



# Students' Perceptions on Drug Abuse and Academic Performance in Computer Science and Allied Subjects

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## Abstract

Given the high rate of drug abuse in society, this study investigates how much of its knowledge is available to secondary school students. Also evaluated is the perceived effect of drug abuse on their academic achievement in subjects such as Computer science and allied subjects. A questionnaire was developed to obtain the respondents' opinion with 304 responses analyzed for this study. This research reveals that the majority (97.4%) of students know about drug abuse and the harm it causes to health. The most abused drugs by the students surveyed are Alcohol (5.9%), Tobacco (3.3%), and Marijuana (Indian hemp) (2.3%). The hypotheses tested showed a statistically significant ( $p < 0.05$ ) relationship between the type of school (public/private) a student attends and their tendency to abuse drugs, as well as how much knowledge is possessed by the students. We conclude that the academic performance of students can be negatively influenced by the abuse of drugs.

**Keywords:** drug abuse, academic performance, computer studies, secondary school students

## 1. INTRODUCTION

A drug is a chemical substance that is consumed or used externally to cause an effect in the body. This effect could have a positive or negative impact on the body system. Drugs are mostly derived from plants, animals, or natural resources and it can be in any form including solid and liquid. Drugs can also be synthesized. Drug abuse results from taking these substances inappropriately or without a medical expert's prescription. Some drug addictions are due to the consumption of certain control drugs that gives an effect other than the purpose for which it was primarily designed [1].

Ekpenyong [2] reported that the society of Doctors and Pharmacists discountenance the ease of publicly accessing drugs in markets and medical stores with a minimal implementation of regulations. The predominant risk factors (such as individual behaviours and deviant attitudes) and protective factors (such as a counsellor or parent's support) greatly determines the risk level of individuals abusing drugs [3]. The individual's age, gender, ethnicity, culture, and environment are notable factors to be considered [4, 5].

Over the years, the use of hard drugs like tobacco, sedatives, Marijuana (Indian hemp), cocoa leaves, alcohol, heroin, morphine, cocaine, inhalants (such as glue), amphetamines to mention

but a few have drastically been on the increase especially in Africa [2, 6].

Given the high rate of drug abuse by members of the society, this study seeks to investigate the involvement of secondary school students. It is widely believed that drug abusers are often mentally derailed and are unable to perform well in their academics. This is more pronounced in science subjects, such as Computer science and allied studies, which requires high concentration for better understanding.

The specific objectives of the study are to:

- Examine the perception of Oredo Secondary School Students about drug abuse.
- Evaluate the perceived effects of abused substances on the academic performance of students, especially in Computer Studies and allied subjects.
- Determine the extent of knowledge about drug abuse among secondary school students in Oredo Local Government Area of Edo State, Nigeria.
- Identify the most commonly abused substances or drugs among the students.

The research covers selected secondary schools within Oredo Local Government Area (LGA) of Edo State Nigeria. Some of the schools visited

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include Edokpolo Grammer School, Ihogbe College, Pioneer Comprehensive College, Idia College, Emotan College, and Oredo Girls Secondary School.

Furthermore, the research questions stated hereunder were adopted to guide this study:

1. What are the commonly abused drugs by students?
2. Do students know that drug abuse is harmful to their health?
3. Does drug abuse affect the ability of students to concentrate when studying computer science and allied subjects?
4. What is the perception of students concerning the impact of drug abuse on academic performance?

The following null hypotheses were formulated:

$H_01$ : The type of school (Public/Private) has no relationship with drug abuse.

$H_02$ : There is no relationship between knowledge about drug abuse and the act.

## 2. BACKGROUND OF THE STUDY

Academic performance is described as the extent to which a student accomplishes his or her tasks and studies. Grades, which is the student's "score", are highly regarded as the major indicator of academic performance. Academic performance was further described by [7] as the "outcome of education; the extent to which the student, teacher, or institution have achieved their educational goals". Academic achievement is continually been observed in school subjects among secondary school students [8].

The deteriorating students' performances in public examinations have been expressed as a serious issue by parents, teachers, curriculum experts, and evaluators. It was argued by Morakinyo [9] that the non-use of verbal reinforcement strategy by teachers is largely responsible for the falling level of academic performance. Furthermore, Welsch [10] opined that poor teaching methods and the attitude of some teachers to their job have a negative influence on students' academic performance. Research has also shown that drug abuse greatly affects the academic performance of students [6, 11, 12].

Drug abuse and addiction 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 [13–16].

Researchers [6] noted 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 behaviours, physical dependency, addiction, and/or constitute a nuisance to the society. The term

"substance/drugs" was described by Abdullahi [17] as a broad name that covers oral therapy (such as tablets and capsules) and others such as marijuana, alcohol, and locally-brewed alcoholic drinks like "Ogogoro, Burukutu, Fito and Bammi".

Substances/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 behaviour among Nigerians [6, 18, 19].

According to [20], the commonly abused substances in Nigeria are marijuana and amphetamines which have negative effects (such as aggressive and violent behaviour) on the youths, immediate society, and Nigeria at large. In the view of [11], many categories of youths (male and female) are addicted to substance/drug abuse. Substance/drug abuse leads to a high rate of crime, fuel conflict, political thuggery, religious intolerance, rape, domestic violence, suicide, amongst others in the society [15, 17, 21, 22].

## 3. RELATED LITERATURE

The relationship between drug abuse and academic performance of students in Emohua LGA of Rivers State Nigeria was examined with respondents drawn from public secondary schools [12]. They observed that the sampled students abused alcohol and tobacco more, noting that peer group influenced their behaviour. The study concludes that academic performance can be negatively affected by drug abuse.

A cross-sectional descriptive survey to find out the effect of substance/drug abuse on the academic achievement of secondary school students in Mkar metropolis, Mkar, Gboko, Benue State was carried out by [6]. A sample size of 220 secondary school students was selected and administered questionnaires. Their findings revealed that 22.3% of the surveyed population abuse Amphetamines like Tramadol or Tradyl. The research also showed that poor academic performance was one of the effects of this substance/drugs on the student.

Research by [15] on the effects of drug abuse and addiction on the academic performance of students in Federal Polytechnic Idah, Kogi State Nigeria showed that majority of the drug users were males even though the involvement of females was also evident. They noted that students from wealthy homes were the highest number involved in drug use and abuse due to access to the financial allowance from their parents.

Finally, the research revealed that most reasons given for drug abuse are highly insignificant and do not have any moral and social justification. Irrespective of the reasons that lead students to drug abuse, [23] opines that such behaviour can be corrected by counselling those affected.

In a similar study conducted by [24] on factors influencing substance abuse among undergraduate students in Osun State, Nigeria, a descriptive

survey of 1200 randomly selected students from three tertiary institutions in Osun state was carried out. The result of this study depicts that shyness, excitement, pleasure, stress from academic work, as well as frustration, could be indicators of substance abuse among undergraduate students.

#### 4. METHODOLOGY

This study adopt descriptive survey approach in the analysis of drug abuse in Oredo LGA of Edo State, Nigeria. Six (6) schools gave the researcher access to the students to administer a questionnaire. The Statistical Package for the Social Sciences (SPSS) Version 22 for Windows was used in the analysis of data.

##### 4.1. Design of the Study

A questionnaire was developed to get information about the students' knowledge of drug abuse and its consequent effects in their academic performance. All students sampled offer subjects such as computer studies or information and communication technology (ICT). Notably, the respondents were assured that the instrument will be treated confidentially; hence names or private information was not requested.

The questionnaire was divided into three (3) sections. Section A contained demographic information of the respondent such as their Gender, Age Range, Academic Level, and the name of their school. Sections B and C used a four-point Likert-type scale to obtain the respondents' position as regards each item. The four-point Likert scale, similar to that of Yusuf [24], was preferred for this study over the Yes/No and five-point Likert scale because the students are expected to respond to a set of close-ended questions/statements that required a precise answer. While a precise answer is needed, the respondent has the leverage to choose between two extremes while avoiding being 'Undecided'. In this case, a respondent chooses from options such as 'Strongly Agree', 'Agree', 'Disagree', and 'Strongly Disagree'. Scores on this scale ranged from 1 ('Strongly Disagree') to 4 ('Strongly Agree') and the respondents checked the box that best reflected their view on the items stated.

##### 4.2. Sample Size and Sampling Techniques

The random sampling method was used to select six (6) schools from the sample size of the study respondents. A representative sample was randomly selected from the various classes of each school. The questionnaire was self-administered to ensure that the target population category filled the instrument.

The questionnaire was distributed to Four Hundred (400) respondents out of which Three Hundred and Forty-Eight (348) were returned. However, only Three Hundred and Four (304) of the returned questionnaire were used for this study. Others were rejected for reasons ranging from damaged sheets and missing data to multiple selections for the same item.

##### 4.3. Validity of Instrument

The validity of a questionnaire refers to the extent to which the questionnaire measures what it claims to measure [25]. Validity means the extent to which the scores and the conclusions based on these scores can be used for the intended purpose of the questionnaire [2]. In other words, it is the degree to which results obtained from the analysis of the data represents the phenomena under the study. For this research, face validity and content validity of the instruments were carried out by some experts in education who are lecturers/teachers. Their contributions were considered in restructuring the questionnaire.

##### 4.4. Reliability of Instrument

The study ascertained the measurement instrument reliability by applying the Cronbach's Alpha method. The reliability coefficient as shown in Table 1 was established as .712, indicating positive reliability. The generally agreed lower limit for Cronbach's Alpha is 0.7, although a decrease to 0.6 is accepted for exploratory research [26, 27]. Nunally [28] suggested that the score for each construct should be greater than 0.6 for it to be considered reliable. Thus, a score of 0.6 and above was accepted in this study as indicated in Table 1.

Table 1: Reliability Test.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.712	.717	30

## 5. RESULTS AND DISCUSSION

### 5.1. Demographic Data of Respondents

Questionnaires were distributed to six (6) randomly selected schools in Oredo LGA. Most of the respondents (177) are from Private schools forming 58.2% while the students who attend Public schools were 127 (41.8%) of the respondents. Out of the 304 accepted questionnaires, Males constituted 139 (45.7%) of the respondents while 165 (54.3%) were Females.

### 5.2. The Commonly Abused Drugs by Respondents

The most abused drug as shown in Table 2 is Alcohol with a mean response of 1.21 which was followed by Tobacco (Cigarette) with 1.14 mean response. This shows that students in Oredo commonly abuse Alcohol and Tobacco (Cigarette) more than others. Some other students have consumed Marijuana (Indian hemp or Igbo) at one time or the other, making a 1.08 mean of the responses.

It is worthy of emphasis that, even though Alcohol tops the list of abused drugs, only 39 students (12.8%) out of the 304 surveyed had tasted Alcohol at one time or the other. This indicates that

Table 2: Descriptive statistics of drugs abused by Secondary Students in Oredo LGA.

	N	Frequency	Percentage	Mean
I have used Alcohol	304	18	5.9	1.21
I have used Tobacco (Cigarette)	304	10	3.3	1.14
I have used Marijuana (Indian hemp) or hashish (hash oil)	304	7	2.3	1.08
I have used Heroin (smack, horse)	304	7	2.3	1.06

Source: Field Study

most Oredo secondary school students do not indulge in excessive use of Alcohol. Notably, 87.2% of the students sampled have never consumed nor abused Alcohol at any time.

While Tobacco (Cigarette) had a mean response of 1.14, only 10 of the students (3.3%) admitted to having abused the drug, while 278 (91.4%) of Oredo students said they have never consumed Tobacco (Cigarette). This shows that only a handful of students (8.6%) in Oredo have consumed Tobacco (Cigarette) which forms a minor but important portion of the sample population.

Furthermore, findings agree with Kalunta [20] that Marijuana was among the topmost abused drugs. However, only a few students (2.3%) have abused Marijuana at one time or the other.

### 5.3. Knowledge of the Harmful Effect of Drug Abuse on the Students' Health

Drug abuse entails taking drugs without a Doctor's prescription or consuming more than the recommended dosage [2, 6]. The cumulative percentage (34.5%; 105) of sampled students had at some time in their lives consumed drugs without a Doctor's prescription. Notably, 199 out of 304 students consumed drugs only on Doctor's prescription. This study further shows that majority (96.4%) of the students sampled in Oredo LGA are aware of the dangers of drug abuse and admitted to knowing it is harmful to their health.

As observed in Table 3, a significant majority (64.9% – strongly agreed and 67.5% – agreed to) have knowledge of drug abuse and have not abused drugs. However, some students admitted to having knowingly abused drugs; about 35.1% strongly agreed and about 32.5% simply agreed.

### 5.4. Effect of Drug Abuse on Students' Concentration when Studying Computer, Science and allied subjects

The cumulative percentage of respondents who agreed that drug abuse has a way of affecting concentration is 81.3%. However, 12.2% merely disagreed but 6.6% strongly disagreed to the notion that drug abuse affects their concentration. Students who lack concentration when studying are likely to have low grades during examination. The academic performance of students should be of interest to education stakeholders especially the parents [29]. Hence, for a student's academic performance to be impressive, parents, teachers, school administrators and other stakeholders should help eliminate factors that can alter a student's concentration. Based on the statistics in

Table 4, the perception is that drug abuse affects the concentration of students.

It can be observed in Table 5 that 85.2% affirmed that drug abuse can affect the understanding of Computer Studies books. Although 10.5% merely objected, 4.3% strongly disagreed to the notion that drug abuse can affect the comprehension of the academic materials of students.

### 5.5. Perception of Students Concerning the Impact of Drug Abuse on their Academic Performance

Table 6 indicates that 143 students, equivalently 47% of respondents sampled, strongly agreed that drug abuse will negatively affect their academic performance. Also, 99 (32.6%) of the students agree that drug abuse is inimical to academic performance. Thus, the majority of the students with a cumulative percentage of 79.6% are of the view that drug abuse harms academic performance. However, 62 students forming 20.4% of respondents objected to the notion that drug abuse could negatively affect them.

It is imperative for stakeholders to further enlighten students of the dangers inherent in drug abuse, dispelling some of their perception that it cannot negatively affect their academics. While 20.4% of the sampled population seem small, it is significant when compared to the number of secondary school students in Oredo. Some researchers do not consider drug abuse as a factor that could affect the academic performance of students. For instance, [29] proposed data mining techniques to predict student academic performance considering several factors; however, the study did not consider if the student was involved in drug abuse.

Similarly, 93.1% of the students affirm that their academic performance would improve if they do not abuse drugs. However, 4.9% did not totally agree while 2% strongly disagreed that their academic performance would be improved if they avoid drug abuse.

### 5.6. Testing Hypotheses

#### 5.6.1. $H_{01}$ : The type of school (public / private) has no relationship with drug abuse

The hypothesis examined is the perception that the type of school a student attends will likely define whether or not such child will abuse drugs. The Pearson Chi-Square was used to test the hypothesis, as none of the cells had an expected count less than 5. The test, as shown in Table 7, produced a Chi-square value of 22.657 and a p-value less than the level of significance (0.05),

Table 3: Descriptive statistics of drugs abused by secondary students in Oredo LGA.

<b>I know about Drug Abuse</b>		<b>I have used drugs without a Doctor's prescription</b>				
		<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Total</b>
Strongly Disagree	Count	1	0	0	1	2
	% within I know what is Drug Abuse	50.0%	0.0%	0.0%	50.0%	100.0%
Disagree	Count	1	2	3	0	6
	% within I know what is Drug Abuse	16.7%	33.3%	50.0%	00.0%	100.0%
Agree	Count	23	52	33	3	111
	% within I know what is Drug Abuse	20.7%	46.8%	29.7%	2.7%	100.0%
Strongly Agree	Count	95	25	34	31	185
	% within I know what is Drug Abuse	51.4%	13.5%	18.4%	16.8%	100.0%
Total	Count	120	79	70	35	304
	% within I know what is Drug Abuse	39.5%	26.0%	23.0%	11.5%	100.0%

Source: Field Study

Table 4: Statistics of respondents on drug abuse and concentration.

	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Strongly Agree	151	49.7	49.7	49.7
Agree	96	31.6	31.6	81.3
Disagree	37	12.2	12.2	93.4
Strongly Disagree	20	6.6	6.6	100.0
Total	304	100.0	100.0	

Source: Field Study

Table 5: Drug abuse affects the understanding of computer studies students.

	<b>Frequency</b>	<b>Percent</b>	<b>Valid</b>	<b>Cumulative Percent</b>
Strongly Agree	162	53.3	53.3	53.3
Agree	97	31.9	31.9	85.2
Disagree	32	10.5	10.5	95.7
Strongly Disagree	13	4.3	4.3	100.0
Total	304	100.0	100.0	

Source: Field Study

Table 6: Drug abuse negatively affects the academic performance of students.

	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Strongly Agree	143	47.0	47.0	47.0
Agree	99	32.6	32.6	79.6
Disagree	45	14.8	14.8	94.4
Strongly Disagree	17	5.6	5.6	100.0
Total	304	100.0	100.0	

Source: Field Study

Table 7: Drug abuse negatively affects the academic performance of students.

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	22.657 <sup>a</sup>	3	.000	.000		
Likelihood Ratio	22.689	3	.000	.000		
Fisher's Exact Test	22.471			.000		
Linear-by-Linear Association	20.595 <sup>b</sup>	1	.000	.000	.000	.000
N of Valid Cases	304					

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.62.  
b. The standardized statistic is -4.538.

Source: Field Study

hence the null hypothesis is rejected. It can be deduced that there is statistically significant evidence that the type of school (Public/Private) a student attends could determine the likelihood of abusing drugs.

#### 5.6.2. $H_{02}$ : *There is no relationship between knowledge about drug abuse and the act*

Fisher's Exact Test, which examines the relationship between two categorical variables, is used to test this null hypothesis. It is often used as an alternative to the Chi-Square Test of Independence if cells are having expected count that is less than 5, as it is in this case.

The Fisher's exact test produced a value of 69.619 and a p-value which is less than 0.05, as seen in Table 8; indicating a statistically significant relationship between the knowledge and the act of drug abuse. Hence, the null hypothesis is rejected and the alternate hypothesis is accepted.

## 6. CONCLUSION

This study examined the perception of students in Oredo LGA about drug abuse and its effect on academic performance. Majority of the students, with a cumulative percentage of 79.6%, are of the view that drug abuse has a negative effect on academic performance. Similarly, 93.1% of sampled students affirm that the academic performance of students would improve if they refrain from abusing drugs. Hence, we conclude that drug abuse has a negative effect on academic performance.

In the present study, relationships were also tested rather than analyzing with frequencies and percentages as used in some other research [30]. The null hypotheses tested included the perception that the type of school (Public/Private) has no relationship with drug abuse. This study also hypothesized that there is no relationship between knowledge about drug abuse and the act. Both null hypotheses were rejected since the p-value was less than the level of significance ( $\alpha=0.05$ ). This study provides statistical evidence that the school (Public/Private) a student attends could influence the chance of abusing drugs.

It is imperative to keep sensitizing students about drug abuse, as this study shows that knowledge correlates with the act of drug abuse. Government intervention should be channelled more

into rehabilitating those students who knowingly indulge in drug abuse.

## 7. RECOMMENDATION

This study indicates that most students surveyed in Oredo LGA are not drug addicts. However, further study is recommended on a broader scope to determine which areas in Oredo predominantly abuse drugs. Also, further research is recommended to determine the factors that might be responsible for the low abuse of drugs in this study population. Researchers may look comparatively into the academic grades of students with an emphasis on those involved in drug abuse.

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Table 8: Fisher's Exact Test for relationship between knowledge and drug abuse.

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	69.079 <sup>a</sup>	9	.000	.000		
Likelihood Ratio	72.365	9	.000	.000		
Fisher's Exact Test	69.619			.000		
Linear-by-Linear Association	1.976 <sup>b</sup>	1	.160	.160	.088	.014
N of Valid Cases	304					

a. 8 cells (50.0%) have expected count less than 5. The minimum expected count is .23.  
b. The standardized statistic is -1.406

Source: Field Study

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