



## Psychoactive substance use among secondary school students in a semi-urban setting in Nigeria: Prevalence, pattern and sociodemographic correlates.

Dr Eriyo Williams

MBBS, FWACP(Psychiatry). Dept of Psychiatry, Ambrose Alli University, Ekpoma Edo State Nigeria).

### ABSTRACT:

#### Objective:

Psychoactive substance use has been a major challenge among secondary schools in Nigeria with associated physical, health and mental health complications. This study was aimed to establish the prevalence, pattern and sociodemographic correlates of psychoactive substance use among secondary school students in a locality in Nigeria.

**Method:** This is a descriptive study, permission was obtained from appropriate school authorities and consent was taken from each participant. The W H O Students' Drug Use Questionnaire which had been previously validated was used to obtain drug use information from the respondents. The data collected was analyzed using Statistical Package for Social Sciences [SPSS 16] and p value set at less than 0.05.

**Results:** A total of 940 students were analyzed of whom 53.4% n= 502 were males and 46.6% [438] were females. The mean age was 14.3 years. 73.8% [n=694] lived with their parents, 12.9% [n=121] lived outside the home, 10.9% [n=102] with guardians and 2.4% with friends. The commonest substances used were alcohol, stimulants and hypnotosedatives with life time use prevalent rates of 41.2%, 24.5% and 7.0% and current use prevalent rates of 17.8%, 18.4% and 2.3% respectively. The life time use prevalent rates of nicotine, opioids, cocaine and cannabis were 6.6%, 1.9%, 0.3% and 2.2%. Stimulant [coffee and kolanuts] was the most common currently used substance with prevalence of 18.4%. The overall lifetime prevalence use rate of any substance was 86.8%. Logistic regression analysis showed that parental drug use, use of drug by peers and school mates, gender and residential place significantly correlated with the use of drug by the students.

**Conclusion:** Psychoactive substance use was prevalent among secondary school students in this study and it is advocated that concerted efforts should be made to stem the trend through massive campaign by government and non governmental bodies against drug abuse and inclusion of drug education in schools curriculum.

Received 27 September, 2021; Revised: 08 October, 2021; Accepted 10 October, 2021 © The author(s) 2021. Published with open access at [www.questjournals.org](http://www.questjournals.org)

### I. INTRODUCTION:

Psychoactive substance is a substance that alters the normal biological and psychological function of the body, especially the central nervous system<sup>1</sup> or a substance that modifies perceptions, cognitions, mood, behaviour and general body functions<sup>2</sup>. Some of these substances when properly administered have therapeutic effects. For example, opium has been used to relieve pain. Also they alter the body functions either positively or negatively depending on the body composition of the user, the type of drug used, the amount used and whether used alone or with other drugs. However, over the past few decades, the use of psychoactive substances has spread at an unprecedented rate across the globe. With some 200 million people or 5 percent of the total World's population aged 15 - 64 years reporting a drug use of at least once in the past 12 months<sup>4</sup>. World Health Organization (WHO) estimates that globally, 25-90% of children and adolescents have ever used at least one substance<sup>32</sup>. In most parts of Europe and Asia, opiates continued to be the main drug of abuse, accounting for 62 percent of all treatment demands<sup>4</sup>. In the United States of America, cocaine was reported as the main drug linked to drug related treatment and accounts for about 60% of treatment demand<sup>4</sup>. In 2012, an estimated 23.9million (9.2%) Americans aged 12 years older reported illicit drug use within the past year and historic trends indicate particularly large increases in heroin consumption<sup>33</sup>. In Africa, cannabis is the most commonly used illicit drug and accounts for 64% of treatment related cases of drug abuse<sup>1</sup>.

Currently Nigeria is facing epidemic of substance use with visible episode along the streets in both urban and rural areas where young adults and adolescents gather to smoke marijuana<sup>6</sup>. Available data from studies reported that alcohol, tobacco and cannabis remain the most commonly used substances. While opioids, cocaine and cannabis are major illicit drugs, alcohol and tobacco hitherto described as 'gateway' drugs are socially acceptable and legally approved in the society<sup>10,21,28,40</sup>. Nigeria along with other developing countries of Africa has been experiencing a rapid increase in production, distribution and consumption of multiple psychoactive substances<sup>39,43,54</sup>. The dreadful consequences of such spread have become a big issue of great concern to all. Most studies on the prevalence of substance use in Nigeria were based on specific groups in the community<sup>44-45,55</sup>. These groups are mostly undergraduates and secondary school pupils because of their perceived vulnerability to drugs, easy accessibility and high level of literacy<sup>20,44,47,56</sup>. Available report in most of the literatures shows that male students use psychoactive drugs more than their female counterparts<sup>32,43</sup>. Oshodi et al<sup>29</sup> conducted a study on prevalence and associated factors of substance use among 402 youths in some selected schools in Lagos using the modified WHO student's drug use questionnaire. It was reported that the commonest substances used were caffeine (kolanuts and coffee), mild analgesics (Paracetamol and Aspirin) and the antimalarias most especially chloroquine with lifetime prevalence rates of 85.7%, 73.8% and 65.7% respectively. For the "gateway drugs" alcohol and tobacco, their life time use prevalence rates were 9.2% and 5.2% while the lifetime use prevalence rate for cannabis was 4.4%<sup>29</sup>. A similar study in an institution in Minna, Northern central Nigeria showed 1% had used heroine, 17% alcohol, 22.5% cigarette, 14% kolanuts and 11% cannabis<sup>60</sup>. Though the respondents in the study admitted to using psychoactive substances, they all expressed a negative attitude to its use<sup>60</sup>.

Another study on the pattern of substance use among senior secondary school students in south western city of Nigeria showed that the commonly used substances were analgesics (46.7%), cannabis (16.7%), tobacco (14.3%) and inhalers (14.3%) while 8.3%, 7.4% and 6.4% of the respondents were found to be using alcohol, sedatives and solvents respectively<sup>58</sup>

Though many studies have been done on substance use among secondary school students in Nigeria<sup>28-30</sup> no similar study has been reported among secondary school students in South south region of Nigeria. This is even more relevant as the study location is close to one of the corridors where the National Drug Law Enforcement Agency (NDLEA) has reported high incidence of planting and seizure of cannabis.

## II. METHODS

### Study location

Esan West Local Government Area of Edo state is in the South south region of Nigeria, it was created in 1984 and consists of ten [10] wards. According to the last National Population Census of 2009 it has a population of 127, 718<sup>62</sup>. The Local Government Headquarter is located in Ekpoma. The following infrastructures are located within Ekpoma town, Ambrose Alli University, three public health care facilities, two Magistrate courts, one State high court, many privately owned health institutions and some state government ministries. The people are mainly farmers and civil servants including staffs of Irrua Specialist Teaching Hospital and Ambrose Alli University. Information from the Chief Inspector of Education [CIE] in Esan West Local Government Area showed that there are 16 public secondary schools with a population of 10,587. The number of students in the junior secondary schools was 4,935 while there are 5,652 students in the senior secondary schools.

### Participants

A total of four out of 16 secondary schools were randomly selected for this study. Each school had both junior and senior secondary classes. The number of students from each school was determined using multistage sampling technique. Sample size for population was calculated using Fisher's formula<sup>64</sup>

$$n = z^2 pq / d^2$$

Where n is desired sample size and z is the standard normal deviation set at 1.96 [95% confidence level]

p is the estimated life prevalence of substance use in this population from previous study

$$= 50.7\% (0.507) \quad 60$$

$$q = 1 - p$$

$$d = \text{sample error tolerated} = 5\%$$

$$n = 1.96 \times 1.96 \times 0.507 \times 0.493 / 0.05 \times 0.05$$

$$= 384$$

Therefore the minimum sample size is 384.

Improper response rate of 10% may be set for possible incompletely filled data during the study = 38.4

The total minimum sample size is 384 + 38.4 = 422

For school survey with a population of more than 10,000 pupils, Smart et al<sup>64</sup> suggested 10% proportion of population as sample size. Since the total population of students in Esan West Local Government Area was

10,587 which constituted the sample frame, 10% of the total population i.e., a total of **1,060** students will approximately constitute sample size as it is well above the minimum sample size and will allow for robust statistical analysis.

**Instruments** A modified version of the World Health Organization (WHO) Student Drug Use Questionnaire was used. The World Health Organization in collaboration with the United Nations Fund for Drug Abuse Control originally developed it for use in different socio-cultural settings<sup>65</sup>. The reliability and validity of the instrument have been found to be satisfactory in seven countries, Nigeria inclusive, where it was pilot tested<sup>32,67</sup>. It has three (3) sections; the first section of the questionnaire provides questions on socio-demographic data. The second section assesses 'Current Use' and 'Lifetime Use' of drugs and the attitude of the respondents towards drug use. Lifetime use is defined as ever use of any of the listed drugs and current use as the use of any drug(s) in the past 30 days. The substances of enquiry include tobacco, alcohol, cannabis, opiates, cocaine, psychostimulants, hallucinogens, organic solvents and hypnosedatives. The last section provides questions relating to drug use by members of the respondents family friends and his or her knowledge of the harmful effects of drug use<sup>65</sup>. The prototype questionnaire consists of 22 items, comprising 6 items on demographic variables, 14 items on frequency and age at first use of 10 types of psychoactive substances and 2 items on honesty. Items 1-16 sought information on respondents' socio-demographic characteristics, items 17-20 on parents' use of cigarette and alcohol, items 21-31 on frequency of use, age and level of education at first use of 11 types of psychoactive drug. Item 32 sought information on a fictitious drug, to check over reporting. Item 33-34 covered any other drug that the student and or his/her class mate might have used. Item 35 deals with perceived availability of the substances within the environment. Items 36-37 aimed to test honesty of reporting by the student.

The instrument was pretested in a secondary school not included in the main study. Twenty (20) students were randomly selected and made to complete the questionnaire. The aim was to determine the ease of administration and the duration of completion of the questionnaire. The findings showed that the instrument was easy to administer and took an average of 50 minutes to administer. The analyzed pretest data (n=20) showed a cronbach's Alpha of 0.757 which further confirmed the internal consistency of the items in the questionnaire.

The data collection was done in 3 months with the assistance of two research assistants (medical undergraduates) who assisted in the distribution and collection of questionnaires. The research assistants were trained by the researcher on the items in the questionnaire, the importance of confidentiality and how to provide clarifications to students where and when necessary.

The data was analyzed using SPSS version 16. Prevalence of use of psychoactive substances was calculated, socio-demographic variables were analyzed using statistical tools like the means, standard deviation and frequency tables. Chi square was used to determine the relationships for discrete or categorical variables and regression analysis done for factors that had significant associations while student t-test was used to determine the relationship between continuous variables. P value was set at less than 0.05. International standard classification of occupation (ISCO-88) was used to code respondents' parental occupations (See appendix 111).

**Table 1: Socio demographic characteristics of respondents.**

Variables	Frequency	Percentage	Variables	Frequency	percentage
<b>Gender</b>			<b>Mother's O.G</b>		
Males	502	53.4	0		64
6.8					
Females	438	46.6	1		137
14.6					
Age ranges in yrs			11		5
0.5					
10-14	496	52.8	111		53
5.6					
15-19	441	46.9	1V		271
28.8					
20+	3	0.3	V1		401
42.7					
Christian	937	99.7	<b>Mother's E L.</b>		
Muslim	2	0.20	none at all		38
4.0					
T.A.R	1	0.10	Primary		178
18.9					

<b>Father's alive</b>			Secondary	367
39.0				
Yes	811	86.3	University/Post SC	174
18.5				
No	129	13.7	Adult education	46
4.9				
<b>Mother's alive</b>			Don't know	137
14.6				
Yes	899	95.6	<b>Respondents Resident</b>	
No	41	4.40	Outside the home	121
12.9				
<b>Parent M.S</b>			Home with parents	691
73.8				
M&L T	628	66.8	With Gaurdians	102
10.9				
M&L A	109	53	<b>Religiousity</b>	
Sep/Divorced	53	150	Very religious	721
76.7				
Not applicable	150	16	Just religious	177
18.8				
<b>Fathers OG</b>			Not religious	42
4.5				
0	33	3.5	<b>Relationship with mo</b>	
1	262	27.2	Not applicable	56
6.0				
11	18	1.9	Friendly	849
90.3				
111	26	2.8	Not friendly	35
3.7				
1V	85	9.0	<b>Relationship with Teachers</b>	
V	380	4.4	Not applicable	
V1	68	7.2	Friendly	895
95.2				
V11	26	2.7	Not friendly	45
4.8				
V111	21	2.2	<b>Relationship with</b>	
1X	21	2.2	<b>Schoolmates</b>	
<b>Fathers E. L</b>			Not applicable	
None at all	31	3.3	Friendly	905
96.3				
Primary	128	13.6	Not friendly	35
3.7				
Secondary	321	34.1	<b>Birth Order</b>	
University/Post sc	286	30.4	First child	257
27.3				
Adult education	42	4.5	Second child	186
19.8				
Don't know	132	14.0	Third child	206
21.9				
<b>RelationshipWF</b>			Fourth child or more	291
31.0				
N. Applicable	124	13.2	<b>Mental Health</b>	
Friendly	748	79.6	Good	816
86.8				
Not friendly	68	7.2	Average	105
11.2				
<b>Relationship with Sibs</b>			Poor	19
2.0				
Not applicable	36	3.8	<b>Respondents residents</b>	

Not Friendly 12.9	26	2.8	Outside the home	121
Friendly 73.8	878	93.4	Home with parents	694
<b>Study difficulty</b> 10.9			With guardians	102
Absent 2.4	636	67.7	With friends	23
Present	304	32.3		

### Sociodemographic of respondents

One thousand and sixty students took part in the study out of which 940 questionnaires were analyzed representing (88.7%) of the total population of respondents. One hundred and twenty (120) questionnaires representing (11.3%) were rejected for analysis because of gross inconsistencies and non-completion of vital aspects of the questionnaires. Five hundred and two (502) males and four hundred and thirty-eight (438) females representing (53.4%) and (46.6%) respectively participated in the study. The response rate was good. . The mean age of all the respondents was  $14.28 \pm 2.0$  years. The mean age among the males was  $14.6 \pm 2.05$  years while that of the females was  $13.9 \pm 1.87$  years. Male students were significantly older than their female counterparts ( $t=5.372$ ;  $p<0.0001$ ). Majority of the respondents were in the age group 10-14 years (52.8%). Nine hundred and thirty seven (99.7%) respondents were Christians, two (0.2%) were Muslims while only 1(0.1%) practiced traditional African religion.

Six hundred and ninety four of the students (73.8%) were living at home with their parents, 121 (12.9%) were living alone in rented apartments, while (10.9%) and (2.4%) were living with guardians/relatives and friends respectively.

Majority of the students (895) had good relationship with teachers (95.2%). Similarly, a high percentage of (96.3%) has good relationship with schoolmates. (Table 1)

**Table 2: Prevalence of substance use**

Variables	Lifetime use n (%)	Past use n (%)	current use n (%)
Nicotine	62(6.6)	44(4.7)	18(1.9)
Alcohol	387(41.2)	220(23.4)	167(17.8)
Cannabis	26(2.2)	17(1.6)	9(0.6)
Stimulants	230(24.5)	57(6.1)	173(18.4)
Hypnotosedatives	66(7.0)	44(4.7)	22(2.3)
Opioids	18(1.9)	9(0.96)	9(0.96)
Cocaine	3(0.3)	3(0.3)	0.0
Organic solvents	24(2.6)	22(2.3)	2(0.2)

### Prevalence of substance use

The overall lifetime prevalence use of any substance was 811 (86.8%) and the current use prevalence of any substance was 400 (42.5%). The commonest substance used was alcohol with lifetime prevalence of (41.2%) and current use prevalence of (17.8%). This was followed by stimulants with lifetime and current use prevalence of (24.5%) and (18.4%) respectively. For the hypnotosedatives (diazepam, nitrazepam, bromazepam and chlordiazepoxide) the lifetime use prevalence was (7.0%) and current use of (2.3%) was reported by respondents. Nicotine had a lifetime and current use prevalence of (6.6%) and (1.9%) respectively. The lifetime prevalence use of opioids, cocaine and organic solvents were relatively low and no respondent reported current use prevalence of cocaine. Both the lifetime and current use prevalence of opioids were approximately (2%) and (1%) respectively.(Table 2)

**Table 3: Types of substances used by the respondents**

Substance	Frequency N=940	Percentage %
<b>Alcohol</b>		
Beer	13	3.4
Palm wine	110	28.4

Spirit	14	3.6
Beer and palm wine	140	36.2
Beer and Spirit	69	17.8
Beer and Ogogoro	41	10.6
<b>Stimulants</b>		
Coffee	30	13.0
Kolanuts	67	29.1
Pro-plus	7	3.0
Amphetamines	18	7.8
Coffee and Colanuts	108	46.9
<b>Hypnosedatives</b>		
Metaqualone	12	18.2
Diazepam	28	42.4
Nitrazepam	12	18.2
Chlordiazepoxide	14	21.2
<b>Opioid</b>		
Pethidine	1	5.5
Codeine	2	11.0
Tramadol	15	83.5
<b>Inhalants</b>		
Petrol	17	70.8
Glue	5	20.8
Organic solvents	2	8.4

**Table 4: current use of substance by the respondents**

Variables	Monthly users n%	Weekly users n%	Daily users n%
Nicotine	6(33.3)	6(33.3)	6(33.3)
Alcohol	140(82.8)	20(11.9)	7(4.2)
Cannabis	8(100)	0.0	0.0
Stimulants	148(85.5)	12(6.9)	13(7.5)
Sedatives	17(77.3)	4(18.2)	1(4.5)
Opioids	8(88.9)	1(11.1)	0.0

#### Types of substances used by the respondents

The data on alcohol and stimulant shows that most respondents used more than one psychoactive substance.

##### Alcohol

Two hundred and fifty respondents (64.6%) used more than one alcohol related substances. Palm wine and beer, which were the most common combination accounted for (36.2%). This was followed by palm wine use only (28.5%), a combination of spirit and beer (17.8%), beer and *ogogoro* (locally brewed spirit) (10.6%), beer only (3.4%) and spirit only (3.6%).

##### Stimulant

A combination of coffee and kolanuts (*kola acuminata*) were the most commonly used substances reported by over (45%) of the respondents. This was followed by kolanuts alone (29.1%) of the respondents. Other stimulants were coffee, amphetamines and pro-plus reportedly used by (13.0%), (7.8%) and (3.0%) respectively.

##### Hypnosedatives

The most commonly used hypnosedatives was diazepam used by 28 (42.4%) of the respondents. Twelve (18.2%) each of the respondents used metaqualone and nitrazepam. Fourteen (21.2%) of the respondents used Chlordiazepoxide.

##### Opioids

Out of the eighteen respondents who reported the use of opioids, 15 (83.3%) used tramadol, 2 (11.0%) used codeine while 1 (5.5%) used parenteral (intramuscular or intravenous) pethidine.

##### Inhalants

Twenty-four (24) respondents reported the use of inhalants; 17 (70.8%) used petrol, 5(20.8%) of the respondents' snuffed glue and 2 (8.4%) inhaled organic solvents.(Table 3)

**Current use pattern of substances by the respondents**

A sizeable number of current users of alcohol, stimulants, opioids and sedatives (83.8%; 85.5%; 88.9% and 77.3%) respectively, reported using them monthly. Hundred percent of current users of cannabis also reported using them monthly. Of the 18 current users of nicotine, (33.3%) of the respondents used it daily, weekly and monthly respectively. The users of organic solvents were monthly users while the few respondents who reportedly used cocaine were past users. (Table 4)

**Table 5: Relationship between socio demographic characteristics of the respondents**

Variables	Nicotine		Alcohol		Stimulants		Sedatives		Cannabis		Opioids	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Gender												
Male	14(2.8)	488(97.8)	88(17.5)	414(82.5)	106(21)	396(79)	11(2.2)	49(97.2)	6(1.2)	496(98.8)	8(1.6)	494(98.4)
Female	4(0.9)	434(99.1)	79(18)	359(82)	67(15)	371(85)	11(2.5)	427(97.5)	2(0.5)	436(99.5)	1(0.2)	437(99.8)
X <sup>2</sup>	4.381		0.41		5.274		0.105		0.427		4.598	
Df	1		1		1		1		1		1	
P	<b>0.029</b>		0.453		<b>0.013</b>		0.455		0.409		<b>0.031</b>	
Age gp (yrs)												
10-14	4(0.8)	492(99.2)	78(15.7)	418(84.3)	90(18.1)	456(81.9)	15(3.0)	481(97)	1(0.2)	495(99.8)	2(0.4)	494(99.6)
15-19	10(2.3)	431(97.7)	87(19.7)	354(80.3)	82(18.6)	359(81.4)	7(1.6)	434(98.4)	5(1.1)	436(98.9)	6(1.4)	435(98.6)
>20	0(0.0)	3(100)	2(66.7)	1(33.3)	1(33.3)	2(66.7)	0(0.0)	3(100)	0(0.0)	3(100)	1(33.3)	2(66.7)
X <sup>2</sup>	3.442		7.485		0.478		2.181		3.218		35.523	
Df	2		2		2		2		2		2	
P	0.179		<b>0.024</b>		0.787		0.336		0.20		<b>0.0001</b>	
Religion												
Christianity	14(1.5)	923(98.5)	167(17.8)	770(82.2)	167(17.8)	770(82.2)	22(2.3)	15(97.7)	6(0.6)	931(99.4)	9(1.0)	928(99)
Islam	0(0.0)	2(100)	0(0.0)	2(100)	0(0.0)	2(100)	0(0.0)	2(100)	0(0.0)	2(100)	0(0)	2(100)
Trad.religion	0(0.0)	1(100)	0(0.0)	1(100)	1(100)		0(0.0)	1(100)	0(0.0)	1(100)	0(0)	1(100)
Df	2		2		2		2		2		2	
P	0.978		0.722		0.087		0.965		0.40		0.096	

**Relationship between psychoactive substance use and sociodemographic characteristics of the respondents.**

**Gender**

Significantly more males were current users of cigarette ( $x^2 = 4.38$ ;  $p=0.03$ ), stimulants ( $x^2=5.27$ ;  $p=0.01$ ) and opioids ( $x^2=4.60$ ;  $p=0.03$ ). There was no significant association between gender and other drugs.

**Age**

Respondents in the age group 15-19 years had the highest current use prevalence rates for alcohol ( $x^2=7.49$ ;  $p=0.02$ ) and opioids ( $x^2=35.52$ ;  $p=0.001$ ).

**Religion**

There was no significant association between religion and current use of any of the substances.(Table 5)

**Table 6: Parental characteristics and current use of some psychoactive substances**

Variables	Nicotine		Alcohol		Stimulants		Sedatives		Cannabis	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Father's occ. grp										
Middle class	7(1.3)	523(98.7)	84(15.8)	446(84.2)	100(18.9)	430(81.1)	10(1.9)	520(98.1)	2(0.4)	528(99.6)
Lower class	7(1.7)	403(98.3)	83(20.2)	327(79.8)	73(17.8)	337(82.2)	12(12.9)	398(97.1)	6(1.5)	404(98.5)
X <sup>2</sup>	0.235		3.036		0.174		1.094		1.305	
Df	1		1		1		1		1	
P	0.417		0.049		0.371		0.203		0.232	
Father's edu.Lev.										
Adult education	0(0.0)	42(100)	6(14.3)	36(85.7)	12(18.6)	30(71.4)	1(2.4)	41(97.6)	1(2.4)	41(97.6)
Don't know	1(0.8)	131(99.2)	13(9.8)	119(90.2)	16(12.1)	116(87.9)	3(2.3)	129(97.7)	3(2.3)	129(97.7)
No formal edu.	2(6.5)	29(93.5)	12(38.7)	19(61.3)	13(41.9)	18(58.1)	0(0.0)	31(100)	0(0.0)	31(100)
Primary edu.	3(2.3)	125(97.7)	25(19.5)	103(80.5)	26(20.3)	102(79.7)	3(2.3)	125(97.7)	0(0.0)	128(100)
Secondary edu.	5(1.6)	316(98.4)	58(18.1)	263(81.9)	58(18.1)	263(81.9)	6(1.9)	315(98.1)	1(0.3)	320(99.7)
Tertiary edu.	3(1.0)	283(99.0)	53(18.6)	233(81.4)	48(16.8)	238(83.2)	9(3.1)	277(96.9)	1(0.3)	285(99.7)
X <sup>2</sup>	7.345		15.727		18.627		1.872		9.509	
Df	5		5		5		5		5	
P	0.196		<b>0.008</b>		<b>0.002</b>		0.868		0.090	
Mother's occ.grp										
Middle class	9(2.0)	439(98.0)	88(19.6)	360(80.4)	87(19.4)	361(80.6)	9(2.0)	439(98.0)	3(0.7)	445(99.3)
Lower class	5(5.0)	487(95.0)	79(16.1)	413(83.9)	86(17.5)	406(82.5)	13(2.6)	479(97.4)	3(0.6)	489(99.4)
X <sup>2</sup>	1.575		2.064		0.588		0.412		0.013	
Df	1		1		1		1		1	

<b>P</b>	0.162	0.083	0.247	0.337	0.612
<b>Mother's edu.Lev</b>					
Adult education	0(0.0) 46(100)	6(13.0) 40(87.0)	8(17.4) 38(82.6)	0(0.0) 46(100)	0(0) 46(100)
Don't know	1(0.7) 136(99.3)	18(13.1) 119(86.9)	20(14.6) 117(85.4)	4(2.9) 133(97.1)	3(2.2) 134(97.8)
No formal edu.	2(5.3) 36(94.7)	10(26.3) 28(73.7)	12(31.6) 26(68.4)	0(0) 38(100)	0(0.0) 38(100)
Primary edu.	4(2.2) 174(97.8)	36(20.2) 142(79.8)	42(23.6) 136(76.4)	5(2.8) 173(97.2)	1(0.6) 177(99.4)
Secondary edu.	4(1.1) 363(98.9)	71(19.3) 296(80.7)	63(17.2) 304(82.8)	11(3.0) 356(97.0)	1(0.3) 366(99.7)
Tertiary edu.	3(1.7) 171(98.3)	26(14.9) 148(85.1)	28(16.1) 146(83.9)	2(1.1) 172(98.9)	1(0.6) 173(99.4)
X <sup>2</sup>	6.084	6.925	9.933	4.158	6.541
Df	3	3	3	3	3
<b>P</b>	0.298	0.226	0.077	0.527	0.257
<b>Parental mar.sta.</b>					
Married liv.Apart.	2(1.8) 107(98.2)	25(22.9) 84(77.1)	25(22.9) 84(77.1)	7(6.4) 102(93.6)	0(0.0) 109(100)
Married liv.Togeth	9(1.4) 619(98.6)	101(16.1)527(83.9)	115(18.3)513(81.7)	10(1.6) 618(98.4)	6(1.0) 622(99.0)
Not applicable	2(1.3) 148(98.7)	30(20.0) 120(80.0)	22(14.7) 128(85.3)	3(2.0) 417(98.0)	0(0.0) 150(100)
Separated/Divorce	1(1.9) 52(98.1)	11(20.8) 42(79.2)	11(20.8) 42(79.2)	2(3.8) 51(96.2)	0(0.0) 53(100)
X <sup>2</sup>	0.184	4.048	3.084	10.04	3.00
Df	3	3	3	3	3
<b>P</b>	0.980	0.256	0.379	<b>0.02</b>	0.392

**Parental characteristics and current use of some psychoactive substances.**

There was significant association between respondents father's occupation and current use of alcohol ( $\chi^2=3.06$ ,  $df=1$   $p=0.049$ ) with respondents whose fathers belonged to lower occupational class been more likely to report current use of alcohol. Fathers' education was significantly associated with current use of alcohol ( $\chi^2=15.73$ ,  $df=5$ ,  $p=0.01$ ) and stimulants ( $\chi^2=18.63$ ,  $df=5$ ,  $p=0.00$ ) with respondents whose fathers had no formal education reporting higher use. Also parental marital status was significantly associated with current sedative use ( $\chi^2=10.04$ ,  $df=3$ ,  $p=0.02$ ) with students of parents that are married and living apart having the highest use of sedatives.(Table 6)

**Table 7: School factors associated with current use of some psychoactive substances**

Variables	Nicotine		Alcohol		Stimulants		Sedatives		Cannabis	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
<b>Domicile during school</b>	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)
At Home	2(0.3)	692(99.7)	113(16.3)	581(83.7)	115(16.6)	579(83.4)	14(2.0)	680(98.0)	1(0.9)	693(99.1)
Alone	8(6.6)	114(93.4)	20(16.4)	120(83.6)	27(22.1)	95(77.9)	4(3.3)	118(96.7)	5(4.1)	117(95.9)
Guardian/Relative	3(2.9)	99(97.9)	26(25.5)	76(74.5)	24(23.5)	78(76.5)	2(2.0)	100(98.0)	2(2.0)	100(98.0)
Friends	1(4.5)	21(95.4)	8(36.4)	14(63.6)	7(31.8)	15(68.2)	2(9.1)	20(90.9)	0(0.0)	22(100)
X <sup>2</sup>	31.048		10.557		7.102		5.237		12.004	
Df	3		3		3		3		3	
<b>P</b>	<b>0.000</b>		<b>0.01</b>		0.069		0.155		<b>0.01</b>	
<b>Study difficulty</b>										
Absent	3(1.0)	301(99.0)	44(14.5)	260(85.5)	57(18.8)	247(81.2)	4(1.3)	300(98.7)	0(0.0)	304(100)
Present	11(1.7)	625(98.3)	123(19.3)	513(80.7)	116(18.2)	520(81.8)	18(2.8)	618(97.2)	6(0.9)	630(99.1)
X <sup>2</sup>	0.773		3.333		0.036		2.064		2.886	
Df	1		1		1		1		1	
<b>P</b>	0.286		<b>0.04</b>		0.458		0.111		0.095	
<b>Relationship with schoolmates</b>										
Friendly	12(1.3)	895(98.7)	157(17.3)	750(82.7)	161(17.8)	746(82.2)	20(2.2)	887(97.8)	6(0.7)	901(99.3)
Not friendly	2(6.1)	31(93.9)	10(30.3)	23(69.7)	12(36.4)	21(63.6)	2(6.1)	31(93.9)	0(0.0)	33(100)
X <sup>2</sup>	4.871		3.679		7.346		2.071		0.220	
Df	1		1		1		1		1	
<b>P</b>	0.084		<b>0.05</b>		<b>0.01</b>		0.179		0.807	

**School factors associated with current use of psychoactive substances**

There was a significant association between respondents residence during school session and current use of some substances such as cigarettes, alcohol and cannabis with values of  $p=0.00$ ,  $0.01$  and  $0.01$  respectively. Respondents who lived alone reported the highest current use of cigarettes (6.6%) and cannabis (2.5%) while those who lived with friends had the highest current use of alcohol (36.4%). Students who reported 'not friendly' relationship with school mates had significantly higher use of stimulants when compared with those with 'friendly' relationship with schoolmates.(Table 7)



**Table 8: Association between psychoactive substances use by the Respondents and use by relatives and peers**

Variables	Nicotine (%)		Alcohol		Stimulant		Sedatives		Cannabis	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
<b>Fathers use</b>										
Never used	6(0.8)	739(99.2)	42(8.7)	440(91.3)	87(14.7)	503(85.3)	16(2.1)	753(97.9)	3(0.4)	802(99.6)
Don't know	4(3.8)	102(96.2)	16(15.8)	85(84.2)	9(9.5)	86(90.5)	3(2.5)	115(97.5)	1(0.9)	112(99.1)
Current	4(4.5)	85(95.5)	109(30.5)	248(69.5)	77(30.2)	178(69.8)	3(5.7)	50(94.3)	4(18.2)	18(81.8)
X <sup>2</sup>	11.623		67.116		33.915		2.804		25.787	
Df	2		2		2		2		2	
<b>P</b>	<b>0.00</b>		<b>0.00</b>		<b>0.00</b>		0.246		<b>0.00</b>	
<b>Mothers use</b>										
Never used	11(1.3)	847(98.7)	109(14.5)	645(85.5)	167(19.5)	690(80.5)	13(1.7)	759(98.3)	3(0.4)	702(99.6)
Don't Know	1(1.5)	66(98.5)	14(20.3)	55(79.7)	5(6.4)	73(93.6)	1(1.3)	78(98.7)	2(2.4)	82(97.6)
Current	2(13.3)	13(86.7)	44(37.6)	73(62.4)	1(20.0)	4(80.0)	8(9.8)	81(90.2)	1(0.7)	141(99.3)
X <sup>2</sup>	14.593		37.480		8.149		19.066		4.491	
Df	2		2		2		2		2	
<b>P</b>	<b>0.00</b>		<b>0.00</b>		<b>0.02</b>		<b>0.00</b>		0.106	
<b>Close friends</b>										
Never used	5(0.8)	649(99.2)	53(10.7)	444(89.3)	60(11.3)	473(88.7)	14(2.1)	645(97.9)	1(0.1)	732(99.9)
Don't Know	2(1.5)	128(98.5)	14(13.0)	94(87.0)	24(13.3)	156(86.7)	2(1.2)	171(98.8)	2(1.2)	163(98.8)
Current	7(4.5)	149(95.5)	52.351		89(39.2)	138(60.8)	6(5.6)	102(94.4)	3(7.1)	39(92.9)
X <sup>2</sup>	11.900		52.351		86.629		6.081		31.786	
Df	2		2		2		2		2	
<b>P</b>	<b>0.00</b>		<b>0.00</b>		<b>0.00</b>		<b>0.048</b>		<b>0.00</b>	

**Association between Psychoactive substance use among respondents and use among relatives and peers.**

Table 8 shows that fathers current use of substances was significantly associated with tobacco ( $x^2=11.62$ ;  $p=0.00$ ), alcohol ( $x^2=67.12$ ;  $p=0.00$ ), stimulants ( $x^2=33.92$   $p=0.00$ ) and cannabis ( $x^2=25.79$ ;  $p=0.00$ ).

Mothers current use of substances was significantly associated with tobacco ( $x^2=14.60$ ;  $p=0.00$ ), alcohol ( $x^2=37.48$ ;  $p=0.00$ ) stimulants ( $x^2=67.12$ ;  $p=0.02$ ) and sedatives ( $x^2=19.07$   $p=0.00$ ).

Peers current use of psychoactive substances was significantly associated with tobacco ( $x^2=11.90$ ;  $p=0.0$ ), alcohol ( $x^2=52.36$ ;  $p=0.00$ ), stimulants ( $x^2=86.63$ ;  $p=0.00$ ), sedatives ( $x^2=6.08$ ;  $p=0.048$ ) and cannabis ( $x^2=31.79$ ;  $p=0.00$ ).(Table 8)

**Table 9: Relationship between respondent's current substance use and perceived harm of substance by the respondents**

Perceived harm of substance By respondent	Current substance use		X <sup>2</sup>	df	P value
	Yes	No			
<b>Alcohol</b>					
Not harmful	56(24.3)	174(75.7)	15.607	3	<b>0.00</b>
Mildly harmful	36(21.1)	135(78.9)			
Very harmful	36(11.8)	268(88.2)			
Don't know	39(16.4)	196(83.4)			
<b>Cigarette</b>					
Not harmful	7(3.6)	186(96.4)	9.762	3	<b>0.02</b>
Mildly harmful	2(2.5)	79(97.5)			
Very harmful	2(0.5)	435(99.5)			
Don't know	3(1.3)	226(98.7)			
<b>Hypnosedative</b>					
Not harmful	9(4.2)	206(95.8)	4.731	3	0.193
Mildly harmful	3(2.2)	132(97.8)			
Very harmful	4(1.3)	304(98.7)			
Don't know	6(2.1)	276(97.9)			
<b>Stimulants</b>					
Not harmful	72(27.7)	189(72.3)	28.527	3	<b>0.000</b>
Mildly harmful	36(22.0)	128(78.0)			
Very harmful	24(11.2)	191(88.8)			
Don't know	41(13.7)	259(86.3)			
<b>Cannabis</b>					
Not harmful	4(3.2)	126(96.8)	9.655	3	<b>0.02</b>
Mildly harmful	0(0.0)	38(100.0)			
Very harmful	0(0.0)	475(100.0)			
Don't know	4(1.4)	293(98.6)			
<b>Opioids</b>					
Not harmful	1(0.8)	121(99.20)	0.716	3	0.869
Mildly harmful	0(0.0)	47(100.0)			

Very harmful	4(0.9)	437(99.1)			
Don't know	4(1.2)	326(98.8)			

**Relationship between respondent's current substance use and perceived harm of substance by the respondents.**

Table 9 shows that significant associations were observed between respondents perceived harm of substance and current use of alcohol ( $\chi^2=15.61$ ;  $p=0.00$ ), nicotine ( $\chi^2=9.76$ ;  $p=0.02$ ), stimulants ( $\chi^2=28.53$ ;  $p=0.00$ ) and cannabis ( $\chi^2=9.66$ ;  $p=0.02$ ) respectively. Respondents who perceived psychoactive substance use as 'not harmful' constituted the majority of current users of stimulants (27.7%), alcohol (24.3%), hypnosedatives (4.2%), cigarettes (3.6%) and cannabis (2.3%) respectively.(Table 9)

**Table 10: Relationship between respondent's current substance use and perceived availability of the substance by the respondents**

Variables	Frequency		X <sup>2</sup>	df	P value
<b>Alcohol</b>	<b>Yes</b>	<b>No</b>			
Very easy	116(20.0)	438(80.0)	12.937	3	<b>0.01</b>
Not very easy but possible	21(18.1)	95(81.9)			
Very difficult	12(9.4)	116(90.6)			
Probably impossible	18(12.8)	123(87.2)			
<b>Stimulants</b>					
Very easy	33(21.7)	119(78.3)	4.186	3	0.242
Not very easy but possible	45(18.7)	196(81.3)			
Very difficult	55(20.1)	219(79.9)			
Probably impossible	40(14.7)	233(85.3)			
<b>Hypnosedative</b>					
Very easy	8(2.8)	278(97.2)	0.392	3	0.942
Not very easy but possible	6(2.1)	286(97.9)			
Very difficult	4(2.2)	177(97.8)			
Probably impossible	4(2.2)	177(97.8)			
<b>Opioids</b>					
Very easy	3(2.5)	118(97.5)	5.533	3	0.136
Not very easy but possible	0(0.0)	149(100.0)			
Very difficult	4(1.3)	294(98.7)			
Probably impossible	2(0.5)	370(99.5)			
<b>Cannaabis</b>					
Very easy	1(0.7)	91(99.3)	6.684	3	0.083
Not very easy but possible	4(1.7)	225(98.3)			
Very difficult	1(0.3)	297(99.7)			
Probably impossible	0(0.0)	297(100.0)			

**Relationship between respondents' current substance use and perceived availability of substance by respondents.**

Table 10 shows that perceived availability of drugs was only significantly associated with current use of alcohol ( $\chi^2=12.40$ ;  $p=0.01$ ) (Table 10)

**Table 11: Logistic Regression**

Variables	Coefficient of variables (a)	P values
<b>Tobacco</b>		
Gender	-0.838	0.172
Relationship with schoolmates	1.345	0.121
Fathers use	-0.706	0.032
Mothers use	-0.059	0.896
Peers use	-0.499	0.140
<b>Alcohol</b>		
Age group	-0.309	0.078
Residence	-0.307	<b>0.036</b>
Religiosity	-0.214	0.154
Father use	-0.477	<b>0.000</b>
Mother use	-0.186	0.202
Peers use	-0.260	<b>0.044</b>
<b>Stimulants</b>		
Gender	0.547	<b>0.002</b>
Schoolmates	-1.017	<b>0.010</b>
Father education	0.122	0.081
Father use	-0.316	<b>0.018</b>
Mother use	0.827	<b>0.001</b>

Peers use	-0.402	<b>0.000</b>
<b>Sedatives</b>		
Mother use	-0.451	0.637
Peers use	0.154	1.167
Parental marital status	-0.127	0.457
<b>Opioids</b>		
Religiosity	-1.222	<b>0.006</b>

**Factors that are significantly correlated with current use of substances**

On regression analysis, father's use of tobacco was found to have significant correlation with current use of tobacco in the respondent (a= 0.706, p=0.03).

Alcohol; the followings were significantly correlated with respondent's current use, respondent's place of residence (a -0.307, p=0.04), fathers use of alcohol (a=-0.477,p=0.00) and peers use (a= -0.260,p=0.04).

Stimulants: There is significant correlation between respondent's use of stimulant and gender (a=0.547,p=0.002), schoolmate (a=-1.017,p=0.010), use by the father (a= -0.316,p=0.018 ), mothers use (a=0.827,p=0.001 ) and use by peers (a=-0.402,p=0.000 ). Opioids; There was significant correlation between the current use of opioids in the respondents and level of religiosity (a=-1.222,p=0.006) (Table 11)

**III. Discussion**

**Response rate**

The response rate of 88.7% found in this study is a good representation of the students' population and compares favorably with previous studies among secondary school students for example as reported by Atoyebi et al<sup>58</sup>

**Socio-demographic variables**

The study shows that more males 502 (53.4%) took part in the study than females 432 (46.4%). The mean age of 14.28±2.0 years of respondents was similar to many studies that found age range 10-20years<sup>29,49</sup>. Predominantly (99.7%) of the respondents were Christians which reflected the area and region of the country of research. This is similar to results of previous studies in Nigeria<sup>44,68</sup>. In a study conducted by Ndom et al among undergraduates of Nasarawa state University, 74% of the respondents were Christians while Muslims accounted for (26.6%) of the respondents.<sup>68</sup> Also, Makanjuola et al (2007) in another study among medical students in Ilorin found that (68%) of the respondents were Christians while (32%) were Muslims. Both the parents of respondents appear to have some level of education though more fathers (30.4%) have post graduate education than the mothers (18.5%)<sup>44</sup>. This may not be unconnected with the previously prevalent practice in some African cultures, of preference for sending male children to school instead of female children<sup>69</sup>. Previous authors have also reported similar findings in their study<sup>70</sup>.

The education attainments of parents may be directly linked to the socioeconomic status of the respondents and this could also determine the amount of money available to the family and level of information about substance use. Most of the respondents' parents were married and live together. Family dynamics have shown that stability at home provides some resistance for youths to indulge in substance use and more so children from stable homes are less likely to report problems from substance use than those from unstable homes.<sup>9,21,71</sup> Majority of the respondents reported to be in good relationship with their parents, school mates and siblings including their lecturers. This suggests good rapport between respondents and others and also adequate supervision from parents which could shield respondents from negative environmental influences.

**Types of substances used by respondents**

Stimulants were consumed in the form of coffee, kolanuts, and amphetamines and pro-plus and the commonest stimulant used in the study was caffeine (coffee and kolanuts). This was reported by over (45%) of users. This is followed by kolanuts, coffee, amphetamine and pro-plus in decreasing order. These findings are in harmony with previous studies in Nigeria<sup>29,44</sup>. However some other studies reported coffee as the most common stimulants among adolescents<sup>68,70</sup>. The preponderance of caffeine might not be unconnected with the fact that most students use it to keep themselves awake to read especially during the period of examination. A greater part of the users of alcohol in this study used more than one agent, the most common combination of substances containing alcohol was palm wine and beer reported by (36.2%) of users. This was followed by beer and spirit (17.8%) and beer and ogogoro (10.6%) respectively. Palm wine was the commonest single substance used by (28.4%) of the respondents. This is a reflection of the study area being rural and palm wine is readily available and cheap and its use is not restricted and more importantly the natives believe it has eye cleansing effect.

Most of the users of hypnosedatives reported Diazepam (42.4%) as the most commonly used substance. This was followed by chlordiazepoxide (Librium) (21.2%) and metaqualone and nitrazepam (18.2%) each respectively. This was however different from study carried out by Atoyebi et al<sup>58</sup> who studied psychoactive substance use among senior secondary school students alone. Methodology, sample size, regional

difference and the effect of campaign against unregulated use of sleeping drugs can explain the observable change.

Tramadol, a synthetic mild opiate analgesic was the most common opioids used by majority of the respondents (83.5%) as shown in this study. This was followed by codeine (11%) and parenteral pethidine (5.5%) respectively. This is higher from previous studies by Igwe<sup>72</sup>, Adewuya et al<sup>49</sup> and Oshodi et al<sup>29</sup>. It is worrisome that (5.5%) of the respondents at such a very tender age of between 10 to 20 years were already users of parenteral drugs of abuse such as pethidine with all the attendant consequences. Further research may be necessary to find out if the trend still persist and also proffer preventive measures to stem it. Petrol was the commonest inhalants reported by over (65%) of respondent and was closely followed by glue and organic solvents in decreasing order of use. This perhaps may be because a lot of bunkering activities on crude oil takes place in that state and also in the study location. This may increase the prevalence because of continuous contact with petroleum products.

### **Prevalence of Substance use**

Alcohol and mild stimulants (coffee and kolanuts) were the most used substances in terms of lifetime prevalence. This might be due to the prevalent use of these two drugs in the study location and other parts of Nigeria. Alcohol and kolanuts are used for celebrations during religious and cultural festivals and ceremonies such as wedding and naming ceremonies<sup>457374</sup> and particularly common for such ceremonies in the study location.

### **Prevalence of current use of substances.**

In this study the prevalence of current use of any substance was (42.5%). This is in between what was previously reported in some studies in Nigeria<sup>58,59</sup>, however in another study among secondary schools in Lagos by Oshodi et al<sup>29</sup> found prevalence rate of (73.3%).

Differences in numbers of substances investigated, sample size and methodology may account for the observed differences.

The most currently used psychoactive substance in this study was stimulants with prevalence rate of (18.4%). This was followed by alcohol (17.8%), hypnosedatives (2.3%) and cigarette (1.9%). About one fifth of the respondents reported to be current users of stimulants and this is comparable to (20.7%) and (17.7%) reported by Igwe et al<sup>71</sup> in Enugu and Fatoye in Ile- Ife.<sup>72</sup> This may be due to limited awareness by these students on the use of stimulant as an agent that could be used to keep them awake to study. In another study, Oshodi et al<sup>29</sup> found current use rate of (56%) among secondary schools in Lagos which was higher than the prevalence found in this study. Reasons for higher prevalence in the Lagos study suggested were that the students were adolescents who were going through stages of critical psychosocial development of role identity versus role confusion as described by Eric Erikson and could manifest with abnormal behavior including drug use<sup>75</sup>. More importantly Lagos is regarded as a cosmopolitan state and this factor may account for the higher rate reported among students in Lagos.

In this study, current alcohol use was (17.8%) which is higher than a rate of (13.4%) reported by Atoyebi who studied psychosocial correlates of substance use among secondary school students in south western Nigeria<sup>58</sup>. This study shows that the use of alcohol is high among students who live outside the school where there is free access to alcohol. The current use of hypnosedatives ranked third in this study with prevalence rate of (2.3%). This rate is low compared to (24%) documented by Oshodi et al<sup>29</sup> among secondary school pupils in Lagos<sup>29</sup>. The low rate may be due to its lack of popularity among the students and also the set up which is semi urban area.

Also in this study the respondents current use rate for cigarettes of (1.9%) ranked fourth. This is lower than the prevalence found in previous studies documented in Nigeria<sup>72</sup>.

The rate is far lower than current prevalent use of cigarette in other nations of the world<sup>76</sup>. The low rate of cigarette use in this study may be due to intense campaign against cigarette smoking in print and electronic media everywhere in the country.

The current rate of cannabis use of (0.6%) reported in this study is comparable to what was documented among general population in Nigeria by Gureje et al<sup>77</sup> whose study spanned across middle aged, the elderly and the young people. This further confirms that illicit drugs use is more common among young people than middle or older age group<sup>37,56</sup>. Also a high rate of (6.1%) was documented among secondary school students in Kenya residents in sub county region<sup>78</sup>. However, in other nations like Australia and West Indies, the reported current uses of cannabis among students of secondary schools were (21.4%) and (10.2%) respectively. This further confirms that illicit drug use is higher in developed nations than in Africa nations<sup>79</sup>.

In this study the current use rate of opioids is (0.96%) and its higher than previous findings in studies in Nigeria', this may be connected to the increase awareness of its analgesic effect and lack of adequate control by the regulatory body of its synthetic brand which made it readily available on the counter in the form of tramadol.

The observed finding of low use rate of organic solvent is in line with previous studies in Nigeria<sup>20,28,77</sup>. Low availability and or lack of awareness may be factors contributing to lower current usages of this illicit psychoactive substance.

### **Pattern of current use of substances**

Majority of the respondents who reported monthly current use of opioids (88.9%), stimulants (85.5%), alcohol (83.8%), and hypnosedatives (77.3%) were occasional users. Most students get their stipend during month end and this enhances their freedom to socialize and have fun with peers and one of the things they do is to use drug. Sixty six percent of the respondents who smoked cigarettes were frequent users. This may be attributed to its social acceptance, a feeling that nicotine is harmless; it's cheap and readily available.

### **Socio-demographic factors associated with substance use**

#### **Gender**

Males were predominantly found to be current users of substances than their female counterparts. Males when compared to females were more current users of nicotine (2.8% vs 0.9%), stimulants (21.0% vs 15.0% %), cannabis (0.8% vs 0.5%) and opioids (1.6 % vs 0.2%) compared to females. These findings are in keeping with previous local and international studies<sup>58,72,76,81</sup>. In a study of socio-demographic correlates of substance abuse among secondary school students in Enugu, Igwu et al<sup>71</sup> reported that more males significantly used alcohol, cigarette, cannabis and hypnosedatives compared to females. In this study current use of alcohol was insignificantly higher among females than males (18.0% vs 17.5%). This is in keeping with Owoaje et al<sup>28</sup> who reported similar findings among undergraduates of University of Ibadan where females were reported to be more current users of alcohol than males. A large proportion of males were reported to be current users of stimulants compared to females (21.0% vs 15.0%). This is in keeping with previous studies which show that males usually dominate drug scenes<sup>44,72</sup>. Also similar findings were reported for opioids and hypnosedatives. This may perhaps be because males are more likely to be more adventurous than their female's counterparts and they are more likely to experiment with substance during their adolescent years. Females perhaps on the other hand in this environment enjoy more supervision of parent/guardian because of the fear that their engagement in social activities could predispose them to being wayward.

#### **Age**

In this study, the current use of substances among different age groups varies. For example, rate of current use of substances among age group 10-14 years is higher for hypnosedatives (3.0%) and cannabis (0.2%). Whereas those in age group 15-19 years reported higher current use of nicotine (2.3%), alcohol (19.7%), stimulants (18.6%) and opioids (1.4%). In a study among secondary schools in southwestern Nigeria those in age group 16-19 year reported higher current use of substances<sup>80</sup>. The higher rate of current prevalence observed in these age groups may be attributed to increase susceptibility to peer influence and also involvement of younger age groups in use of psychoactive drugs.

#### **Religiosity**

There was significant association between drug use and self reported religiosity as respondents who used alcohol were 'not religious' or 'just religious' respectively. This study is done in an area where over (90%) of respondents were Christians whose religion does not place much restriction on the consumption of alcohol. However in other studies comprising of mostly Muslims, lower rate of current use of alcohol and other psychoactive substances were reported due to stringent Islamic laws against the sale and use of alcohol and other psychoactive substances<sup>44,59</sup>. Hence in this study, respondents who reported they are 'not religious' had high rates of use nicotine (2.4%) and alcohol (26.2%). However, respondents who reported they were 'just religious' reported higher use across the following psychoactive substances; cannabis (3.4%), and sedatives (2.8%). This finding is not in keeping with previous reports of inverse relationship between substance use and self reported religiosity<sup>44</sup>. Also those who reported to be very religious were higher among the non users of some psychoactive drugs; nicotine (98.6%), alcohol (83.9%), sedatives (97.8%) and opioids (99.7%) which were not surprising as many religions do not encourage the use of psychoactive substances by its followers which is also common among the Christian faith which majority of respondents in this study belonged to.

#### **Occupational status of respondents' parents and parental educational level**

There was significant association between respondents' father's occupation and use of alcohol ( $\chi^2=3.056$ ,  $df=1$ ,  $p=0.049$ ) as respondents whose fathers are in lower occupational class reported higher substance use. This is at variance with previous report by Gureje et al<sup>77</sup> which found no link between respondents' income and substance use in a research conducted among adults in general population. In the same vein, there was association between

respondents' fathers' education and substance use. Those whose fathers had no formal education reported higher use of alcohol (38.7%) and stimulants (49.1%) with significant associations ( $\chi^2 = 15.73$ ,  $df=5$ ,  $p=0.01$ ) and ( $\chi^2 = 18.63$ ,  $df=5$ ,  $p=0.00$ ) respectively. Lack of awareness and adequate knowledge about the dangers of substance use can be adduced for this observation.

#### **Marital status of Respondents parents**

This study showed no association between the marital status of respondents' parents and substance use by respondents except for hypnotosedatives with significant correlations ( $\chi^2 = 10.04$ ,  $df=3$ ,  $p=0.02$ ) Those whose parents are married but living apart reported high use rate 'prevalence of (6.4%). They also reported higher use of alcohol and stimulants (22.9%) each respectively. This finding is at variance with the study by Atoyebi et al in which the respondents from divorced or separated parents reported greater use of alcohol and other substance use. This perhaps is due to less parental supervision, lack of parental modeling which characterized disrupted families may expose these children to adverse environmental influences including psychoactive substance use.

### **IV. CONCLUSION AND RECOMMENDATIONS.**

#### **Conclusion**

This study shows that the most common currently used substance in this study was Stimulants 18.4%, followed by Alcohol 17.8%. Most of them were multiple drug users and majority of those who reported to be current users were occasional users.

There was preponderance of male gender among those who use cigarettes, stimulants, cannabis and opioids. Close friends and use of drugs by mothers were significantly associated with use of hypnotosedatives by respondents. Fathers' occupation was significantly associated with alcohol use by the respondents while fathers' education significantly associated with the use of alcohol and stimulants by the respondents. Parental use of cigarettes, opioids, stimulants and cannabis were significantly associated with use of same by the respondents.

Perception of substance as not being harmful was found to be significantly associated with the use of cigarettes, alcohol, stimulant and cannabis. Perceived availability was found to be associated with use of alcohol.

Logistic regression analysis shows that parental drug use, use of drugs by peers and schoolmates, gender and residential place significantly correlate with the use of drug by the respondents.

**Recommendation** The finding that a sizeable number of students started using drugs between ages 10-15 years point to the need for early institution of preventive measures. Hence there is a need to improve the teaching of drug education which is already in place in the education curriculum in Nigerian schools. Other governmental and non-governmental organizations should also be encouraged to scale up drug intervention programmes in order to educate, refer appropriately those that need help and rehabilitate those using or abusing substances. It is also important that governmental agencies in charge of drug regulations be strengthened and empowered to arrest and prosecute those who sell drugs out of regulatory laws.

### **REFERENCES**

- [1]. Escandon R, Galvez C. Free from Addictions. Madrid; 2006, Editorial Safeliz.
- [2]. Balogun S.K. Chronic intake of separate and combined alcohol and Nicotine on body maintenance among albino rats. *Journal of Human Ecology*, 2006;19(1):21-24.
- [3]. Nnachi. R O Advanced Psychology of Learning for enquiries, Enugu: 2007, J. J. Classic Publishers.
- [4]. United Nations Office of Drugs and Crime (UNODC) (2005) W.H.O. Expert Committee on Dependence Producing Drugs.
- [5]. Manbe D.A. Crime and drug abuse among Nigerian youth: A critical Examination in (WHO) expert committee on drug dependence, 2008: 28th Report (Unpublished)
- [6]. National Agency For Food and Drug Administration. Quarterly bulletin on Drug control, 2004; Vol 12 (3) 24-25.
- [7]. National Daily Vanguard. Federal Government Ban the Use and Importation of Codeine products in Nigeria. 2018;5(1):1
- [8]. United Nations Offices on Drug and Crime (UNODC), (2004). Global Illicit Drug Trends
- [9]. Kokkevi AE, Arapaki AA, Richardson C, Florescu S, Kuzman M, Sterga E et al. Further investigation of psychological and environmental correlates of substance use in adolescent in six European countries. *Drug and Alcohol Dependence*, 2007; (88):308-312.
- [10]. Sherman SG, Sutcliffe CG, German D, Sirirojn B, Aramrattana A, Celentano DD et al Patterns of risky behaviours associated with methamphetamine use among young Thai adults: A latent class analysis. *Journal of Adolescent Health*, 2009; 44(2):169-175.
- [11]. Masita GM. Substance use among township secondary school students-an emergent phenomenon. *Africa Education Review*, 2007; 4(1):70-88.
- [12]. Curran E. The relationship between social capital and substance use by high school students. *Journal of alcohol and Drug Education*, 2007;(51):51-73.
- [13]. Cheng Y, Sherman SG, Srirat N, Vongchak T, Kawichai S. Risk factors associated with injection initiation among drug users in Northern Thailand. *Harm Reduction Journal*, 2006;3(10):
- [14]. Peltzer K. Prevalence and correlates of substance use among school children in six African countries. *International Journal of Psychology*, 2009;58(5):378-386.
- [15]. Fareo D.O. Drug abuse among Nigerian adolescents: Strategies for Counseling. *The Journal of International Social Research*, 2012;5(20):341-347.

- [16]. Edafiadhe W. Prevalence of substance abuse among senior secondary school students in Benin City. A Dissertation submitted to the National Postgraduate Medical College, 2005.
- [17]. Okogbeni E. The Prevalence and correlates of alcohol use and abuse among adolescent secondary school students in Benin City. A Dissertation submitted to West African Postgraduate Medical College, 2008.
- [18]. Room R. Taking account of cultural and societal influences on Substance use diagnoses and criteria, *Addiction*, 2006; 101(suppl. 1) (206), 31-3.
- [19]. Anderson P. Global use of alcohol, drugs and tobacco. *Drug and Alcohol Review*, 2006; Nov 1:25(6):489-502.
- [20]. Fatoye F.O. Substance use among undergraduates. A study of pattern and beliefs in Ile-ife. *Nigerian Postgraduate Medical Journal* 2007;14: 37-41
- [21]. Rudatsikira E, Maposa D, Mukandavire Z, Muula AS, Siziya S. Prevalence and predictors of illicit drug use among adolescent students in Harare, Zimbabwe. *Annals of African Medicine*, 2009;8(4):215-220.
- [22]. Viner RM, Taylor B. Adult outcomes of binge drinking in adolescence: finding from a U.K national birth cohort. *Journal of Epidemiology Community Health*, 2007; 62(10):902-907.
- [23]. Stolle M, Sack PM, Thomasius. Binge drinking in childhood and adolescence: epidemiology, consequences and interventions. *DtschArzt International*. 2009;106(19):323-328.
- [24]. Doll. R. Morality in relation to smoking. 50 years' of Observation on Male British Doctor. *British Medical Journal*. 2004;328:15-19.
- [25]. Hall W. The mental health risks of adolescent cannabis use. *Plos Medicals*. 2006; 3(2) e39.
- [26]. Centers for Disease Control (CDC) 2009. The Global School and Health Survey Background From <<http://www.cdc.gov/gshs/background/index>>.
- [27]. Muula A.S, Siziya S, Rudatsikira E. Cigarette smoking and associated factors among in-school adolescents in Jamaica: comparison of the Global Youth Tobacco Surveys 2000-2006. *BMC. Res. Notes*, 2008; 1:55. *Public Health* 2011;( 11):660. Available from: <http://www.biomedcentral.com/1471-2458/11/660>.
- [28]. Owoaje ET, Bello J. Psychoactive substance use among undergraduate students of the University of Ibadan, Nigeria. *The Tropical Journal of Health Sciences*, 2010;17(2): 56-60.
- [29]. Oshodi OY, Aina OF, Onajole AT. Substance use among secondary school students in an urban setting in Nigeria: prevalence and associated factors. *African Journal of Psychiatry*, 2010; 13: 52-57.
- [30]. Okonkwo CC, Lawal R, Ojo M, Eze C, Ladapo HT, Harry P et al. Substance Use among students in a Public Secondary School in Lagos. National Institute on Drug Abuse. United States Department of Health Publication. 2010; 8-10.
- [31]. World Drug Report (2014). United Nations Office on Drug and Crime. World Health Organization. Child Abuse and Neglect, WHO fact sheet, N151. Available at [www.who.int/iffs/en/fact/151.html](http://www.who.int/iffs/en/fact/151.html) Assessed June 22, 2016.
- [32]. Youth Risk Behaviour Surveillance 2011. US Department of Health and Human services, Centre for Disease Control and Prevention. Mortality and Morbidity Weekly Report 21 (4); June 8, 2012. Available at [www.cdc.gov/healthyyouthlyrbs](http://www.cdc.gov/healthyyouthlyrbs). Assessed Mar 6, 2013
- [33]. Smoking Drinking and Drug use among Young People in England in 2012. The Health and Social Care Information Center, 2013. Available at <http://www.hscic.gov.uk/catalogue/PUB11334>. Assessed Nov 24, 2015.
- [34]. European Monitoring Center for Drug and Drug Addiction. Annual Report 2011: The State of the Drug problem in Europe. *Bulletin on Drug addiction*, Vol 5 (3) 30-45.
- [35]. United Nations Office on Drug Control (World Drug Report, 2012.) Available at [www.undoc.org/en/drug/info/analysis](http://www.undoc.org/en/drug/info/analysis). Retrieved July 27, 2014.
- [36]. United Nations Office on Drug and Crime. Recent Statistics and trend analysis of illicit drug markets. New York: United Nations Publication (2012), 7-8. Available at [www.undoc.org/unodc/en/data-and-analysis](http://www.undoc.org/unodc/en/data-and-analysis). (Accessed Feb 25, 2013).
- [37]. United Nations office on Drug and Crime Trends in World markets. World drug report. New York: United Nations Publication (2010) Available at [www.unodc.org/pdf/WDR\\_\\_2009/vol1-web.pdf](http://www.unodc.org/pdf/WDR__2009/vol1-web.pdf). (Assessed, on June 2011.)
- [38]. United Nations Office on Drug and Crime, 2011. UNODC. WHO Expert Committee on Dependence Producing Drugs.
- [39]. Tsitsi, B. Simbarashe R. Prevalence and associated factors of smoking among secondary school students in Harare Zimbabwe. *Bendeson and RusckenkoTobInduc Dis*, 2010;8:12
- [40]. NACADA. Report Situation Assessment of Drugs and Substance abuse in Nairobi, 2007. *Bulletin on Drug addiction Vol.6 (2) 20-28*.
- [41]. Myers, B. Alcohol and Drug Abuse Research Group, Medical Research Council of South Africa, 2006; Tygerberg, Capetown 7505, South Africa.
- [42]. United Nations Office on Drug and Crime. Drug abuse and dependence treatment situation in Nigeria., (2007). Available at [www.undoc.org/doc/treatment/co/Pro/web\\_nigeria.pdf](http://www.undoc.org/doc/treatment/co/Pro/web_nigeria.pdf) (Assessed June 20,2013)
- [43]. Makanjuola, AB, Daramola, TO, Obembe, A.O. Psychoactive substance use among undergraduate students in a Nigerian university. *World Psychiatry* 2007,6(2):112-114
- [44]. Abiodun, AO, Adelekan ML. Psychosocial correlates of Alcohol, cannabis and tobacco use among secondary school students in a South Western state of Nigeria. *Bulletin on narcotics* 1994; 33(2):33-34.
- [45]. National Drug Law Enforcement Agency. Drug data collection; 2008. Vol 4; (6): 22-28
- [46]. AT. Onajole and AO.Gbangbala. Sociodemographic characteristics of Drug misuse in polytechnic in Lagos, Nigeria, *Nigeria Journal of Health and Biomedical Sciences*, 2004;3(1):40-43.
- [47]. Olutola, FO. Drug Addiction and Rehabilitation in Nigeria: Insights from Sociological Theories. *Global Journal of Medical Research*, 2012;12(5):2249-4618
- [48]. Adewuya AO, Ola BA, Aloba OO. Gender differences in the relationship between alcohol use and anxiety symptoms among Nigerian college students, *Drug and Alcohol Dependence*, 2006; 85(3):255-257.
- [49]. Enakpoya E. "Prevalence of drug abuse among Nigerian adolescents: Implication for Counseling", *The Counselor*, 2009; (26): 2.
- [50]. Abudu, V. "Young people and Drug Abuse". Paper presented at the 8th Biennial International Conference on Alcohol, drugs and society in Africa, Abuja, Nigeria. Between July 23-25, 2008.
- [51]. Rew, L. Adolescent Health. A multidisciplinary Approach to Theory and Intervention. 2005; California: Publication.
- [52]. *National Vanguard Publication* 2014;10(7):1
- [53]. Ifabumuyi O.I. Alcohol and drug addiction in northern Nigeria. Available at <http://onlinelibrary.wiley.com>.(2007). Retrieved on 12 March 2012.
- [54]. Adelekan M L, Makanjuola A B, Parakoyi D B, Osagbemi G.K, Fagbemi O and Petu A O et al. Trend Analyses of Substance Among undergraduate of University of florin, Nigeria, 1988-1998. *African Journal of Drug and Alcohol studies*. 2000;1(1):39-52
- [55]. Adelekan M. L, Self reported drug abuse among secondary school students in Bendel state, Nigeria. *Bulletin on Narcotics* 1989;4:109-116

- [56]. Sadock BJ, Kaplan HI, Sadock VA. Human Development throughout the life cycle. In: Kaplan and Sadock's Synopsis of Psychiatry (10thEd.). Philadelphia: Lippincott Williams& Wilkins; 2007: 12-69.
- [57]. Atoyebi, AO and Atoyebi OE. Pattern of Substance abuse among Senior Secondary School students in a Southwestern Nigerian City. *International Review of Social Sciences and Humanities*, 2013; 4(2); 54-65.
- [58]. Eneh AU and Stanley PC. Pattern of Substance use among secondary School students in Rivers state, *Nigerian Journal of Medicine*, 2004; 13(1):36-39.
- [59]. Essien, CF. Drug Use and Abuse among students in tertiary institution-The case of Federal University of Technology, Minna. *Journal of Research in National Development*. 2010;8(1):30-35.
- [60]. Onofa G. Prevalence and pattern of drug abuse among students of three tertiary institutions in Ogun state. A Dissertation submitted to West African College Post graduate medical college, 2007.
- [61]. Lawoyin TO, Ajumobi OO, Abdul MM, Adegoke DA, Agbedeyi DA. Drug use among senior secondary school students in rural Nigeria. *African Journal of Medicine*. 2005; 34(4):355-359.
- [62]. National Population Commission. Population census gazette, 2009, Assessed Feb. 20 2016.
- [63]. Fisher A, Laing J, Stoekel. Ssampling and sampling size determination In: *Handbook for family operations research design*. New York Publication Council 1993:31-33.
- [64]. Smart RG, Hughes PH, Johnson LD, Anumonye M. A methodology for a student drug use surveys. WHO offset publication 1980; No 50, Geneva.
- [65]. Akinhanmi OA. Drug abuse among medical students in a state University in Nigeris. A dissertation submitted to West African College of Physician, 1996.
- [66]. Adelekan ML, Odejide AO, The reliability and validity of WHO student drug use questionnaire among Nigerian students *Drug and Alcohol dependent* 1999;24 :245-249.
- [67]. Ndom RJE, Igbokwe DO, Ekenuro O. Student's opinion on substance use, violent behaviour and possible intervention Strategies in Nigerian public University, *European Scientific journal* 2012;(8) 19: 191-211
- [68]. Uwakwe C, Ajibola F, Benedict E, Omobola A. Impact of decentralization and privatization on the quality of education In sub Saharan Africa. "The Nigerian experience" *European Journal of social science* 2008: 7(1) : 52-54.
- [69]. Ilhan JO, Yildirim F, Dermirbas H, Dorgan BY. Correlates of substance use among regularly drinking University Students in Turkey. *German Journal of psychiatry* 2008 11: 34-39.
- [70]. Kuntsche EN, Kuendig H. What is worse ? A hierhachy of family related risk factors predicting alcohol use in Adolescence. *Substance use and mis use* 2006; 41: 71-86
- [71]. Igwe WC, Ojinaka N, Ejiofor SO, Emechebe GO, Ibe BC. Sociodemographic correlates of psychoactive substance abuse Among students in Enugu, Nigeria. *European Journal of social sciences* 2009;12(2) ;277-283.
- [72]. Health D. *Drinking occasions; Comparative persepectives on alcohol and culture*, London: Brunner; 2000.
- [73]. Jarvinen M. Drinking rituals and drinking problems in wet cultures. *Addiction research and theory*, 2003;11:217-233.
- [74]. Sadock BJ, Sadock VA. Substance related disorders: Kaplan and Sadock Synopsis of Psychiatry, 10<sup>th</sup> Ed. New York: Lippincott Williams and Wilkins, 2007, p207-210.
- [75]. Dhannokdhary AM, Gomez AM, Khan R, Lall A, Murray D, Prabhus D et al. Substance use among University students At the St Augustine campus of the University of the West Indies. *West Indian medical journal* 2010; 59(6): 1-9.
- [76]. Gureje O, Degenhardt L, Olley B, Uwakwe R, Udofia O, Wakili A et al. A descriptive epidemiology of substance and Substance use disorders in Nigeria during the early 21<sup>st</sup> Century. *Drug and alcohol dependence* 2007;91: 1-9.
- [77]. Kaguthi J. *Youth in Peril: Alcohol and drug abuse in Kenya*, Nairobi: Baseline survey report, 2004.
- [78]. United Nations Office on Drug and Crimes. *World drug report* 2010.
- [79]. Adamson TA, Onifade PO, Ogunlesi A. Trends in sociodemographic and drug abuse variables in patients with alcohol And drug use disorders in a Nigerian treatment facility. *West African Journal of Medicine* 2010: 29 (1): 12-18.
- [80]. Adelekan ML, Makanjuola AB, Ndom JE, Fayeye JO, Adegoke AA, Amusan O et al. 5 yearly monitor trend of substance Use among secondary school students in Ilorin, Nigeria, 88-1999). *West African Journal of medicine* 2002: 20(1): 28-36.