinking was 3.60 drinks ($SD = 2.38$). Also, results showed students drank on average 2.13 days a week ($SD = 1.49$).

In comparison, student's who are involved in Greek Organizations drink slightly more days a week with the average being 2.61 ($SD = 1.41$). Furthermore, on a typical day when these members are drinking, they have an average of 4.00

drinks ($SD = 2.31$). Lastly, within the past thirty days, participants who are members of a sorority or fraternity reported their highest number of drinks consumed, on average, in one night having as being 7.88 ($SD = 4.76$).

3.2 CEBRACS

The Compensatory Eating and Behaviors in Response to Alcohol Scale was used to measure participant's tendencies to engage in behaviors related to Drunkorexia. It was shown that students who were initiated members of a Greek Organization scored higher on each of the four subscales compared to students who were not members. This indicates that participants who are members of a sorority or fraternity report engaging in higher levels of drunkorexic behavior. The most common behaviors students agreed to are dietary restraint and increased exercise ($M = 10.26$, $SD = 4.74$) as well as alcohol effects ($M = 9.35$, $SD = 4.12$).

An independent t test determined that members of social Greek organizations ($M = 9.35$; $SD = 4.12$) have significantly higher social scores on the Alcohol Effects subscale than non-members ($M = 8.27$; $SD = 2.69$), $t(223)=2.33$, $p=0.02$. Although Greek affiliation and alcohol consumption are positively correlated, in a multiple regression, Greek affiliation did not significantly predict Drunkorexia tendencies after accounting for alcohol consumption [$F(2,211) = 2.946$, $p = 0.055$].

4. Discussion

The physical inactivity and high alcohol consumption of college students was predicted to lead to compensatory behaviors such as Drunkorexia. However, this study showed that being a member of a Greek organization cannot significantly predict different aspects of Drunkorexia after controlling for alcohol consumption level. These results were not expected due to demanding social lives, various influences and expectations, as well as the desire to fit in that often comes with being a member of a sorority or fraternity. Therefore, more studies should be pursued in order to attempt to further demonstrate these results that would aid in proving the stereotypical Greek lifestyle to be skewed. This in turn could be used across colleges and their campuses to eliminate such stereotypes and possibly increase the participation in these organizations for their positive attributes instead of the focus of parties and alcohol. On another note, although exercise has many health benefits, a large proportion of college students are not exercising sufficiently enough to gain the mental and physical health benefits of exercise¹³. Therefore, the idea that students are not simply exercising for their health, but possibly using it as a compensatory behavior is still supported by this study. With that being said, it is important that colleges provide education on a healthy college lifestyle and provide access to helpful habits when figuring out how to living alone, which is a first for many college students. Although being a member of a sorority or fraternity cannot significantly predict aspects of Drunkorexia, it is clear that these members scored higher on all four subscales including: alcohol effects, bulimia, dietary restraint or exercise, and restriction. Studies provide evidence that by increasing exercise, which is considered a substance-free activity, college student drinking can be decreased¹³. Although this is in disagreement with the compensatory behaviors of Drunkorexia, if students are not exercising correctly, or for the right reasons, these results might not be applicable. Therefore, further studies should be done to analyze why Greek members score higher on the CEBRACS scale when it cannot significantly predict drunkorexic tendencies. Intrinsic and extrinsic motivations as well as perceived expectations could be analyzed. This study, like any study, has limitations. One of these limitations could be the survey method of collecting data, where participants might not have been truthful in their answers. Furthermore, the demographics of this study included mostly white females, which limited diversity and could have skewed the results. In pursuing further studies, these limitations can be accessed and the demographic of students expanded. In conclusion, expectations that member's of Greek Organizations engage in higher levels of alcohol consumption was supported. Those who are members of a sorority or fraternity are more likely to binge drink, drink more often, and in higher volumes. They are more likely to engage in drunkorexic behaviors in order to get drunk faster or make up for empty calorie intake. They are also more likely to purge or skip meals in order to avoid weight gain when drinking. However, although Greek members scored higher on these scales, Greek affiliation was not able to significantly predict Drunkorexia tendencies after accounting for alcohol consumption when compared to non-Greek members. These results show that college students, no matter what organization they are a part of, are not exercising for their health or following a healthy diet and eating habits. Further studying the impacts of college pressures, intrinsic and extrinsic motivations, and memberships to various student organizations is important to access and understand what drives drunkorexic behaviors and how they can be improved to maintain and promote healthy lifestyles on college campuses.

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6. References

1. American Heart Association Recommendations for Physical Activity in Adults. (2016, July 17). Retrieved from http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/American-Heart-Association-Recommendations-for-Physical-Activity-in-Adults_UCM_307976_Article.jsp#.WPaLy461ub8
2. Bryant, J. B., Darkes, J., & Rahal, C. (2012, February 2). College Students' Compensatory Eating and Behaviors in Response to Alcohol Consumption. *Journal of American College Health*, 5, 350-356. doi:10.1080/074484812011630702.
3. Buscemi, J., Martens, M. P., Murphy, J. G., Yurasek, A. M., & Smith, A.E. (2011, June 8). Moderators of the relationship between physical activity and alcohol consumption in college students. *Journal of American College Health*, 6, 503-509. doi:10.1080/074484812010518326
4. Cashin, J. R., Presley, C. A., & Meilman, P. W. (1998). Alcohol use in the Greek system: follow the leader? *Journal of Studies on Alcohol*, 1, 63-70. doi:10.15288/jsa.1998.59.63.
5. Glass, N. (2012, May 8). Examining the benefits of Greek Life. USA Today College. Retrieved from <http://college.usatoday.com/2012/05/08/examining-the-benefits-of-greek-life/>.
6. Hingson, R. W., Heeren, T., Zakocs, R. C., Kopstein, A., & Wechsler, H. (2005). Magnitude of alcohol-related mortality and morbidity among U.S. college students ages 18-24. *Journal of Studies on Alcohol*, 2, 136-44. Retrieved from https://www.collegedrinkingprevention.gov/media/mag_and_prev_arph_april_2005.pdf
7. Hunt, T. K., & Forbush, K.T. (2016). Is “drunkorexia” an eating disorder, substance use disorder, or both? *Eating Behaviors*, 22, 40-45. doi:10.1016/j.eatbeh.2016.03.034.
8. Larimer, M. E., Irvine, D. L., Kilmer, J. R., & Marlatt, A.G. (1997). College Drinking and the Greek System: Examining the Role of Perceived Norms for High-Risk Behavior. *Journal of College Student Development*, 38, 587-598. Received from https://www.researchgate.net/publication/232556308_College_drinking_and_the_Greek_system_Examining_the_role_of_perceived_norms_for_high-risk_behavior
9. Mokdad, A.H., Marks, J.S.; Stroup, D.F.; & Gerberding, J.L. (2004). Actual causes of death in the United States 2000. *JAMA: Journal of the American Medical Association*, 10, 1238–1245. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/15010446>
10. Spain, E. (2014). College Kids Need to Change Unhealthy Ways. Retrieved from <https://news.northwestern.edu/stories/2014/05/college-kids-need-to-change-unhealthy-ways>.
11. Stahre, M., Roeber, J., Kanny, D., Brewer, R.D. & Zhang, X. (2014). Contribution of Excessive Alcohol Consumption to Deaths and Years of Potential Life Lost in the United States. *Center for Disease Control and Prevention*. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/24967831>
12. Ward, R. M. & Galante, M. (2015). Development and initial validation of the Drunkorexia Motives and Behaviors scales. *Eating Behaviors*, 18, 66-70. doi:10.1016/j.eatbeh.2015.04.003
13. Weinstock, J. (2010). A Review of Exercise as Intervention for Sedentary Hazardous Drinking College Students: Rationale and Issues. *Journal of American College Health*, 6, 539-544. doi:10.1080/07448481003686034.
14. Xu, J., Murphy, S. L., Kochanek, K. D., & Bastian, B. A. (2016). Heart Disease Facts and Statistic. Retrieved from http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_02.pdf