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(RESEARCH ARTICLE)



Comparative study of drug abuse among students of tertiary institutions in Ekiti State, Nigeria

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Abstract

Drug and substance abuse has been a thing of concern to the Nigerian Government at all levels as it has continued to affect the lives and subsequently educations of our youths despite all the various measures put in place to stop it. Intense and often misused of drugs leads to addiction which may result to clinically significant impairment or distress, wherein the person involved may also suffer from tolerance and withdrawal. The effect of drug usage among students of higher learning cannot be over emphasized hence the needs to study by comparing the levels of drugs abused by students of tertiary institutions. Some statistical tools; Analysis of variance, Mean plot and bar charts were employed. It is observed that there is significant difference in the type of drugs, institutions and gender. It is also observed that the state university record the highest abuse of drugs and alcohol is the mostly abused substance in all the schools considered.

Keywords: Drug abuse; Substance; Tertiary Institutions; Addiction; Students

1. Introduction

Drug and substance abuse is a public health problem globally and has continued to be a thing of concerned to the government at all levels all over the world. The prevalence of substance abuse among the youths is alarming, this problem not only harms individuals but also affect both families and the societies negatively.

Different definitions have been given to drugs by different people. One of the definitions is that drug is any substance which when taken into the living organism may alter one or more of its functions. Drug as defined by the world Health organization (WHO) is a substance other than those required for maintenance of normal health, which when taken into the living organism, may modify one or more of its functions Ghodes [1]. Drugs can be legal or illegal. The non-medical use of drugs is referred to as drug abuse. When a substance is deliberately used to induce physiological or psychological effects or both for purpose other than therapeutic ones and when the use contributed to health risks or some combination of these, is referred to as abused of substance.

Halabu [2] defined drug abuse as continuous and excessive self-administration of a drug without regards to culturally or medically acceptable pattern.

Oketch [3] showed in his study that drug abuse affects the general population with the youth being the most affected. He was able to show that the age of indulgence has dropped to as low as four years, given many reasons for this. Oketch[3] also opined that youthfulness, physiological and physical change, competition in school and life in general, generational gap, unjust and cruel world among other problems induces abusing of drugs and substances.

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Globally, ancestors explored the properties of every plant, fruit, root and nut they found, the eventual use of these products would be partly determined by pharmacological effects, the nature, intensity and duration of these strange and desirable new experiences and partly by the particular group's pattern of living Kombo [4]. The inkas of South America for instance took cocaine which had a central role in their religious and solid systems throughout civilization which stretched from around AD 1200 to AD 1500 Wolmer [5].

A report by United Nations Drug Control Programme (UNDCP) shows that 60% of student's population abuse drugs. In a survey by NACADA in 2006 it was shown that substance abuse is wide spread. It affects the youth mostly but cut across all social groups.

In Kenya the most commonly abused drugs by the youths include; alcohol, tobacco, blong, miraa, a host of inhalants and prescription drugs NACADA [6]. Heroin and cocaine are also growing rapidly in Kenya especially in large cities.

According to US national survey; 78% of adolescents used alcohol, out of which 47% reported regularly drinking alcohol Swedsen et al. [7]. In 2012 approximately 1700 deaths were attributed to drug abuse in the United Kingdom and Island; out of which over 70% of the casualties were male Corkery et al. [8]. Salima and Shaista [9] in their study highlighted some factors that may contribute to drug abuse as age and gender, poverty, peer pressure and media, family, availability and accessibility of substances among others.

The epidemiology of drug addiction in a given society however seems to be dependent on cultural values, beliefs and altitudes to drug use, which are variables across cultures and geographical regions Emmanuel et al. [10]. Mugo [11] believed that there are numbers of biological, psychological and social factors, called risk factors that can contribute to a person's likelihood of developing a drug-abuse or a drug dependency disorder. They believed that the frequency to which drug- abuse disorder occur within some families seems to be higher than could be explained by an addictive environment of the family. Foo et al. [12] opined that parent's substance abuse habits were the most influential factors in affecting a child's substance abuse. Adeyemo et al. [13] in their study revealed that 46.6% of the sample respondents have taken drug for the reason which are non-medical for at least once.

It is evident that drug and substance abuse is still a problem among student at various levels of institutions. This research work therefore carried out a comparative study on the levels of the usage of some common drugs and substances being abused by students in federal, state and private tertiary institutions.

Objective of the study

The main objective of the study is to compare abuse of drug among students in tertiary institutions which includes selected public and private's institutions of learning.

1.1 Research Questions

The research work attempts to find answers to the following questions:

- Which institution is mostly affected by drug abuse?
- What age distribution and gender are mostly prone to drug abuse?
- What are the factors influencing students to drug abuse?

1.2 Hypothesis

There is significant difference in the usage of different types of drugs with respect to institution.

2. Research Methodology

2.1 Research design

Descriptive survey.

2.2 Setting of the study

The study was carried out among students of four higher institutions in Ekiti-State: Federal Polytechnic Ado, Federal University Oye, Ekiti State University, Ado and Crown Polytechnic Odo, Ado-Ekiti.

3. Results

3.1 Research Population

1000 questionnaires were distributed among students of four higher institutions in Ekiti State.

3.2 Instrument of data collection

Questionnaires was administered to students in the selected institutions. The questionnaire comprises drugs that is mostly abused among students, type of institution attended, gender, age distribution with respect to drug abuse, factors influencing students to drug abuse.

The drugs that were considered to be commonly abused include; Tobacco, Alcohol, Marijuana, Cocaine etc.

3.3 Sampling Techniques

Two-way Analysis of variance (Randomized Block Design)

In a two-way classification of experiment units, each observation is classified by treatment type and block type. The model for this design is given as;

$$y_{ij} = \mu + b_j + \tau_i + \varepsilon_{ij},$$

$$\text{where } \begin{matrix} i = 1, 2, \dots, t \\ j = 1, 2, \dots, b \end{matrix}$$

y_{ij} is the yield of treatments i in block j , μ is the overall mean, b_j is the block effect, τ_i is the deviation of treatment i from the average of the set of all the treatments in the experiment, B is the total number of blocks; t is the total number of treatments and ε_{ij} is the error term.

$$SS_{total} = SS_{treatment} + SS_{block} + SS_{error}$$

$$\sum_{ij} (y_{ij} - y_{..})^2 = \sum (y_{i.} - y_{..})^2 + \sum_{ij} (y_{.j} - y_{..})^2 + \sum_{ij} (y_{ij} - y_{i.} - y_{.j} + y_{..})^2$$

Table 1 ANOVA Table

Source	Sum of squares (SS)	Degree of freedom (DF)	Mean squares (MS)	F
Treatment	$\sum_{i=1}^t \frac{T^2}{b} - \frac{G^2}{n}$	t-1	$\frac{SS_{treatment}}{t-1}$	$\frac{MS_{treatment}}{MS_{error}}$
Block	$\sum_{j=1}^b \frac{B^2}{t} - \frac{G^2}{n}$	b-1	$\frac{SS_{block}}{b-1}$	$\frac{MS_{block}}{MS_{error}}$
Error	By subtraction	(t-1)(b-1)	$\frac{SS_{error}}{(t-1)(b-1)}$	
Total	$\sum_{ij} y_{ij}^2 - \frac{G^2}{n}$	bt-1		

3.4 Graphical Presentation of Data

A graph is the pictorial presentation of the relationship between variables. Many types are employed in statistics, depending on the nature of data involved and the purpose of which the graph is intended. For the analysis a simple bar chart and main effect plots are used.

The main-effect plot represents a simple line plot of the response means for each treatment.

3.5 Analysis and results

Table 2 ANOVA table Testing for significant difference in the usage of different types of drugs with respect to institutions

Source of Variation	SS	df	MS	F	P-value	F crit
Institutions	4013.075	3	1337.692	25.22757	5.5E-08	2.960351
Drugs	5465.225	9	607.2472	11.45209	3.8E-07	2.250131
Error	1431.675	27	53.025			
Total	10909.98	39				

note that 5.5E-08= 0.000000055

From the above, there is significant difference in the types of drug used, and there is also significant different in the type of schools with respect to drug usage.

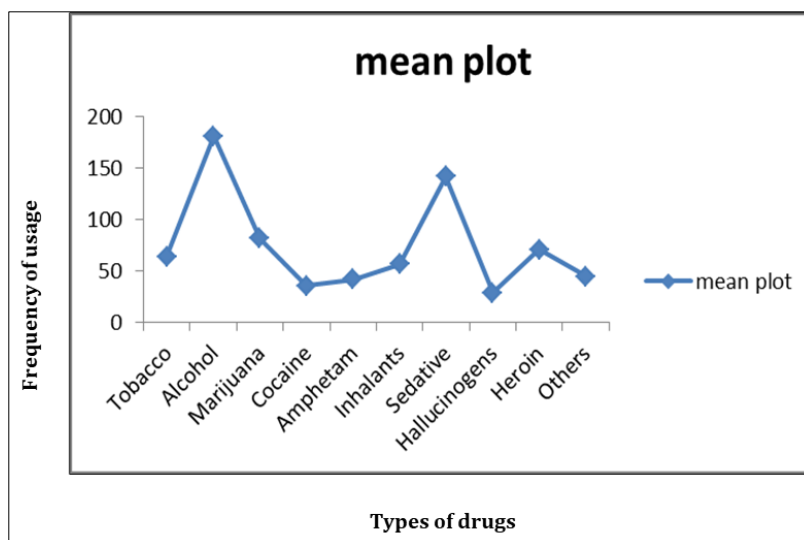


Figure 1 The mean plot of the drugs usage

From the graph alcohol is the highest, followed by sedative e.t.c. in that order in terms of magnitude of usage.

Table 3 ANOVA table of university types against drug usage

Source of Variation	SS	df	MS	F	P-value	F crit
Universities	5418.067	2	2709.033	18.74571	3.98E-05	3.554557
Drugs	7112.033	9	790.2259	5.468131	0.001099	2.456281
Error	2601.267	18	144.5148			
Total	15131.37	29				

There is significant difference in the level of usage of drugs and substances in the institutions

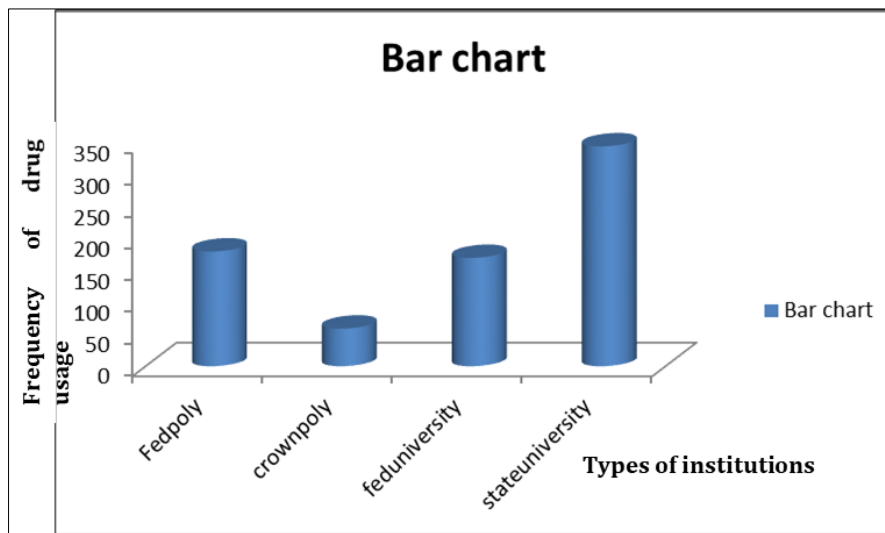


Figure 2 Bar charts showing the usage of alcohol by institutions

From the bar chart, Ekiti state university has the highest users of alcohol, followed by Fedpoly the Fed University and lastly the Crown Poly

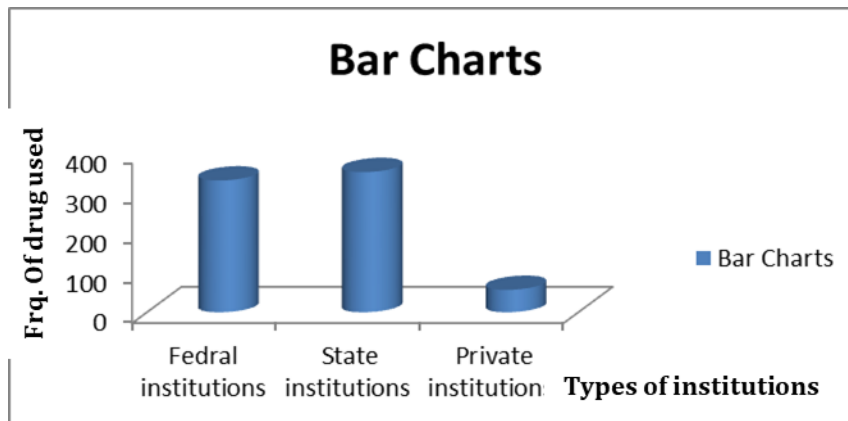


Figure 3 Bar chart of types of school and drug usage

From the chart above the state school has the highest number of students engaging in drugs abuse closely followed by the students of the federal institutions and lastly and distantly followed by students in private institution.

Table 4 ANOVA table for gender against drug abuse

Source of Variation	SS	df	MS	F	P-value	F crit
gender	1729.8	1	1729.8	6.891023	0.02758	5.117355
Drugs	11170.2	9	1241.133	4.944317	0.013006	3.178893
Error	2259.2	9	251.0222			
Total	15159.2	19				

There is significant difference in the levels of drugs and substance abuse between male and their female counterpart.

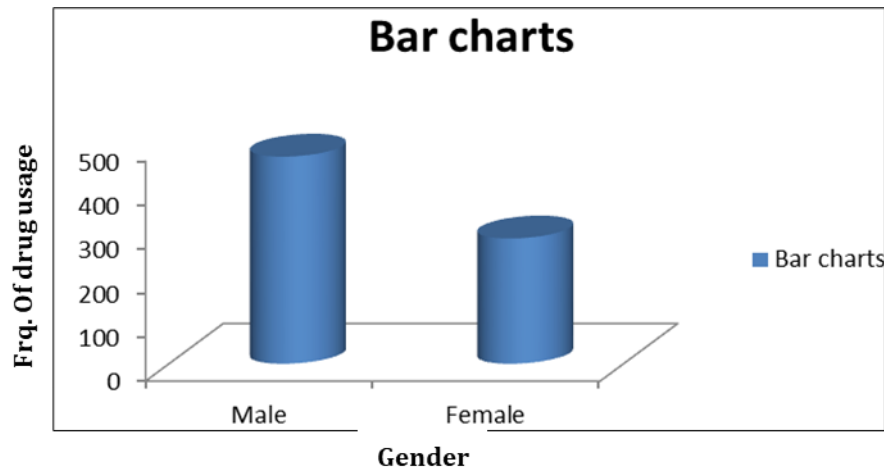


Figure 4 Bar chart of gender with respect to drugs abuse

The bar charts show that more male abuse drugs and substances than their female counterparts.

Table 5 ANOVA table for Age against drug usage

Source of Variation	SS	df	MS	F	P-value	F crit
Age	12494.08	5	2498.817	18.54613	5.82E-10	2.422085
Drugs	3441.017	9	382.3352	2.837679	0.009836	2.095755
Error	6063.083	45	134.7352			
Total 21998.1859						

There is significant difference in age distribution with respect to drugs and substance abuse.

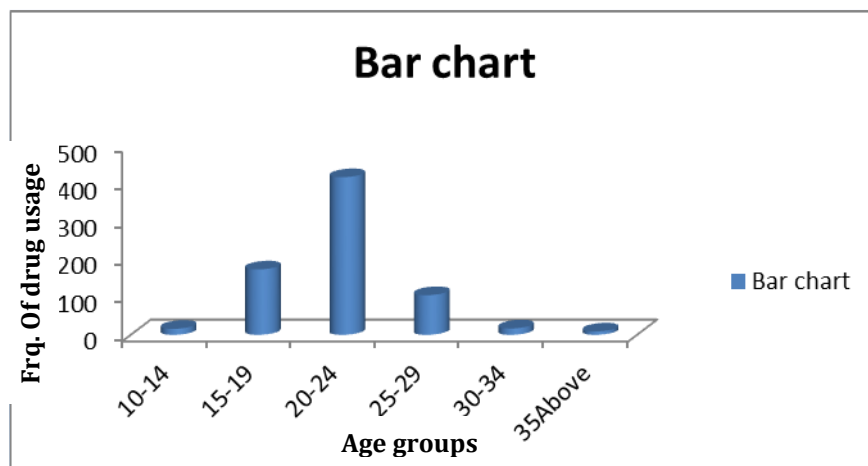


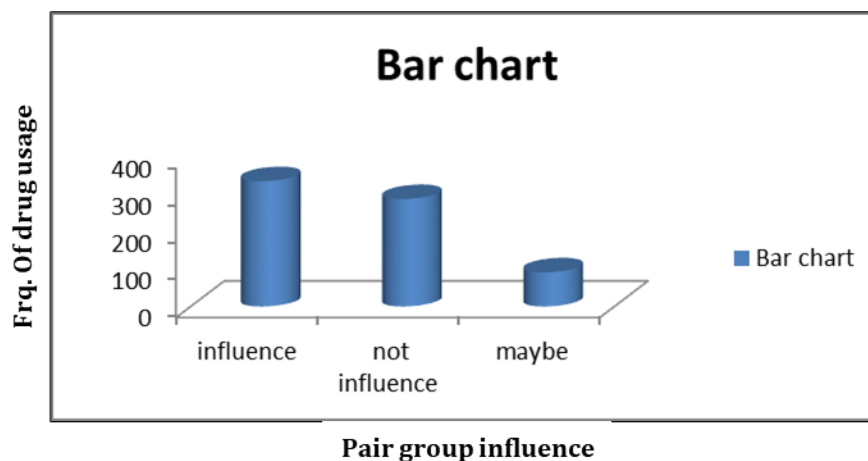
Figure 5 Bar chart for age distribution and Drug abuse

Students in the ages of 24 to 25 are the highest users of drugs while the students whose ages are above 35 are the least users of drugs.

From the below sexual partners influence is significant in students' habit of engaging in drugs and Substance abuse.

Table 6 ANOVA table of Sexual partners against drugs usage

Source of Variation	SS	df	MS	F	P-value	F crit
influenced	3371.267	2	1685.633	24.80088	6.73E-06	3.554557
Drugs	7407.2	9	823.0222	12.1092	5.81E-06	2.456281
Error	1223.4	18	67.96667			
Total	12001.87	29				

**Figure 6** Bar charts of influences on drug usage

More students that engaged in the acts are influenced by their sexual partners followed by those who are not influenced by their partners.

4. Discussion

The analysis of variance clearly shown that there is significant difference among the different types of drugs being abused with respect to institutions. It is also shown that there is difference in the levels of drugs abused among the institutions considered, with state institution having the highest abusers of drugs and private institution recording the lowest number of students that indulge in drug and substance abuse. The substance that is mostly abused is alcohol, while Hallucinogens is the least substance being abused as shown in the graphs. The graph shows that there is difference in the ages of students who indulged in drugs, with student between the ages of 20-24 years as the age groups that are mostly involved. This group incidentally is expected to be the most active age group.

The influence rate of sexual partners is also significant with respect to drug abuse as shown by the analysis of variance and this result is complimented by bar charts. The level of indulgence by male in drug abuse is higher than their female counterpart as shown in figure 5.

5. Conclusion

From the results obtained above, it can be concluded that the type of schools, gender, sexual partners or peer groups can influence student considerably in participating or indulging in drug or substance abuse. There is need for early intervention that targets students in public university since drug usage and abuse is high compare to private university. More students should be made to develop drug abuse prevention strategies that target students at high risk.

Recommendations

- Health education that gears towards prevention of drug abuse should be intensifies in various institutions and social media can be used to raise students' awareness of the risks involves in drug abuse.

- Government, school management/ authority and parents must take appropriate measures against abuse of drug.e.g strong punitive measures must be imposed on the offenders.
- All hands must be on deck to help the students to be proactive towards achieving sustainable development goals in Nigeria and the world at large.
- Laws prohibiting the abuse of drugs should be fully enforced and necessary punishments effected to serve as deterrent to others.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare that there is no conflict of interest whatsoever among the authors in the cause of executing this research work.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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