Impacts of Alcohol Consumption on College Students Academics, Factoring Age and Employment

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Abstract: **The purpose of this study was to examine the impact alcohol consumption on college student's academic performance, while factoring in both age and employment. Data was collected from 150 college students, representing 84 female (56%) and 66 male (44%) participants. The participants completed three instruments: a Demographic Survey with 10 items, the College Student GPA Survey with nine items, and the Alcohol Consumption Questionnaire with 18 items. The study showed that there was a significant relationship between alcohol consumption and age, as well as alcohol consumption and employment. Students who tend to consume alcohol have lower overall GPAs than students who do not consumer alcohol.**

Keywords: **alcohol consumption, employment, academic achievement, GPA.**

1. INTRODUCTION

The purpose of this study is to examine the effects that alcohol consumption has on a college student's academic performance, while factoring in age and employment. Alcohol consumption in college students is a universal problem that has led to many academic and health-related negative consequences. Alcohol consumption on college and university campuses has gained attention not only because undergraduate students drink significantly more than adults, but also because they drink more than young adults who do not attend university (Balodis, Potenza & Olmstead, 2009).

Alcohol use among college students is an issue of concern on many college campuses. The majority of students will consume alcohol at some point in their college career. National samples of college students demonstrate that two thirds of all students report consuming alcohol during their college academic career (Parada et al, 2011). A study found that, next to time spent studying outside the classroom, time spent drinking was the most reliable predictor of a student's grade point average GPA (Powers, 2014). There are different levels of consuming alcohol, whether it is causal drink with dinner to binge drinking on the weekends, all have some impacts on college students' personal and academic life (Pascarella et al, 2007). Students can change their consumption of alcohol depending on the ease of the semester, or the academic status they are in at the school (freshman, sophomore, junior, senior). Powers (2014) has shown that alcohol consumption negatively affect memory functions, no matter the dosage. This could be a cause for reasons why students do not do well on tests after a weekend of drinking. Alcohol consumption typically relates to students not attending class and not completing schoolwork in a timely manner (Balodis, Potenza & Olmstead, 2009).

Excessive drinking is an increasingly dangerous activity that college students all across the world (Savrock, 2009). It can result in multitude of negative consequences that can influence a person's judgment and in some cases can put a person's life in danger. One negative affect from alcohol is that it can interfere with a sleep schedule (Pascarella, et al., 2007). Students who drink alcohol typically have interrupted patterns of a regular sleep schedule. Over-consumption leads to late night and a late rise in the morning, which can make a student, miss classes (Parada et al, 2011).

2. LITERATURE REVIEW

Alcohol consumption in college is an ever-present issue at colleges in the United States. Whether a student is a freshman, sophomore, junior or senior, each student has most likely consumed alcohol at some point in his or her college career and majority of students consume alcohol on multiple occasions (Powell, Williams & Wechsler, 2002). Weitzman, Nelson and Wechsler, 2003) noted that binge drinking is prevalent among university students and binge drinking is associated with damage to the hippocampus, a region of the brain that plays a key role in learning and memory (Balodis, Potenza & Olmstead, 2009). It has been established that binge drinkers students remembered fewer words in the interference list and displayed greater proactive interference in the verbal learning test; they performed worse in logical memory, both on immediate and delayed recall (Parada et al., 2011). The study also shows that binge drinking is associated with poorer verbal declarative memory, regardless of gender (Parada et al., 2011). Townshend and Duka (2005) stated that binge drinking can lead to brain damage and have implications for the development of alcohol dependence. The study showed that binge drinkers had less positive moods than non-binge drinkers. The results confirmed that binge drinkers and nondependent alcohol-drinking group, differences can be seen in mood and cognitive performance between those that binge drink and those that do not binge drink.

Porter and Pryor (2007) examined the connection between heavy episodic alcohol use and student involvement on a college campus. The study noted that student involvement with faculty has a positive effect on a multitude of college behaviors and outcomes, such as GPA, degree attainment, satisfaction with college and self-reported gains in academic and personal growth (Hingson, Heeren, Winter, & Wechsler, 2005).Students involved in organization and clubs, mainly Greek Life, are presumed to engage in alcohol consumption more often than others, typically because those involved in clubs tends to be more social than students not involved (Weitzman, Nelson, & Wechsler, 2003)

Porter and Pryor (2007) found that alcohol consumption has a positive correlation with fraternity and sorority membership and pointed out that alcohol consumption has an impact on college outcomes in that drinking is negatively related to college GPA and graduating with honors, but positively related to the attainment of a Bachelor's degree. Alcohol use by college students is correlated with death, sexual assault, bodily injury, academic failure, and academic underperformance (Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2002)

In a national survey, senior-level college administrators estimated that 30% of the time alcohol was involved in student attrition (Anderson & Gadaleto, 2001). Due to their alcohol use, college students who drink at the heavy episodic level are more likely to miss class, get behind in school work, not use protection during sex, get into physical fights, and experience a wide variety of other negative consequences (Eastman, 2002). Past research has shown that alcohol consumption can negatively affect memory function, no matter the dosage. Memory is not just affected by alcohol consumption but also during a hangover. Therefore, alcohol consumption in college students can affect participant's memory to remember information that was learned in class, which will in turn affect GPA (Powers, 2014).

College student's alcohol consumption relates to poor academic performance, criminal and social issues. Moreover, alcohol abuse continues to increase among college students and directly associates with decreased academic performance (Powers, 2014). It is stated that college students often experience negative alcohol-related consequences, including hangovers and blackouts, driving under the influence and academic problems (Powers, 2014).

Savrock (2009) noted that college students who engage in binge drinking tend to earn lower grades than students who don't abuse alcohol. The culture of alcohol abuse on college campuses endangers the academic performance, general well-being, and at times, the very lives of students (Powers, 2014). Savrock (2009) indicated that there is a definite link between the number of binge drinking episodes and grade point average as the students who abused alcohol more frequently also had lower GPAs. Binge drinking on university campuses is associated with social and health-related problems (Balodis, Potenza & Olmstead, 2009).

Balodis, Potenza and Olmstead (2009) study examined the subjective perception of binge-like dose of alcohol in a large sample of male and female undergraduates and man reported more drinking occasions than woman. Thombs et al (2009) on a study of first- and second-year college students only and determined that frequent heavy episodic drinkers are more likely to miss class and get behind on schoolwork than occasional heavy episodic drinkers and non-heavy episodic drinkers, indicating a negative correlation between alcohol consumption and academic performance. Thombs et al. (2009)

found that higher levels of nighttime intoxication would predict lower academic performance among first- and second-year undergraduates.

Pascarella et al., (2007) study examined the evidence that excessive alcohol consumption has a negative influence on student academic performance in college. The study founded that males tended to experience higher numbers of academic and nonacademic problems due to drinking, and females were more likely to miss classes due to hangovers (Savrock, 2009).

Research findings also noted that the negative effects of excessive alcohol consumption on academic performance are discernible as early as the second semester of the first year of college, but also that the magnitude of the negative effects for first-year students are essentially the same as those for seniors (Pascarella et al., 2007).

Powell, Williams and Weschler (2002) examined the effect of alcohol consumption among college students on study habits. The consumption of alcohol can be expected to have a negative impact on schooling both directly through its potential affect on cognitive ability and indirectly through its impact on study habits (Powell, Williams & Weschler, 2002). Overall, frequent alcohol drinking college students are more likely to miss a class and fall behind in their schoolwork. The number of drinks consumed correlated positively with the number of classes missed and frequency of alcohol consumption was associated positively with absenteeism from classes that were disliked (Wechsler et al., 1998). There is a negative relationship between heavy episodic alcohol use and the time students spend on studying for academics (Porter & Pryor, 2007). Overall, binge drinking two or more times in a week period is linked to significantly lower semester grades and the heaviest drinkers obtain the lowest grades (Pascarella, et al., 2007)

Theories on Alcohol Consumption:

Eastman (2002) hypothesized that the consumption of alcohol has a negative effect on the grade point averages of college students who drink more than three beverages at a time. The relationship between variables of alcohol and grades can be explained through the sociological theory of Robert Menton, termed the Self-fulfilling Prophecy (Anderson, & Gadaleto, 2001). This phenomenon occurs when an originally false assertion becomes true simply because it was predicted.

Winograd and Sher (2015) examined binge drinking and other negative behaviors among college students. The study tested the explanatory power of three criminological theories: self-control, social bonds, and routine activities. Individuals who lacked self-control would have a tendency to be "impulsive, insensitive, physical risk-taking, short-commitment and alcohol use, but found a positive relationship between measures on involvement and alcohol use, a finding which was consistent with the social bond theory (Eastman, 2002).To explain the inconsistency, it is suggested that drinking was an integral part of mainstream college life. Themes in the college alcohol use literature seemed to support normative variations in the collegiate population. For example, students who had some heavy drinking experiences appeared most integrated into the college community. Similarly, the consistent findings shows those involved in Greek Life (i.e. fraternities and sororities) tended to drink more heavily and more frequently (De Haan, Egberts, & Heerdink, 2015)

The same findings suggest that students involved in athletics tended to drink more than other students. This implied a positive association between involvement and alcohol consumption. Based on previous research regarding social bond theory as well as research using constructs resembling the theory, it was expected that measures of social bond theory were associated with alcohol-related behaviors among college students (Winograd and Sher, 2015). College students who were committed to conventional goal partook in alcohol-related behaviors less frequently than those who were not. Similarly, high levels of involvement have a negative influence on alcohol-related behaviors among college students (De Haan, Egberts, & Heerdink, 2015).

3. METHOD

Research Questions:

1. Does college student age influence alcohol consumption?

2. Does having a job influence college student's alcohol consumption?

3. Does college student's alcohol consumption impact student overall GPA?

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Participants:

Data in this study was collected from college students from different majors of study. The participants of this study were undergraduate students at a university campus in the United States. Participants included both traditional and non-traditional students. Convenient stratified sample was used in this study as participants were individuals that were from selected classrooms. There were other participants recruited in college as long as they were students during the time of data collection.

Materials:

Three different surveys were used to collect data for this study. The surveys consisted of 10 items on demographic questions that focused on age, sex and biological relationship. The College Student GPA Survey with 8 items that measured student's grade point average, academic motivation and hours spent studying. The Alcohol Consumption questionnaire consisted of an 18-item instrument that helped to measure the participant's alcohol intake. The purpose of the questionnaire is to find out the reality of alcohol consumption among college students.

Procedure:

The collection of the data for this study was a convenient and stratified sample. The sample was convenient as participants responded during usual class time and stratified as the investigator identified various classes in the campus to respond to the surveys. The investigator contacted professors of their choice by e-mail, asking for permission to pass out surveys during their class time. The survey was attached to each e-mail so that the professors were able to see what the survey was about before they agreed to let the investigators pass out the survey in their class. The surveys were then taken to the instructor's classrooms who agreed for data collection. Once in the classrooms, the consent letters and the surveys were handed out to the class and they were given about 15 minutes to complete the survey and return it to the investigators. The surveys were then individually entered into SPSS after every survey was collected.

4. RESULTS

RQ1 – Does college student age influence alcohol consumption?

Table 1

	N	Mean	Std. Deviation	df	Mean Square	F	Sig.
Young	82	25.256	9.3146	1	366.739		
Old	68	28.397	9.9238	148	92.067	3.983	.048
Total	150	26.680	9.6907	149			

One-way ANOVA comparing Alcohol Consumption as the dependent variable against Young and Old students as a factor showed a significant difference on alcohol consumption among the two groups. A significant finding was made with $(F_{(1,148)} = 3.983, p<.05)$. Tukey's HSD was used to determine the nature of the difference between Young and Old Age students. Young students drink less (M = 25.26, sd = 9.31) than the older students (M = 28.40, sd = 9.92)

RQ2 – Does having a job influence college student's alcohol consumption?

Table 2

	N	Mean	Std. Deviation	df	Mean Square	F	Sig.
Employed	113	27.8319	9.34068	1	607.808	6.721	.010
Unemployed	37	23.1622	10.01808	148	90.438		
Total	150	26.6800	9.69073	149			

One-way ANOVA comparing Alcohol Consumption as the dependent and employed and unemployed as a factor was carried out. A significant difference was found with $(F_{(1,148)} = 6.721, p < .05)$. Tukey's HSD was used to determine the

nature of employed and unemployed. Students who are unemployed consumer less alcohol (M =23.16, sd = 10.02) than students who are employed (M = 27.83, sd = 9.34).

RQ3 – Does college student's alcohol consumption impact student GPA?

Table 3

	N	Mean	Std. Deviation	df	Mean Square	F	Sig.
Low GPA	94	28.3298	9.61226	1	685.310	7.622	.006
High GPA	56	23.9107	9.25846	148	89.914		
Total	150	26.6800	9.69073	149			

One-way ANOVA comparing Alcohol Consumption as the dependent variable and High GPA and Low GPA as factor was carried out. A significant difference was found between these two factors ($F(1,148) = 7.622$, $p > .05$). Tukey's HSD was used to determine the nature of the difference between the two variables. Students with a high grade point average GPA consumed less alcohol (M = 23.91, sd = 9.26) than students with a low grade point average (M = 28.33, sd = 9.61).

5. DISCUSSION

One-way ANOVA showed that there is a statistical difference in the relationship between the Alcohol Consumption and Young and Old students. The study by Thombs et al. (2009) focused on first- and second-year students and their likelihood to be drinkers. The study found that high levels of evening intoxication would predict lower academic performance in first- and second-year undergraduates. Results from a study by Pascarella et al. (2007) determined that, on average, 53.9% of first-year students are at risk for lower semester GPAs than their respective peers.

The research showed that there is a statistical difference between alcohol consumption and those employed and unemployed. A study by Porter & Pryor (2007) examined the connection between alcohol use and student life outside of college. The study's results students who were employed had less time to study, complete homework and prepare for exams, which reflected in their overall GPA, while the students who were unemployed had more time to do those things. Students who were employed felt more stress than the unemployed and felt as if they did not have enough time to complete their assignment because they were physically and psychologically exhausted.

The study showed that there is also significance when it comes to the Alcohol Consumption and Low and High GPA. Those students with high GPA consume less alcohol. The study conducted by Savrock (2009) stated that college students who engage in binge drinking tend to earn lower grades than students who do not abuse alcohol. Students who abused alcohol more frequently had lower overall GPA's. In another study by Pascarella et al. (2007) also determined the evidence suggesting that excessive alcohol consumption has a negative net influence on student academic performance in college. The results of this study supported that excessive alcohol consumption has negative implications for academic performance for college students.

6. CONCLUSION

Both age and employment have influence college students alcohol consumption and a college student's overall grade point average. There is no significant difference between females and males with their alcohol consumption, but there is a large difference between age of students and their alcohol consumption. Students who are employed tend to feel more stressed than students who are unemployed, and therefore drink more often. In general, students who tend to engage in alcohol consumption have a lower overall grade point average than those students who do not engage in the consumption of alcohol.

REFERENCES

[1] Anderson, & Gadaleto. (2001). *Results of the 2000 College Alcohol Survey: Comparison with 1997 results and baseline year*. Fairfax, VA: Center for the Advancement of Public Health, George Mason University.

[2] Balodis I.M., Potenza M.N., & Olmstead M.C. (2009). Binge drinking in undergraduates: relationships with sex, drinking behaviors, impulsivity, and the perceived effects of alcohol. *Behavioral Pharmocology, 5-6,* 518-526.

[3] De Haan, L., Egberts, A. C. G., & Heerdink, E. R. (2015). The relation between risk-taking behavior and alcohol use in young adults is different for men and women. *Drug and Alcohol Dependence*, 155, 222–227. doi:10.1016/j.drugalcdep.2015.07.013

[4] Eastman, P. (2002). Toll of Binge Drinking Far More Destructive than Realized. *Emergency Medicine News, 24*(6), 48. doi:10.1097/01.eem.0000334153.38128.fd

[5] Hingson, R., Heeren, T., Winter, M., & Wechsler, H. (2005). Magnitude of alcohol-related mortality and morbidity among U.S college students ages 18-24: Changes from 1998 to 2001. *Annual Review of Public Health, 26*(1), 259–279.

[6] Hingson, R. W., Heeren, T., Zakocs, R. C., Kopstein, A., & Wechsler, H. (2002). Magnitude of alcohol-related mortality and morbidity among U.S. college students ages 18-24. *Journal of Studies on Alcohol, 63*(2), 136–144. doi:10.15288/jsa.2002.63.136

[7] Parada, M. Corral, M. Caamano-Isorna F., Mota, N., Crego A. Hollguin, S. R. & Cadaveira, F. (2011). Binge drinking and declarative memory in university students. *Alcoholism: Clinical and Experimental Research, 35,* 1475-1484.

[8] Pascarella, E.T., Goodman K. M., Seifert T.A., Tagliapietra-Nicoli, G., Park, S. Whitt, E. J. (2007). College student binge drinking and academic achievement: a longitudinal replication and extension. *Research in Brief, 48-6,* 715-727.

[9] Porter, S.R. & Pryor, J. (2007) The effects of heavy episodic alcohol use one students engagement, academic performance, and time use. *Journal of College Student Development 48-4,* 455-467.

[10] Powell, L. M., Williams, J., & Wechsler, H. (2004). Study habits and the level of alcohol use among college students. *Education Economics, 12*, 135-149.

[11] Powers, L. (2014). Effect of alcohol consumption on college student's academic performance. *Kinesiology and Health.* 192-198

[12] Savrock, J. (2009). Study: Inverse relationship between alcohol abuse and college GPA. *Penn State College of Education. News and Publications.*

[13] Thombs, D.L., Olds, R.S., Bondy, S.J., Winchell J., Baliunas, D., Rehm, J. (2009)

[14] Undergraduate drinking and academic performance: a prospective investigation with objective measures. *J Stud Alcohol Drugs, 70-5,* 776-785

[15] Townshend, J., & duka, t. (2005). Binge drinking, cognitive performance, and mood in a population of young social drinkers. *Alcoholism: Clinical & Experimental Research, 29 -3,* 317-325.

[16] Wechsler, H., Dowdall, G., Maenner, G., Gledhill-Hoyt, J., Hang, L. (1998). Changes in Binge

[17] Drinking and Related Problems among American College Students Between 1993 and 1997: Results of the Harvard School of Public Health College Alcohol Survey. *Journal of American College Health, 47(2),* 57-68.

[18] Weitzman, E., Nelson, T., & Wechsler, H. (2003). Taking up binge drinking in college: the influences of person, social group, and environment. *Journal of Adolescent Health, 32*(1), 26–35. doi:10.1016/s1054-139x(02)00457-3

[19] Winograd, R. P., & Sher, K. J. (2015). *Binge drinking and alcohol misuse among college students and young adults.* Boston, MA: Hogrefe Publishing. doi:10.1027/00403-000