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 academic performance of undergraduate students. A survey research design was used. A pilot study carried out with 30 students to validate and determine the psychometric properties of the questionnaires used in this study. Total of 200 respondents, 114 male and 86 females with ages ranging between 17 to 25 years participated in this study. Three hypotheses were tested using Pearson r, T-test, and ANOVA regression analysis. The result revealed that there is a significant relationship between...
and academic performance \( R^2 = 0.74, P < .05 \), there is a significant difference in academic performance between 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 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 the standard set out by the institution. As career competition grows ever fiercer in the working world, the achievement 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 evaluate the progress of students in schools. Parents care about their child's academic performance because 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 taking tests, performing presentations, turning in homework, 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 achievement 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 involve numerous factors including gender, age, teaching faculty, students' schooling, father/guardian's socioeconomic status, what they consume, residential area of students, medium of instructions in schools, daily study hour and accommodation as hostels or day scholar. Many researchers conducted studies about the factors contributing to students' performance at different study levels. C. suggested that a student's educational success is contingent heavily on social status of students in the society. Considine and Zappala (2002) noticed the same that parent's income status positively affects the student's test score in examination. According to Minnesota (2007), education performance is depending upon the academic performance of graduate students. Dui quoted Staffolani and Bratti, (2002) observed that "the measurement of students previous outcomes are the most important indicators of students future achievement, this refers that previous performance is, better and will predict the student's academic performance in future. have been conducted in the area of students' achievement and these studies identified and number of factors that affect the academic performance of the student at school, college, university level. Their findings identified students' effort, previous schooling, parent's background, family income, self-motivation of students, age of student, learning preferences, qualification of students as important factors that have effect on student's academic performance setting. The utility of these studies lies in the need to undertake corrective measures that academic performance of undergraduate students. It is generally assumed that the students 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 best determinant academic gain at university or higher level or innovative measures. However, it is also observed that the researchers do not agree with this viewpoint or statement. Reddy and Talcott (2006) described these assumptions that future academic gains are resolute by preceding performance. In their relationship between previous academic performance and subsequent achievement at undergraduate level, they found that students learning or studying at graduate level and the score secured did not academic achievement at university level. They also cited Pearson and Johnson (1978) who observed the whole grade association of only 0.28 graduate level marks and university degree achieved. Parent's socio-economic condition, which includes parents' academic and professional revenue and occupational affiliation, is also associated with academic gain of students. The researchers confirmed that academic achievement of students is contingent upon parent's socioeconomic 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 stand."


Among many research studies conducted on academic achievement, it is not very surprising to 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 economic standard. Considine and Zappala (2002) also having the same views as Graetz (1995) study on the influence of social and economic disadvantage in the academic performance of students noticed, where the parents or guardians have social, educational and economical advantages strengthen the higher level success in future. But it is also noted that these parents make available psychological and emotional shore up to their children by providing good educational environment that produce confidence and the improvement of skills needed for success. O Pedrosa et.al (2006) in their study on social and educational background pointed out those mostly came from deprived socio-economic and educational background performed relatively others coming from higher socio-economic and educational area. They named this phenomenon elasticity. It is obvious and true that the criteria for categorizing socio-economic standards countries are different depending of their norms and values. The criteria for low socio-economic developed country will be different from the criteria of developing nations and same will be 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 your chances of educational success. Furthermore, he also pointed that due to residential segregation, the students belonging to low-income backgrounds usually attend schools with lower levels, and this situation reduced achievement motivation of the students and high risk of 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. Gurej (2003) Production and consumption of alcohol in the modern Nigeria is on the increase and the vol1 unrecorded due to illegal and local productions and the paucity of data on the legality of produc & 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 competitions among youths. Bar owners, brewery's representatives set out prizes for the fastest the winner is judged based on the quantity consumed (Odejide et al, 1987, 1999, 2006). In Nigeria, guilder ultimate search and a host of others. In the universities there is a group known 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 ultimately stored. Sleeping off after a buzz is a common practice, it can interfere with the resulting in an increase in anxiety, jumpiness, and irritability the next day, and fatigue the d
alcohol consumption has further-reaching effects on memory and learning ability", a Duke Un
suggests, "intoxication is produced by temporary impairment of brain receptors key in creat
memories in the hippocampus", said Jeff Georgi, a coordinator at the school's Alcohol ai
Program. "If you study for four hours...then go drinking, it affects this anchoring process," h
Chronicle. Alcohol also disrupts sleep, which interferes with long-term memory formation. In ac
adults seem to have more trouble than older adults learning while drinking, the study suggest
subjects drank two drinks in one hour, subjects aged 21 to 24 fared worse on a test of vert
memory than subjects aged 25 to 29. In some cases the linkage between problem drinking
performance is profound. Drinking can affect the biological development of young people 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, ver
visual-spatial cognition. Diagnosticians often find that these skills in adolescents who drink ar
comparison to those who aren't drinking. Scientists know that alcohol problems are tied to lower
attendance and increases dropout rates. According to Fleming (1992) youths (undergraduate
alcohol use to help them cope with academic stress, negative emotions and make them
Students that use alcohol as a coping mechanism tend to indulge more always in the use of alc
of the time apply defence mechanism by engaging in denial and rationalization. Almost one tr
students admit to having missed a class, and failing a test/project because of alcohol (school
According to FACTS ON TAP, an organization that specializes in educating college students abou
of alcohol consumption, "159,000" of first year undergraduates drops out of school as a result of
other related drugs.

2. Statement of Problem

If you take a closer look at what qualities it takes to have an excellent academic performance,
that this are the qualities required to be successful in life, because to have a good academic per
have to be consistent, determined, focused, then you can have a good academic performar
performance reflects your abilities. Success on its own comes with lots of meanings and th
varies across individuals, however one's definition of success determines how he dreams and v
achieving it, nevertheless academic success is the primary and the major step one will likel
race, because it is when are educated and have a degree that you will work in a company ti
some level of happiness and financial stability which in some definition is already a success.
how one defines success, having a good academic performance will be a boost in achieving it ra
been 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 ur
group has a strong influence on the students' involvement with alcohol. Students instead o
academic activity spend their precious time in social activity (alcohol). This leads to class mis
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 in the community.

4.2. Participants

The participants were two hundred undergraduate students of Delta State University (DELSU). The sample size ranges 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. It entails administering questionnaires to undergraduates that indulge in alcohol and those that do not.

4.4. Instrument

A structured questionnaire developed by the researcher (Cronbach Alpha coefficient of 0.78 and consistency of 0.86) was used to tap relevant information from the participants. The questionnaire consists of different sections with each of the sections collecting information on different aspects 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 their age, department, and level of 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 to participate in the study.
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 St; 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 whether participate in the study and signing the consent form. Those who responded in the affirmative to the study, while also at the same time requesting them to pick one ballot paper from the basket. Those who picked 'Yes' written on the card were drawn into the study while those that picked excluded from the study. This procedure ensured that every participant was given equal opportunity to participate in the study. Prior to given the questionnaires to them to fill, the researcher instructed them on how they were expected to respond to the statements in the questionnaire (i.e., they should fill in each statement and that the questionnaire should be filled completely as half filled questionnaire rendered invalid). Additionally, the participants in the main study were informed that their response was guaranteed and therefore, they should not write their names on the questionnaires. They were also told to mention any areas in the questionnaire they did not comprehend. They were told that the questionnaire was written in unambiguous language and therefore, they could respond to the statements in the questionnaire almost effortlessly on their own.

5. Statistical Analysis

Data generated in this study was analyzed using simple regression analysis, Pearson r, independent samples t-test, and Anova.

5.1. Results

This chapter discusses the analyses and presentation of results. For all the hypotheses tested, the level of significance is 0.05. As stated in chapter three, the independent variable is alcohol consumption and 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 students. 82 participants (41%) were 300 level students, 42 participants (21%) were 400 level students, 24 (12%) were 500 level students.

Table 2. (CGPA of the participants).
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| CGPA     | Frequency | Percent | Valid percent | Cumulative |
|----------|-----------|---------|---------------|------------|
| 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            |            |
| 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.

| Alcohol     | Frequency | Percent | Valid percent | Cumulative |
|-------------|-----------|---------|---------------|------------|
| consumers   | 170       | 85      | 85            |            |
| Non consumers | 30       | 15      | 15            |            |
| Total       | 200       | 100     | 100           |            |

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

| Source   | Frequency | Percent | Valid percent | Cumulative |
|----------|-----------|---------|---------------|------------|
| parents  | 34        | 20      | 20            |            |
| peers    | 100       | 59      | 59            |            |
| self     | 36        | 21      | 21            |            |
| total    | 100       | 100     | 100           |            |

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

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

10 participants (6%) consumes between 1-2 bottles once, 110 (65%) participants consumes 3-6 while 50 participants (29%) consumes 7 bottles and above once.
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| 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 missing test due to hang over.

| Table 7. (Ever been sanctioned in school/home as a result of alcohol use). |
|---------------------|-------------|--------|---------|-------------|
| Sanctioned          | Frequency | Percent | Valid percent | Cumulat |
| 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%) participants 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 and academic performance.

| Table 8. (Summary of correlation coefficient). |
|---------------------|-------------|--------|---------|-------------|
| Variation            | N          | DF     | Mean    | SD        | R observed |
| Alcohol use          | 200        |        | 22.26   | 4.29      | 0.74*      |
| Academic performance | 200        | 199    | 5.64    | 6.08      |            |

The result confirmed the hypothesis that there is a significant relationship between alcohol use and academic performance, \( R^2 = 0.74, P < 0.05 \)

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  | 3.64 | 0.08 |

The result confirms that there is a significant difference in academic performance of students who consume 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 performance.

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

| Model | $R$  | $R$ square | Adjusted $R$ square | Std. Error estimation |
|-------|------|------------|---------------------|----------------------|
| 1     | .691 | .477       | .448                | 4.47                 |

47.7% of the variation in the academic performance could be accounted for by alcohol consumption, and $52.3\%$ 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 consumption influences the academic performance of the consumer (Engs et al., 1996; Perkins, 1992; F 1996a,b; Wechsler et al., 1994, 1998, 2000b). Undergraduates in the universities are no longer guided by their parents and 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 are a result of their background associates 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 and should be addressed. Undergraduates who are regarded as future leaders are destroying themselves with alcohol, then how will they lead others?
Alcohol-related sexual assault is a common occurrence on college campuses. Although estimated incidence and prevalence vary dramatically because different sources use different definitions, victims are unwilling to report sexual assaults to the police or other authorities, at least 50 percent of student sexual assaults are associated with alcohol use (Abbey, 1991, 2002; Abbey et al., Copenhaver and Grauerholz, 1991; Harrington and Leitenberg, 1994; Koss, 1992; Koss et al., and Marshall, 1987; Muehlenhard and Linton, 1987; Presley et al., 1997; Tyler et al., 1998). If there is alcohol involved, acts meeting the legal definition of rape appear more likely to occur (l 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 1994)

Recommendation

- There will be a continuous awareness program on the dangers of alcohol consumption on 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 it is not a self esteem booster.
- There will be a periodic alcohol level screening in the universities and a stiff penalty for wanting so as to deter others.

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