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Abstract

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# The Effect of Alcohol Consumption on the Academic Performance of Undergraduate Students

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**Abstract:** Most people know that academic performance generally refers to how well accomplishing his or her tasks and studies, but there are numbers of factors that determine quality of students' academic performance. This study investigated the effect of alcohol consumption on the academic performance of undergraduate students. A survey research design was used. A pilot study was carried out with 30 students to validate and determine the psychometric properties of the questionnaire used in this study. Total of 200 respondents, 114 male and 86 females with ages ranging between 18-30 years participated in this study. Three hypotheses were tested using Pearson r, T-test, Anova, and regression analysis. The result revealed that there is a significant relationship between alcohol consumption and academic performance of undergraduate students.

and academic performance ( $R^2=0.74, P<.05$ ), there is a significant difference in academic performance of students that drink alcohol and those that do not ( $R^2=12.22, P<.05$ ), there is a significant effect of alcohol consumption on academic performance ( $R^2=4.474, P<.05$ ). The study has the following recommendations.

**Keywords:** Alcohol, Consumption, Academics, Performance, Undergraduates

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## **1. Introduction**

In educational institutions, success is measured by academic performance, or how well a student meets a standard set out by the institution. As career competition grows ever fiercer in the working world, the performance of students doing well in school has caught the attention of parents, and employers. Education is the road to success in the working world, much effort is made to identify, evaluate, track and measure the progress of students in schools. Parents care about their child's academic performance because that good academic results will provide more career choices and job security. Performance is evaluated in a number of ways. For regular grading, students demonstrate their knowledge by tests and oral tests, performing presentations, turning in home work and participating in class discussions. Academic achievement or (academic) performance is the outcome of education in which a student, teacher or institution has achieved their educational goal. Academic performance is commonly measured by examinations or continuous assessment but there is no general agreement on

best tested or which aspects are most important — procedural knowledge such as skills or declarative knowledge such as facts. (majkut@fas.harvard.edu). Students' academic gain and learning performance is influenced by numerous factors including gender, age, teaching faculty, students' schooling, father/guardian social status, what they consume, residential area of students, medium of instructions in schools, daily study hour and accommodation as hostels or day scholars. Many researchers conduct studies about the factors contributing to students' performance at different study levels. Gagnepain suggested that a student's educational success is contingent heavily on the social status of students and their guardians in the society. Considine and Zappala (2002) noticed the same that parents' income status positively affects the student test score in examination. According to Minnesota (2007) education performance is depending upon the academic performance of graduate students. Duval quoted Staffolani and Bratti, (2002) observed that "the measurement of students' previous academic outcomes are the most important indicators of students' future achievement, this refers that students' previous performance is, better and will predict the student's academic performance in future. Several studies have been conducted in the area of students' achievement and these studies identified a number of factors that affect the academic performance of the student at school, college and university level. Their findings identified students' effort, previous schooling, parents' background, family income, self-motivation of students, age of student, learning preferences and the qualification of students as important factors that have an effect on students' academic performance in any setting. The utility of these studies lies in the need to undertake corrective measures that improve the academic performance of undergraduate students. It is generally assumed that the students who perform better or higher performance in the starting classes of their studies also performed better in full years at degree level. Everyone can be surprised with this assumption if it could be proved. From the last two decades it has been noticed significantly that there is great addition in research and review material relating to indicators of academic achievement with much emphasis on whether traditional achievement measures of academic performance are the best determinants of academic gain at university or higher level or innovative measures. However, it is also observed that the researchers do not agree with this view point or statement. Reddy and Talcott (2006) doubt these assumptions that future academic gains are resolute by preceding performance. In their study on the relationship between previous academic performance and subsequent achievement at university level they found that students learning or studying at graduate level and the score secured did not predict academic achievement at university level. They also cited Pearson and Johnson (1978) who observed a weak whole grade association of only 0.28 between graduate level marks and university degree achievement. Parents' socio-economic condition, which includes parents' academic and professional background, revenue and occupational affiliation, is also associated with academic gain of students. The research studies confirmed that academic achievement of students is contingent upon parents' socio-economic condition. So the students belonging to higher socioeconomic backgrounds will perform better than students associated with low socioeconomic backgrounds. "Social and economical status is generally determined by combining parents' qualification, occupation and income standing." (Joshi, 2008)

Among many research studies conducted on academic achievement, it is not very surprising that Socio-economic status is one of the main elements studied while predicting academic performance. Graetz (1995) conducted a study on socio-economic status of the parents of students and concluded that economic background has a great impact on student's academic performance, main source of imbalance among students and student's academic success contingent very strongly on socioeconomic standard. Considine and Zappala (2002) also having the same views as Graetz (1995) in their study on the influence of social and economic disadvantage in the academic performance of students. It is noticed, where the parents or guardians have social, educational and economical advantages, they strengthen the higher level success in future. But it is also noted that these parents make available psychological and emotional support to their children by providing good educational environment that produce confidence and the improvement of skills needed for success. Olayinka and Pedrosa et.al (2006) in their study on social and educational background pointed out that students mostly came from deprived socio-economic and educational background performed relatively lower than others coming from higher socio-economic and educational area. They named this phenomenon as socioeconomic elasticity. It is obvious and true that the criteria for categorizing socio-economic standards in different countries are different depending of their norms and values. The criteria for low socioeconomic standards in a developed country will be different from the criteria of developing nations and same will be different in developing and under developing countries. "The total income of families, monthly or annual expenditures also put a great effect on the learning and academic opportunities accessible to young people and their chances of educational success. Furthermore, he also pointed that due to residential stratification and segregation, the students belonging to low-income backgrounds usually attend schools with lower academic levels, and this situation reduced achievement motivation of the students and high risk of academic malfunction in future life endeavors" (Escarce, 2003).

Alcohol is a colorless, volatile, flammable liquid which is the intoxicating constituent of wine, beer, and other drinks. Alcohol is no ordinary commodity but a drug that can be depended upon (Gureje et al, 2004). Production and consumption of alcohol in the modern Nigeria is on the increase and the volume is largely unrecorded due to illegal and local productions and the paucity of data on the legality of production (Odeyemi & Mayowa 2011). World health organization (2004) ranked Nigeria among the thirty nations with highest per capita consumption of alcohol worldwide. The new drinking norms that have evolved have led to competitions among youths. Bar owners, brewery's representatives set out prizes for the fastest drinking and the winner is judged based on the quantity consumed (Odejide et al, 1987, 1999, 2006). In Nigeria, there are many traditional drinks like star trek, gulder ultimate search and a host of others. In the universities there is a group known as 'Koror' club which uses palm wine as holy water. There can be lingering cognitive deficits up to 48 hours after a night of drinking. Heavy drinking by students can lead to positive blood alcohol levels the next day, whether or not they even get up for class and, if they do, the quality of how information is processed and ultimately stored. Sleeping off after a buzz is a common practice, it can interfere with the learning process resulting in an increase in anxiety, jumpiness, and irritability the next day, and fatigue the day after. Although most people take for granted that alcohol impairs memory of events that occur during the night,

alcohol consumption has further-reaching effects on memory and learning ability", a Duke University study suggests, "intoxication is produced by temporary impairment of brain receptors key in creating memories in the hippocampus", said Jeff Georgi, a coordinator at the school's Alcohol and Drug Program. "If you study for four hours...then go drinking, it affects this anchoring process," he said in the *Chronicle*. Alcohol also disrupts sleep, which interferes with long-term memory formation. In a study of young adults, it seems that younger adults seem to have more trouble than older adults learning while drinking, the study suggests. In a study where subjects drank two drinks in one hour, subjects aged 21 to 24 fared worse on a test of verbal memory than subjects aged 25 to 29. In some cases the linkage between problem drinking and academic performance is profound. Drinking can affect the biological development of young people as well as school-related achievement and behavior. Serious alcohol use among youth has significant consequences. Alcohol damages areas of the brain responsible for learning and memory, verbal ability, and visual-spatial cognition. Diagnosticians often find that these skills in adolescents who drink are lower than those who aren't drinking. Scientists know that alcohol problems are tied to lower academic achievement, lower attendance and increases dropout rates. According to Fleming (1992) youths use alcohol to help them cope with academic stress, negative emotions and make them feel better. Students that use alcohol as a coping mechanism tend to indulge more always in the use of alcohol. They often of the time apply defence mechanism by engaging in denial and rationalization. Almost one third of students admit to having missed a class, and failing a test/project because of alcohol (school and drug use). According to FACTS ON TAP, an organization that specializes in educating college students about the dangers of alcohol consumption, "159,000" of first year undergraduates drop out of school as a result of alcohol and other related drugs.

## 2. Statement of Problem

If you take a closer look at what qualities it takes to have an excellent academic performance, you will find that these are the qualities required to be successful in life, because to have a good academic performance you have to be consistent, determined, focused, then you can have a good academic performance. Success on its own comes with lots of meanings and it varies across individuals, however one's definition of success determines how he dreams and works towards achieving it, nevertheless academic success is the primary and the major step one will likely take to reach, because it is when one is educated and has a degree that one will work in a company to earn some level of happiness and financial stability which in some definition is already a success. However, how one defines success, having a good academic performance will be a boost in achieving it rather than not being educated. Alcohol consumption by students in the university has become unbearable. Alcohol poses danger to health but its negative effect on academic performance. Once in the university, the peer group has a strong influence on the students' involvement with alcohol. Students instead of focusing on academic activity spend their precious time in social activity (alcohol). This leads to class absenteeism, tests, rape, unwanted pregnancies, vandalism, drunk driving and other types of crimes.

## 3. Hypotheses of the Study

- There will be a significant positive relationship between alcohol consumption and academic performance.
- There will be a significant difference in academic performance between users and non users
- There will be a significant effect of alcohol consumption on academic performance.

#### **4. Method Design**

This study which examined the effect of alcohol on academic performance adopted a survey research design. The independent variable is alcohol consumption while the dependent variable is academic performance.

##### **4.1. Setting**

The study took place in Delta State University (DELSU), Delta State Nigeria. This is a conventional university where students have their independence (freedom). Some live in the hostel while others reside with their parents.

##### **4.2. Participants**

The participants were two hundred undergraduate students of Delta State University (DELSU) ranging from 15 to 29 years. There were 114 (57%) males and 86 (43%) females.

##### **4.3. Sampling Technique**

The purposeful sampling method was used to select the participants because of the nature of the study which entails administering questionnaires to undergraduates that indulges in alcohol and those that do not.

##### **4.4. Instrument**

A structured questionnaire developed by the researcher (Cronbach Alpha coefficient of 0.78 consistency of 0.86) was used to tap relevant information from the participants of the questionnaire consists of different sections with each of the sections collecting information on the following areas of interest. It comprised A, B, and C. The structure of the questionnaire is outlined below.

##### **4.5. Section A**

In this section of the questionnaire, demographic information of the participants was captured including age to their department and level of their study.

##### **4.6. Section B**

This instrument measured the drinking behavior, the quantity and type consumed by the participants.

##### **4.7. Section C**

This instrument measured the academic life and performance (CGPA) of the participants.

##### **4.8. Procedure for Data Collection**

The researcher randomly selected two hundred undergraduate students of Delta State University.

Delta state, Nigeria using simple random selection. The respondents cut across age, sex, de level of study. The criteria for inclusion were; must be an undergraduate student of Delta Sta and will be below thirty years of age. The respondents were approached, having acquainted researcher’s intention. The respondents consent was duly sought by asking them wheth participate in the study and signing the consent form. Those who responded in the affirmative p the study, while also at the same time requesting them to pick one ballot paper from the basket them. Those who picked ‘Yes’ written on the card were drawn into the study while those that pic excluded from the study. This procedure ensured that every participant was given equal c participating in the study. Prior to given the questionnaires to them to fill, the researcher in on how they were expected to respond to the statements in the questionnaire (i.e., they should in each statement and that the questionnaire should be filled completely as half filled questionn rendered invalid). Additionally, the participants in the main study were informed that their c was guaranteed and therefore, they should not write their names on the questionnaires. They v albeit individually to mention any areas in the questionnaire they did not comprehend. They the questionnaire was written in unambiguous language and therefore, they could respond to th in the questionnaire almost effortlessly on their own.

## 5. Statistical Analysis

Data generated in this study was analyzed using simple regression analysis, Pearson r, indepe and Anova.

### 5.1. Result

This chapter discusses the analyses and presentation of results. For all the hypotheses tested level of significance is 0.05. As stated in chapter three, the independent variable is alcohol con the dependent variable is academic performance.

**Table 1.** (Level of the participants).

Level	Frequency	Percent	Valid percent	Cumulative p
100	24	12	12	12
200	28	14	14	26
300	82	41	41	67
400	42	21	21	88
500	24	12	12	100
Total	200	100	100	

24 participants (12%) were 100 level students, 28 participants (14%) were 200 level participants (41%) were 300 level students, 42 participants (21%) were 400 level students, 2 (12%) were 500 level students.

**Table 2.** (CGPA of the participants).

CGPA	Frequency	Percent	Valid percent	Cumulati
1.00-2.49	56	28	28	
2.50-3.49	94	47	47	
3.50-4.49	24	12	12	
4.50-5.00	26	13	13	1
Total	200	100	100	

56 participants (28%) have CGPA of 1.00-2.49, 94 participants (47%) have CGPA of 2.50-3.49, 24 participants (12%) have CGPA of 3.50-4.49 and 26 participants (13%) have CGPA of 4.50-5.00.

**Table 3.** (Alcohol).

Alcohol	Frequency	Percent	Valid percent	Cumulati
consumers	170	85	85	
Non consumers	30	15	15	
Total	200	100	100	

170 participants (85%) consume alcohol while 30 participants (15%) do not.

**Table 4.** (Etiology of alcohol consumption behavior).

Source	Frequency	Percent	Valid percent	Cumulati
parents	34	20	20	
peers	100	59	59	
self	36	21	21	1
total	100	100	100	

34 participants (20%) were influenced by their parents, 100 participants (59%) were influenced by their peers while 36 participants (21%) were influenced by nobody.

**Table 5.** (Quantity consumed in a sitting).

No of bottles	frequency	Percent	Valid percent	Cumulati
1-2	10	6	6	
3-6	110	65	65	
7 and above	50	29	29	1
Total	170	100	100	

10 participants (6%) consumes between 1-2 bottles once, 110 (65%) participants consumes 3-6 bottles once while 50 participants (29%) consumes 7 bottles and above once.



**Table 6.** (Missed class or failed test as a result of hang over).

Missed class/failed test	Frequency	Percent	Valid percent	Cumulat
Yes	112	66	66	
No	58	34	34	
Total	170	100	100	

112 participants (66%) missed class/failed test due to hang over while 58 (34%) denied missin test due to hang over.

**Table 7.** (Ever been sanctioned in school/home as a result of alcohol use).

Sanctioned	Frequency	Percent	Valid percent	Cumula
Yes	158	93	93	
No	12	7	7	
Total	170	100	100	

158 (93%) participants have been sanctioned for the use of alcohol while 12 (7%) participant have been sanctioned. This is of a grave consequence.

## 5.2. Hypotheses Testing

Hypothesis one states that there will be a significant relationship between alcohol consumption performance.

**Table 8.** (Summary of correlation coefficient).

Variation	N	DF	Mean	SD	R observed
Alcohol use	200		22.26	4.29	
Academic performance	200	199	5.64	6.08	0.74*

The result confirmed the hypothesis that there is a significant relationship between alcohol use performance, ( $R^2=0.74, P<.05$ )

Hypothesis two states that there will be a significant difference in academic performance between non users of alcohol.

**Table 9.** (Summary of independent t test).

Variations	N	DF	Mean	SD	T observed
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Student alcohol users	170		2.18	1.29	
Students alcohol non users	30	198	3.64	0.08	12.22*

The result confirms that there is a significant difference in academic performance of student alcohol and those that do not ( $R^2=12.22, P<.05$ ),

Hypothesis three states that there will be a significant effect of alcohol consumption on academic performance.

**Table 10.** (Regression summary).

Model	R	R square	Adjusted R square	Std. Error of the Estimate
1	.691	.477	.448	4.474

47.7% of the variation in the academic performance could be accounted for by alcohol consumption. 52.3% represents alcohol consumption measurement error in alcohol consumption and other factors that influence academic performance that were not considered.

**Table 11.** (Alcohol consumption and academic performance variance).

Model	source	Sum of squares	DF	Mean square	F
1	Regression	16.686	1	16.686	4.474
	Residual	792.071	199	3.729	
	Total	758.757	200		

The result confirms that there is a significant effect of alcohol consumption on academic performance ( $R=.691, R^2=4.474, P<.05$ ). The study has recommendations and limitations.

## 6. Discussion and Conclusion

All the hypotheses that were tested in this study were confirmed. It is evident that alcohol influences the academic performance of the consumer (Engs et al., 1996; Perkins, 1992; Perkins 1996a,b; Wechsler et al., 1994, 1998, 2000b). Undergraduates in the universities are no more under the guidance of their parents and they are free to do whatever they choose. This is evident as undergraduates run mad at the course of their academic sojourn and some even suffer memory loss finding it hard to graduate as their academic performance is always below pass mark (Wechsler 2000b). Some as a result of their background associate with peers that will end up destroying themselves with alcohol because they want to belong among the big boys on campus. This is a serious issue as those who are regarded as future leaders are destroying themselves with alcohol, then how will they perform in the future?

Alcohol-related sexual assault is a common occurrence on college campuses. Although estimates of incidence and prevalence vary dramatically because different sources use different definitions, at least 50 percent of student sexual assaults are associated with alcohol use (Abbey, 1991, 2002; Abbey et al., 1991; Copenhaver and Grauerholz, 1991; Harrington and Leitenberg, 1994; Koss, 1992; Koss et al., 1987; Muehlenhard and Linton, 1987; Presley et al., 1997; Tyler et al., 1998). If alcohol is involved, acts meeting the legal definition of rape appear more likely to occur (Lewinsohn et al., 1999). Even aside from academic performance when undergraduates misuse alcohol, damage to the environment or residence hall—including vomit and litter—are common after effects. (Engs et al., 1994)

#### Recommendation

- There will be a continuous awareness program on the dangers of alcohol consumption on academic performance for undergraduates starting from freshmen to those in their final year.
- Promotional sales by alcohol companies will be prohibited in the higher institutions.
- Drinking joints and bars will not be allowed to operate within or around universities.
- Self-esteem training will be carried out periodically, to let the undergraduates understand that it is not a self-esteem booster.
- There will be a periodic alcohol level screening in the universities and a stiff penalty for those who are caught wanting so as to deter others.

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