

Evaluation of Factors Influencing Drug and Substance Abuse among Tertiary Institution Students in Nigeria: A Chi-Square Based Cross-Sectional Study

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ABSTRACT

Around the globe, drug abuse is a notable public health menace. This study evaluates causative factors to abuse of drug and substance among 382 students of the Federal Polytechnic, Ile-Oluji, through administration of questionnaires. Descriptive statistics of the respondent were obtained and various causative factors of abuse of drugs among students were examined. Major factors considered in the study are respondents' age group, parents' abuse of drugs, and abuse of drugs among respondents' friends. Chi-square analysis was employed to determine if there are significant relationships between each considered factor and the different types of drugs being abused. Findings reveal that there is significant relationship between each of the factors and drug types as all Chi-square (χ^2) p-values give (0.000) at 5% level of significance. Finally, the study reveals that the most prevalent reason for abuse of drugs and substances among students is parental failure which takes 48.2% of the total response with overall Chi-square p-values ($\chi^2 = 0.000$) at 5% level of significance.

Keywords: Drug and substance abuse, Prevalence, Evaluation, Chi-square analysis, Tertiary institutions



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INTRODUCTION

According to UNODC (2005), drug abuse is a notable public health menace around the globe. Its use and abuse by adolescents have become one of the most disturbing health-related problems in Nigeria and other parts of the world (NDLEA, 1997). A drug refers to a substance that

could bring about a change in the biological function of a human being through its chemical actions (Okoye, 2001). It is also considered as a substance that modifies perceptions, cognition, mood, behavior and general body functions (Balogun, 2006). NAFDAC (2004) explained the

term “Drug abuse” as excessive and persistent self-administration of a drug without regard to the medically or culturally accepted patterns. It could also be viewed as the use of a drug to the extent that it interferes with the health and social function of an individual. This description or perspective was also cited by Haladu (2003). However, different factors can be linked to the theoretical perceptions of drug abuse as opined by Haladu (2003). Some of these factors, among others, are lack of parental supervision, experimental curiosity, peer group influence and personality problems due to socio-economic conditions. Parents and peers influence adolescent drinking by influencing attitude about alcohol and by acting as role models (Taylor, 2003). In addition to these, parental deprivation due to deaths, divorces, separation or discord has also been strongly associated with drug abuse (Odejide, 1997).

This study aims at evaluating factors causing abuse of drugs and substances among students. Its specific objectives are to:

- Examine the various causative factors to abuse of drugs and substances among students.
- Obtain descriptive statistics of the samples selected.
- Determine the significance of each of the factors examined in relation to the different drug types considered.
- Determine the most prevalent reason for drug abuse among students.

Materials and Methodology

Table 1: Age distribution of the students

Age	Frequency	Percentage (%)
Below 16	2	0.5
16-20	47	12.3
21-25	244	63.9
26-30	76	19.9
Above 30	13	3.4
Total	382	100.0

Source: Drug Abuse Survey (2024)

Table 2: Examined drug types among students

Perceived drug used by student	Frequency	Percentage (%)
Weeds/weeds cakes	68	17.8
Alcohol	88	23.0
Shisha	25	6.6
Tramadol	122	31.9
Heroin	73	19.1
Other	6	1.6
Total	382	100.0

Source: Drug Abuse Survey (2024)

This study is carried out among students of the Federal Polytechnic, Ile-Oluji, Nigeria. A structured questionnaire was developed by the research team and administered to 400 students of the 12 existing departments as at the time of the study, from which 382 (above 90%) questionnaires were returned. For equitable representation from each

department, the technique of proportional allocation was utilized for the questionnaires' administration. Students who participated in the study were 185 males (48.4%) and 197 females (51.6%) with the age distribution shown in Table 1.

Table 2 shows the frequency and percentage distributions of perception of students about the drug/substance commonly being abused by students in the Federal Polytechnic, Ile-Oluji. From the table, Tramadol is the drug that is being abused the most by the students while the least is “Other” types of drugs.

SPSS (version 23) and Microsoft Excel were used for the coding of the questionnaires recovered for data cleaning, exploration and analysis. Suitable descriptive statistics were obtained from the data and various factors contributing to the abuse of drug and substance were examined. Chi-Square analysis (test of independence) was also conducted for confirmatory test of hypothesis.

Chi-Square (χ^2) Test is a test that measures how expectations compare to actual observed data (or model results). The data used in calculating a chi square statistic must be random, raw, mutually exclusive, drawn from independent variables, and drawn from a large enough sample. There are two main kinds of chi square tests: the test of independence for data and tests of goodness of fit for a model. These tests can be used to determine if a certain null hypothesis can be rejected in hypothesis testing that there is no association between the rows and columns of a contingency table. The statistic is calculated by first obtaining for each cell in table, the expected number of events that will occur if the null hypothesis is true. When the observed number of events deviates significantly from expected counts, then it is unlikely that the null hypothesis is true, and it is likely that there is a row-column association. Conversely, a small chi-square value indicates that the observed values are similar to the expected values leading us to conclude that null hypothesis is plausible. The Chi-square (χ^2) test statistic is therefore given as:

$$\chi^2_{\text{calculated}} = \sum_{i=1}^r \sum_{j=1}^c \frac{(o_{ij} - e_{ij})^2}{e_{ij}} \sim \chi^2_{\text{tabulated}} = t_{\alpha, (r-1)(c-1)}$$

where o_{ij} = observed count in category;

e_{ij} = expected count in the category under the null hypothesis;

r, c = the number of rows and columns in the contingency table;

The number of the degree of freedom is equal to the number of cells, rc , minus

the reduction in degree of freedom, p , which reduces to $(r - 1)(c - 1)$.

Results and Discussions

From Table 3, it is revealed that intake of drugs by the students is related to their age at p -value equals 0.000.

Table 3: Association between students' age and intake of drugs

Age	Do you take any of the following drugs?										Chi-Square P-value (α=0.05)
	Alcohol	Weeds/ weeds Cakes	Shisha	Ice	Cough Syrups abused to get "high"	Tramadol	Heroin	Other	I don't use drug		
Below 16	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (100%)		
16-20	3 (6.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (6.3%)	6 (12.8%)	2 (4.3%)	5 (10.6%)	28 (59.6%)	0.000	
21-25	14 (5.7%)	12 (4.9%)	2 (0.8%)	27 (11.1%)	4 (1.6%)	31 (12.7%)	52 (21.3%)	12 (4.9%)	90 (36.9%)		
26-30	10 (13.2%)	8 (10.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (2.6%)	12 (15.8%)	0 (0.0%)	44 (57.9%)		
Above 30	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	7 (53.8%)	3 (23.1%)	3 (23.1%)		

Source: Drug Abuse Survey (2024)

Table 4: Association between drug types and parents' drug abuse status

Do you take any of the following drug/substances?	Does any of your parents take drugs?			Chi-Square P-value (α=0.05)
	Yes	No	I don't know	
Alcohol	0 (0.0%)	21 (77.8%)	6 (22.2%)	0.000
Weeds/ weeds Cakes	12 (60.0%)	8 (40.0%)	0 (0.0%)	
Shisha	2 (100%)	0 (0.0%)	0 (0.0%)	
Ice	1 (3.7%)	26 (96.3%)	0 (0.0%)	
Cough Syrups abused to get "high"	0 (0.0%)	4 (57.1%)	3 (42.9%)	
Tramadol	21 (53.8%)	17 (43.6%)	1 (2.6%)	
Heroin	53 (72.6%)	19 (26.0%)	1 (1.4%)	
Other	2 (10.0%)	18 (90.0%)	0 (0.0%)	
I don't use drug	13 (7.8%)	147 (88.0%)	7 (4.2%)	

Source: Drug Abuse Survey (2024)

Table 5: Association between drug types and friends' drug abuse status

Do you take any of the following drug/substances?	Do you have friends who take drugs?		Chi-Square P-value (α=0.05)
	Yes	No	
Alcohol	13 (48.1%)	14 (51.9%)	0.000
Weeds/ weeds Cakes	12 (60.0%)	8 (40.0%)	
Shisha	0 (0.0%)	2 (100.0%)	
Ice	23 (85.2%)	4 (14.8%)	
Cough Syrups abused to get "high"	1 (14.3%)	6 (85.7%)	
Tramadol	12 (30.8%)	27 (69.2%)	
Heroin	21 (28.8%)	52 (71.2%)	
Other	7 (35.0%)	13 (65.0%)	
I don't use drug	16 (9.6%)	151 (90.4)	

Source: Drug Abuse Survey (2024)

The table also reveals that students who indulge in abuse of drugs and/or substances the most fall within the age group (21-25) while students that are above 30 years have the least number with respect to abuse of drugs and substances. This result also reveals that students that are below 16 years do not indulge in drug abuse at all, as only 2 (100.0%) students in this age group responded "I don't use drug". Heroin (21.3%) and Tramadol (12.7%) are revealed to be the drugs that greater number of students indulge themselves in.

Assessing parental drug abuse status and the different kinds of drugs examined in this study, table 4 shows a significant relationship at 5%. Although many of the students claim that their parents don't use drugs and substances (88.0%), it is worthy to note that significant number of parents are involved in drug and substance abuse as the result shows that 72.6% of them take Heroin, as against 26.0% who do not. Likewise, 53.8% of

the parents of these students take Tramadol while 43.6% do not. This shows a serious connection with the result in table 3 above, where the prevailing drugs on students are both Heroin and Tramadol. It is therefore consequential to note that, from this finding, whatever is predominant in the lives of parents have greater tendency for serious and significant effect on the welfare and wellbeing of their children (Foo, et al., 2012).

Examining the relationship between drug types and drug abuse status of the friends of the students, table 5 reveals a significant response with p-value = 0.000 (at 5%). 85.2% of the students' friends take "Ice", 60% take "Weeds/Weed cakes while none of the students responded in regards to "Shisha". 30.8% and 28.8% students respectively responded "Yes" for friends who take Tramadol and Heroin. As noted by Adewale (2022), there are greater chances that students whose friends abuse drug and substance have high tendency of indulging in the same

Table 6: Association between drug types and prevalent cause of drug abuse

Do you take any of the following drugs/substances?	What do you think causes students to abuse drugs/substances?			Chi-Square ($\alpha=0.05$)	P-value
	Peer Pressure	Parental Failure	Truancy		
Alcohol	24 (88.9%)	3 (11.1%)	0 (0.0%)	0.000	
Weeds/ weeds Cakes	4 (20.0%)	16 (80.0%)	0 (0.0%)		
Shisha	2 (100.0%)	0 (0.0%)	0 (0.0%)		
Ice	3 (11.1%)	24 (88.9%)	0 (0.0%)		
Cough Syrups abused to get "high"	3 (42.9%)	4 (57.1%)	0 (0.0%)		
Tramadol	17 (43.6%)	22 (56.4%)	0 (0.0%)		
Heroin	36 (49.3%)	37 (50.7%)	0 (0.0%)		
Other	20 (100.0%)	0 (0.0%)	0 (0.0%)		
I don't use drug	64 (38.3%)	78 (46.7%)	25 (15.0%)		

practice.

Table 6 reveals that association between drug types and prevalent causes of drug abuse among students of higher institution is equally significant at 5%. Upon a closer look at the table, the result reveals that parental failure is the most prevalent cause of abuse of drug and substance by students of tertiary institution. 80% of students taking "Weeds or Weed cakes" responded that "Parental Failure" is responsible for drug abuse, as against the other two factors. Also, 88.9% of students taking "Ice" also responded that "Parental Failure" is the root cause of students getting into drug abuse. Furthermore, 57.1% of the students who abuse cough syrup in order to get "high" gave their response that parental failure is the most prevalent cause of drug abuse among students. Lastly, 56.4% and 50.7% of students who abuse themselves with Tramadol and Heroin respectively responded that parental failure is the major cause of abuse of drug and substance among students. This result is supported by Foo, et al. (2012) who equally noted that parent's substance abuse habits were the most influential factor in affecting a child's substance abuse. However, from the study (table 6), peer pressure is the second reason that causes the prevalence of drug abuse among tertiary institution students, as students that take other drugs responded (100%) that it (peer pressure) is a major cause of drug abuse. Students who take "Alcohol" also agree that the major cause of drug abuse is peer pressure with 88.9% response. This result upholds Zaman, et al. (2015) and Modebelu and Adeniyi (2023) whose findings stipulate that peer pressure is one of the main causes of drug abuse in students.

Conclusion and Recommendation

This study focuses on evaluation of causative factors of abuse of drug and substance among 382 tertiary institution students of the Federal Polytechnic, Ile-Oluji, Nigeria with 48.4% and 51.6% for male and female respectively. Majority of the students who abuse drug and substance falls between ages 21 and 25 years, covering 63.9% of the sampled data.

As regards the drug used by the students, the largest category of respondents perceived that students use tramadol with percentage response rate (31.9%) while the Official Publication of Direct Research Journal of Social Science and Educational Studies. Vol. 13, 2025, ISSN: 2449-0806

lowest response goes for other drugs at 1.6%. Tramadol, Alcohol and Heroin have the highest value among the different drug types examined with 31.9%, 23.0% and 19.1% respectively. Major factors that are considered in the study include parents' abuse of drugs, respondents' age group, and abuse of drugs among respondents' friends. These factors were assessed alongside with the different types of drugs being abused by the students. Pearson Chi-square test of independence (at $\alpha = 0.05$) was used for determining the relationship between each of these major factors and the different types of drugs. Thereafter, it was found out that all factors examined are significant at 0.000. This reveals that there is relationship between each of these factors and the different types of drugs.

Among all the drugs examined in the study, findings from responses reveal that Heroin and Tramadol are both prevalent on the parents of these students. Consequentially, these are the two major drugs that students abuse the most. It is therefore not a surprise to have found out later in the study that the most prevalent reason that causes abuse of drug and substance by students of tertiary institutions, as responses here stipulates, is parental failure followed by peer pressure (Taylor, 2003)! This calls for a major orientation and/or re-orientation of the parents of these students, so that they can be aware of the danger and havoc that the habit of abusing or indulging in drugs and substances pose upon the lives, career and future of their children. Students of tertiary institutions should also be properly orientated and monitored through targeted campaigns (Akanbi, et al., 2015) on their relationships with suspected and identified drug dealers and abusers in the institution and host community. Inhabitants of communities surrounding tertiary institutions should see it as a serious task to report any student involved in any incidence of drug abuse to the parents, law enforcement agencies and/or authority of the institution for proper corrective measures to be taken to rescue students from the menace of drug and substance abuse in our institutions and the society at large.

References

Adewale, O. (2022). Effect of Drug Abuse on the Academic Performance of Secondary School Students in Nigeria, *European Journal of Biology*

- and Medical Science Research, 10(3):72-79
- Akanbi, M., Godwin, A., Anyio, B., Muhammad, M., & Ajiboye, S. (2015). Impact of Substance Abuse on Academic Performance among Adolescent Students of Colleges of Education in Kwara State, Nigeria. Available at: <https://www.iiste.org/Journals/index.php/JEP/article/view/26561>
- Balogun, S. (2006). "Chronic intake of separate and combined alcohol and nicotine on body maintenance among albinorats", *Journal of Human Ecology*, 19(1) 21-24.
- Foo, Y. C., Tam, C. L., & Lee, T. H. (2012). Family Factor and Peer Influence in Drug Abuse: A Study in Rehabilitation Centre. *International of Collaborative Research on Internal Medicine and Public Health*, 4(3):190-202.
- Haladu, A. (2003). Outreach strategies for curbing drug abuse among out-of-school youth in Nigeria: A challenge for Community Based Organization (CBOS), in A. Garba (ed). *Youth and Drug Abuse in Nigeria: Strategies for Counselling, Management and Control*. Kano: Matosa Press.
- Modebelu, O., & Adeniyi, E. (2023). Prevalence of Drug and Substance Abuse among Undergraduates in the University of Lagos: Implication for Campus-Wide Counselling. *Ilorin Journal of Education*, 40(1), 103–113. Retrieved from <https://ije.unilorinedu.sch.ng/index.php/ije/article/view/25>
- NAFDAC (2004). A handbook on Prevention of Drugs and Substance Abuse in Nigeria National Drug Law Enforcement Agency, (1989): Stages and effects of drug abuse
- NDLEA (1997). Drug date collection and research, Lagos: Drug Demand and Reduction Unit National Drug Law Enforcement Agency
- Odejide, A. (1997). Observation on drug abuse in western Nigeria, *African Journal of Psychology*, 15, (80), 113-128
- Okoye, N. (2001). The adolescents and hard drugs: A psychological concern in R.U.N.
- Taylor, S. (2003) *Health Psychology* (5th Ed.) Indian: McGraw Hill.
- UNODC (2005). "World Health Organization Expert Committee on Dependence Producing Drugs. Fourteenth Report Urban Adolescents", *Child Development*, 61, 2032 – 2046
- Zaman, M., Razzaq, S., Hassan, R., Qureshi, J., Ijaz, H., Hanif, M., & Chughtai, F. (2015). Drug abuse among the students. *Pakistan Journal of Pharmaceutical Research*. 1.10.22200/pjpr.2015141-47