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Effects of Drug Abuse on Academic Performance Among Undergraduate Students in Federal University Wukari, Taraba State

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Abstract

This paper conducted a questionnaire survey at the Federal University of Wukari on the effects of drug abuse on academic performance among undergraduate students. The study aimed to investigate the effects of drug abuse on academic performance among undergraduate students. Descriptive statistics and an independent two-sample t-test were used for the data analysis. The results revealed significant differences in academic performance between drug abuse and non-drug abuse groups, with nicotine emerging as the most commonly abused drug among the surveyed students. The findings of this study highlight the need for attention to substance abuse issues among undergraduate students. While drug abuse was prevalent, its direct impact on academic performance appeared to be nuanced. The study therefore recommends the need to implement targeted substance abuse prevention programs tailored to the specific needs and challenges faced by undergraduate students.

Keywords: Drugs, Abuse, Performance, Effect, Undergraduate Students

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INTRODUCTION

Historically, herbs, leaves and plants are forms of drugs that are used to heal and control diseases. Plants have been utilized as medicines for since creation. The specific plants to be used and the methods of application for particular ailments were passed down through oral history from one generation to the other (Okafor, 2020). There is evidence that intentionally fermented alcohol existed from as early 10,000 BC when it was used in religious worship, for recreation, medicinal use and quenching thirst by long distance travellers (Abikwi and Okafor, 2022).

Marijuana was used as medicine from 2,737BC in China then later in the 19th century, active substances used in production of drugs like cocaine and morphine were extracted and freely prescribed by physicians for various ailments and even sold over the counter (Magidson and Jessica, 2016). Drug is referred to as a substance that could bring about a change in the biological function through its chemical actions (Chebukaka, 2017). It is also considered as a substance that modifies perceptions, cognition, mood, behaviour and general body functions (Balogun, 2016). This could thus be considered as chemical modifiers of the living tissues that could bring about psychological and behavioural changes (Nnachi, 2017). The use of drugs in itself does not constitute any danger, because drugs correctly administered have been a blessing to bring healing. Unfortunately, in contemporary times certain drugs that initially produced effects such as ecstasy, sense of feeling good, serenity and power have grown into a problem of dependence and abuse (Aguocha and Nwefoh, 2021).

Drugs such as tobacco, cocaine, marijuana, alcohol among others tend to stimulate the nervous system of an individual to behave in abnormal and extra ordinary manner, leading such individual to lose his/her sense of being. The abuse of drugs can cause serious irreversible damage to such individual's physical and psychological development. As Manbe (2018) pointed out, common incidence that happens around us today is as a result of drug abuse and that if care is not taken, this could lead to mental disorders.

The World Health Organization defined drug abuse as a "state" of periodic or chronic intoxication, detrimental to the individual and to the society, produced by the repeated consumption of a drug (natural or synthetic) (WHO, 2016). Drug abuse are disorders evident in the deliberate use of chemical substances for reasons other than intended medical purposes and which occasioned physical, mental, emotional, or social impairment

to the users (Okafor, 2020) argued that the use of drugs like Benylin with codeine, Tutolin with codeine, for medical purposes like the whooping cough is not drug abuse but becomes abused only when it is geared towards producing some desired behaviors, physical dependency, addiction, and/or constitute a nuisance to the society. More so, drugs can be said to be abused when they are used without due authorization from formally qualified and registered persons who, according to the laws of the land, must approve their use. This observation is borne out by several studies on ill behaviors particularly among undergraduate students in tertiary institutions (Abikwi and Okafor, 2022).

The causes of drug abuse among undergraduate students may be sociological, psychological, out of inquisitiveness, boredom, to ease fear, develop sexual and physical pleasures, or as a result of family background among other things (Ngesu, 2018). The sequence of usage ranges from tobacco, alcohol, marijuana and other higher substances.

Undergraduate students are gradually engaging in prescribed drugs, particularly narcotics which are given to relieve severe pain and stimulant medications, which treat conditions like attention deficit disorder and narcolepsy (Dankano and Garba, 2020). A long-lasting effect in learning abilities of the user is common for those students who start using drugs at a younger age. Drug abuse causes some areas of the brain not to develop properly leading to learning disabilities. Persistent abuse of drugs further leads to loss of memory and judgment. Many undergraduate students who engage in drug abuse tend to be forgetful and can hardly focus particularly in their studies; it can also lead to loss of short-term memory.

Drug abuse may weaken memory by slowing down the co-ordination materials and may decrease student's ability to remember such materials that was learned prior to using the drugs (Magidson and Jessica, 2016).

MATERIAL AND METHODS

Research Design

The research design for this study on the effects of drug abuse on academic performance among undergraduate students at Federal University Wukari was a quantitative method. Quantitative data was collected through a structured survey administered to a stratified random sample of 100 students, facilitating the examination of drug abuse prevalence and its correlation with academic performance.

Population of the study

The population of this study encompasses all undergraduate students at Federal University Wukari, except 100 level students who have no CGPA, regardless of their field of study or academic year.

Sampling Technique

The study employs a stratified random sampling method to select participants from the population of undergraduate students at Federal University Wukari. Stratification was based on department and academic year to ensure representation from various academic disciplines and class levels.

Sample Size Selection Criteria

Taro Yameni formula was used for the sample size selection. The formula is given by;

$$n = \frac{N}{1 + Ne^2}$$

Where, n = the sample size,

N = the Population of the study

e = the margin error in the calculation

Method of Data Collection

Data for this study was collected using a quantitative approach. The quantitative data was obtained through the administration of a structured survey questionnaire to a stratified random sample of undergraduate students at Federal University Wukari. The survey collected data on student's perception on drug abuse, academic performance metrics, and demographic information.

Method of Data analysis

Descriptive statistics was employed to summarize demographic information, most commonly abuse drug, and academic performance metrics. Additionally, two independent sample t-test analyses were conducted to explore the difference between the academic performance of students who abuse drug and students who do not, and difference between the academic performance of male students and female students. By integrating findings from both data sources, this study has offered a comprehensive and nuanced understanding of the effects of drug abuse on academic performance among undergraduate

students at Federal University Wukari, bridging the gap between quantitative trends and qualitative experiences.

Independent two Sample t-test

The t-test is selected due to its applicability when comparing the means of two independent groups, such as students with a history of drug abuse and those without. The academic performance indicator to be use was the CGPA. By conducting a t-test on these variables, the study determines whether statistically significant differences exist between the academic performance of students engaged in drug abuse and those who are not. The t-test formula is given by;

$$t = \frac{\left(\bar{x}_1 - \bar{x}_2\right)}{\sqrt{\frac{S_1^2}{n_1} - \frac{S_2^2}{n}}}$$

Where, $\overline{x_1}$ = observed mean for those that abuse drugs

$\bar{x}_2$ =observed mean for those who do not abuse drugs

S_1^2 =standard deviation for those that abuse drugs

S_2^2 = standard deviation for those who do not abuse drugs

n_1 =sample size for those that abuse drugs

n_2 = sample size for those who do not abuse drugs

RESULTS

Response Rate:

The study targeted 100 students at the Federal University in Wukari, Taraba State. However, 99 respondents returned the questionnaire, yielding a response rate of 99%. According to Mugenda and Mugenda (2009), a response rate of 50% is adequate for analysis; a rate of 60% is good; and a response rate of 70% and over is excellent; therefore, this response rate was sufficient for the analysis.

Demographic Characteristics of Respondents

Table 1: Gender of the respondents

Gender		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	62	62.6	62.6	62.6
	Female	37	37.4	37.4	100.0
	Total	**99**	**100.0**	**100.0**	

Table 1 shows that out of 99 respondents, 62 were male, accounting for 62.6% of the total respondents in the study compared to females. On the other hand, there were 37 female respondents, comprising 34.4% of the total respondents. While the number of female respondents is lower than that of male respondents in this study, it still represents a significant portion of the sample.

Table 2: Age of the respondents

Frequency	**Percent**	**Valid Percent**	Cumulative percent
below 16	2	2.0	2.0
16-18	10	10.1	12.1
19-21	19	19.2	31.3
22-23	28	28.3	59.6
25-27	23	23.2	82.8
28-30	8	8.1	90.9
31-33	5	5.1	96.0
34 and above	4	4.0	100.0
Total	99	100.0	

Table 2 shows the distribution of the respondents into 8 clusters. Two (2) are of age below 16 years. Ten (10) are aged between 16 and 18 years, nineteen (19) are aged between 19 and 21 years, twenty-eight (28) are aged between 22 and 23 years, twenty-three (23) are aged between 25 and 27 years, eight (8) are aged between 28 and 30 years, five (5) are aged between 31 and 33 years, and four (4) are aged 34 and above.

Table 3: Level of the respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid200	30	30.3	30.3	30.3
300	37	37.4	37.4	67.7
400	22	22.2	22.2	89.9
500	10	10.1	10.1	100.0
Total	99	100.0	100.0	

Table 3 shows the level of the respondents; were the majority of respondents were from the 300 level, comprising 37.4% of the sample. The next significant group was from the 200 level, accounting for 30.3% of the respondents. The 400 level had smaller representation at 22.2%, while 500 level had the smallest representation at 10.1%. Combined, the 200 level and 300 level respondents constituted a substantial portion of the sample at 67.7%, the distribution across the different levels indicates a diverse representation of undergraduate students across various stages of their academic journey.

Table 4: Drug abusers and Non-drugs abusers

Frequency		Percent	Valid Percent	Cumulative Percent	
	Drugs abusers	46	46.5	46.5	46.5
	Non drugs abusers	53	53.5	53.5	100.0
	Total	99	100.0	100.0	

Table 4 compares respondents who abuse drugs with those who do not. Here's an analysis based on the table: The table shows that out of 99 respondents, 46 abused, accounting for 46.5% of the total respondents. This indicates a significant proportion of the sample engages in drug abuse. On the other hand, there were 53 respondents who reported not to be abusing drugs, comprising 53.5% of the total respondents. While the number of non-drug abuse respondents is slightly higher, drug abuse remains prevalent in the sample.

Academic performance of Drug Abuse and Non-Drug Abuse

Table 5 Mean Academic performance of Drug Abusers and Non-Drug Abuse

Academic performance	**Variables**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
(CGPA)	Drugs abuse	46	2.5483	.95712	.14112
	Nondrug abuse	53	3.63202	.63202	.08681

Table 5 presents the cumulative grade point average (CGPA) of respondents categorized into drug abuse and non-drug abuse groups. The table shows that the mean CGPA for respondents in the drug abuse group is 2.5483, with a standard deviation of 0.95712. On the other hand, the mean CGPA for respondents in the non-drug abuse group is 3.69202.

Table 6: T-test Results for Academic performance (Drug Abuse vs. Non-drug Abuse)

	Variables	N	Mean	SD	DF	T	Sig	Decision
Academic performance	Drug abuse	46	2.5483	0.95712	97	-7.111	.000	Rejected
	Non drug abuse	53	3.6938	0.63202				

Table 6 displays the t-test results comparing the academic performance (CGPA) of respondents in the drug abuse group versus the non-drug abuse group. Since the p-value (.000) is less than the alpha value (0.05), the result shows that there is a significant difference between the academic performance of students who abuse drugs and those who do not. Therefore, the null hypothesis is rejected, and we conclude that there is a significant difference between the academic performance of students who abuse drugs and those who do not at the 0.05 level of significance.

Academic performance of Male and Female Students who abuse Drugs

Table 7 Mean Academic Performance of Male and Female Students Drug abusers

	Gender of the respondent	N	Mean	Std. Deviation	Std. Error Mean
(CGPA)	Male	62	3.0902	1.11894	.14211
	Female	37	3.2811	.68902	.11327

Table 7 presents the cumulative grade point average (CGPA) of male and female respondents who abuse drugs. The table shows that the mean CGPA for male respondents is 3.0902, with a standard deviation of 1.11894. On the other hand, the mean CGPA for female respondents is 3.2811, with a standard deviation of 0.68902.

Table 8: T-test Results for Gender-Based Academic performance

Variables	Gender	N	Mean	SD	DF	T	Sig	Decision
Academic performance	Male	62	3.0902	1.11894	97	-.051	.000	Rejected
	Female	37	3.2811	0.68902				

Table 8 displays the t-test results comparing the academic performance (CGPA) of male and female respondents who abuse drugs. Since the p-value (.000) is less than the alpha value (0.05), the result shows that there is a significant difference between the academic performance of male students who abuse drugs and female students who abuse drugs. Therefore, the null hypothesis is rejected, and we conclude that there is a significant

difference between the academic performance of male students who abuse drugs and female students who abuse drugs at the 0.05 level of significance.

The Most Commonly Abuse Drugs

Table: 9: The Most Commonly Abuse Drugs

Names of drugs	Frequency	Percent (%)	Cumulative percentage (%)
Tramadol	1	1.0	1.0
Cocaine	3	3.0	4.0
Marijuana/ hashish	10	10.1	14.1
Alcohol	24	24.2	38.4
Nicotine	28	28.3	66.7
Others	33	33.3	100
Total	99	100.0	

Table 9 presents information about the most commonly abused drugs among the respondents. Nicotine emerged as the most commonly abused drug among the respondents, with a percentage of 28.3% and a cumulative percentage of 66.7%. This indicates that a significant portion of the respondents reported nicotine abused. Alcohol followed as the second most commonly abused drug, with 24.2% of respondents reporting its abuse. Marijuana/hashish accounted for 10.1% of drug abuse among the respondents. Cocaine and Tramadol had lower percentages of abuse, at 3.0% and 1.0% respectively. Others category, which likely includes a variety of substances, accounted for 33.3% of drug abuse among the respondents.

Perception on Effects of Drug Abuse among Undergraduate Students

The undergraduate students were administered a questionnaire on their level of agreement with the effects of drug abuse on their overall performance, and their responses are summarized in Table 10.

Table 10: Effects of drug abuse on academic performance

S/N	Item	SA 4	A 3	D 2	SD 1	Σfi	$\frac{\Sigma f iwi}{\Sigma fi}$
1.	Drug has potential Effect on mental health	63	35	1	0	99	3.63
2.	Drug abuse influence social relationships among students	37	58	3	1	99	3.33
3.	Drug abuse can weaken the immune system, making individuals more susceptible to infections and illness	40	55	3	1	99	3.35
4.	Abuse of some certain drugs can increase heart rate, blood pressure, and the risk of heart- related problems	42	56	1	0	99	3.42
5.	Smoking drugs like tobacco or marijuana can lead to respiratory issues, including chronic bronchitis or lung infections	41	56	2	0	99	3.39
6.	Drug abuse can lead psychological dependence, where individuals feel a strong need for the substance to cope with stress or emotional issues	40	57	2	0	99	3.38
7.	Drugs can cause extreme mood swings, ranging from euphoria to depression	33	59	5	2	99	3.24
8.	Individuals engaged in drug abuse may withdraw from social activities, leading to isolation from friends and family.	31	59	6	3	99	3.19
9.	Maintaining a drug habit can be expensive, leading to financial strain and potential legal issues	31	58	7	3	99	3.18

Table 10 reflects respondent's opinions on the effects of drug abuse on various aspects. Higher cumulative grade point averages (CGPAs) indicate stronger agreement with the negative effects of drug abuse. Generally, respondents expressed concerns about the negative impacts of drug abuse on physical health, mental health, social relationships, immune system, heart health, respiratory health, psychological dependence, mood swings, social withdrawal, financial strain, and legal issues. These perceptions highlight the multifaceted consequences of drug abuse as perceived by the respondents.

DISCUSSION

The gender distribution in Table 1 is an essential demographic characteristic of the study participants. The higher representation of male respondents (62.6%) compared to female respondents (37.3%) suggests that there may be differences in the experiences and perspectives shared based on gender. It's important to consider how gender dynamics might influence responses to certain questions or topics covered in the study. For example, perceptions of drug abuse, academic performance, and health risks may vary between males and females. Based on the gender distribution, future research could delve deeper into understanding gender-specific issues related to drug abuse, academic performance, and health outcomes among undergraduate students.

The age distribution in Table 2 reveals a diverse age distribution among the respondents, ranging from below 16 to 34 and above. The majority of respondents are in the 22–23 age groups, reflecting the typical age range of undergraduate students. Implications for research: the distribution across different age groups suggests the need to consider age-related factors in analyzing responses related to drug abuse, academic performance, and perceptions of health risks. Age and experience: older respondents (28–30, 31–33, and 34 and above) may have different life experiences and perspectives compared to younger participants, which could influence their responses. In summary, Table 2 provides valuable insights into the age composition of the study participants, highlighting the need to consider age-related variables in the analysis and interpretation of study findings related to drug abuse and academic performance.

Academic progression: Table 3 reflects the distribution of respondents across different stages of their academic journey, from sophomore to senior levels. Representation: the higher percentage of respondents at the 200 and 300 levels suggests a larger representation of students in the earlier stages of their undergraduate studies. Senior levels represent senior students; the percentage is lower compared to the earlier levels, indicating a decline in representation as students' progress towards graduation. Implications for study findings: the academic level of respondents can influence their experiences, challenges, and perspectives related to drug abuse, academic performance, and health outcomes. Table 4 shows the prevalence of drug abuse; it highlights the prevalence of drug abuse among the study participants, with nearly half of the respondents reporting drug abuse. Comparing drug abuse and non-drug abuse respondents provides insights into the differences in

experiences, behaviors, and outcomes related to academic performance and health. The table sets the stage for analyzing the effects of drug abuse on academic performances, as there may be differences in CGPA and other academic indicators between the two groups. Understanding drug abuse prevalence is crucial for addressing health risks, psychological well-being, and social dynamics among undergraduate students.

Table 4 highlights a significant difference in CGPA between the drug abuse and non-drug abuse groups. The non-drug abuse groups have a notably higher mean CGPA compared to the drug abuse group. The findings suggest that drug abuse is associated with lower academic performance, as evidenced by the lower CGPA among students who reported drug abuse. The standard deviation values indicate the variability of CGPA within each group. The drug abuse group shows higher variability compared to the non-drug abuse group, suggesting a more diverse range of academic performances among drug-abusing students. In Table 7, the t-test results show a significant difference in academic performance (CGPA) between the drug abuse group and the non-drug abuse group. Both groups have t-values of -7.111, indicating a strong level of significance ($p<.05$). The findings suggest that drug abuse is associated with lower academic performance, as evidenced by the significantly lower CGPA in the drug abuse group compared to the non-drug abuse group. Table 7 highlights a slight difference in CGPA between male and female respondents. The mean CGPA for female respondents is slightly higher than that of male respondents. The standard deviation values indicate the variability of CGPA within each gender group. The standard deviation for males is slightly higher than that of females, suggesting a wider range of academic performance among male respondents. The findings suggest that while there is a difference in CGPA between male and female respondents, it is not substantial. This indicates that factors other than gender may also play a role in academic performance. While the difference in CGPA is minor, it's important to consider gender-specific factors that may influence academic performance, such as study habits, access to resources, and social-emotional support. Table 8 shows that the t-test results indicate a significant difference in academic performance (CGPA) between male and female respondents who abuse drugs. The P-values for both male and female groups' are.000, indicating a strong level of significance. While the mean CGPA for male respondents is 3.0902, it is slightly lower than the mean CGPA for female respondents, which is 3.2811. This difference, although small, is statistically significant. The findings suggest that female respondents, on average, have a slightly higher CGPA compared to

male respondents. This may have implications for gender-specific support and interventions to address academic challenges and promote success among students. Table 9 provides insights into the prevalence of different drugs among the study participants. The most commonly abused drug is "Others," followed by nicotine. Understanding the prevalence of each drug allows for a risk assessment regarding the most significant substances contributing to drug abuse among undergraduate students. These findings can inform policy decisions related to drug abuse prevention and intervention programs on campus. Resources and strategies can be targeted toward addressing the most prevalent substances. It sheds light on the most commonly abused drugs among undergraduate students, providing valuable information for designing targeted interventions and policies to address drug abuse issues on campus.

CONCLUSION

In conclusion, the findings of this study highlight the need for attention to substance abuse issues among undergraduate students. While drug abuse was prevalent, its direct impact on academic performance appeared to be nuanced. Gender differences in drug abuse patterns were observed, and there is a significant difference in academic performance between male and female students who abuse drugs. The study underscores the importance of holistic approaches to promoting student well-being and academic success by addressing substance abuse prevention and intervention strategies.

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