Mixing School Business with Pleasure: Prevalence of Substance Abuse among Secondary School Students in Lagos State of Nigeria

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Abstract

Background: Substance abuse among in-school youth has been found to be on the increase all over the world. This behavior is usually accompanied by physical and mental health consequences which are of public health significance. This study aimed at determining the prevalence of use of illicit drugs among senior secondary school students in Lagos State of Nigeria. Method: This was a descriptive cross-sectional study among 422 senior secondary school students selected by multistage sampling technique. Data were collected using a pre-tested structured, self-administered questionnaire and was analysed using Statistical Package for Social Science (SPSS) version 21. The statistical analyses of frequency counts, percentages and chi square were set at a level of significance of p ≤0.05. The Chi-square and Fisher's exact tests were used to determine the association between

categorical variables. Results: A total of 422 students participated in this study with mean age of 16.30 ± 1.72 years. Out of which 205 (48.6%) were males and 217 (51.4%) were females. About 68% of respondents understood the meaning of illicit drugs. The overall knowledge of students on illicit drugs was good (66.9%), so also for positive attitude (61.6%). There was however a statistically significant association between the knowledge of the respondents and their attitude towards illicit drugs. The awareness of substance abuse was high 89.6% and sources of information were mostly from the television. The most commonly used drugs reported were opiates, codeine contained in cough syrups and tramadol (11.6%), followed by tranquillizers sedative hypnotic (9%), Hallucinogen (5.6%) and Amphetamines (5.3%) with the influencers mainly the parents and family friends. Conclusion: The study reveals that despite overall good knowledge and positive attitude towards substance abuse, some students were still engaged in the practice. There is a need to start the teachings from homes, enforce disciplinary actions against culprits by the policy makers and effect educational programs about substance abuse in schools and social media.

Keywords: School, secondary, students, substance, abuse

Introduction

Substance abuse is the hazardous use of psychoactive substances, including alcohol and illicit drugs in a manner that is unrelated to acceptable medical practice.[1] It sometimes undermines moral restraints and encourages deviant or criminal behavior especially among youth.[2] Obarisiagbon and Ajayi found out that substance abuse is an important determinant of risky sexual behavior among youths in Benin City, Nigeria.[3] Researchers in Lagos, Nigeria also showed that Nigerian youths have limited knowledge of the adverse effects of substance abuse with and widely abuse tobacco, alcohol, opiates, cannabis, amphetamines and benzodiazepines.[4,5] Many of these youths eventually end up abusing more addictive substances.[4,5]

The 2010 World Drug Report reports that some 200 million people, or 5 percent of the world's population aged 15 – 64 had abused a substance at least once in the prior year.[6] Ediomo-Ubong et al concluded that there is a need to urgently improve substance abuse policy in developing countries because health problems associated with substance abuse in developing countries result in poorer outcomes.[7] In addition, there is evidence of increase in prevalence of the use of cannabis and non-medical prescription opioids especially cough syrups containing codeine or dextromethorphan among Nigerian youth.[4,5] Substance abuse among youth generally results in poor academic performance, anti-social behaviors and in some cases into mental illness.[8] Surveys conducted in psychiatric hospitals in western

Nigeria in the 1950s indicate that most of the patients who presented with schizophrenia, anxiety disorders and other mental health problems had a history of drug abuse.[8,9,10]

Eti Osa LGA is in an urban area of Lagos State with many upper-scale neighborhoods merging with urban slums, many of which are located near beaches and marshy areas. The population of the Eti Osa LGA is estimated at 308,767 inhabitants.[11] In some cases, open air shanties on these beaches serve more than food and drinks, they also sell substances of abuse and are sometimes the base for commercial sex work operation on these. The free availability of substances of abuse in these fun spots that line the beaches and the anonymity associated with beach life may be fueling the situation especially among school age children leading to a more severe public health problem. Some international studies have shown that out-of-school youth are more exposed to substance abuse than their in-school peers.[12-14] However, there are few studies that have examined the factors associated with substance abuse among in-school Nigerian youth. Our study therefore sought to assess the knowledge of, attitude to and prevalence of substance abuse among secondary school students in Eti-Osa LGA in Lagos Nigeria.

1. Methodology
a. Description of Study Area

Lagos state is located the south-western geopolitical zone and is the most populous city in Nigeria. It is a metropolitan area, which originated on the islands and currently is divided for administrative purposed into twenty (20) Local Government Areas (LGA).[15] The study was conducted in Eti-Osa LGA of Lagos State which comprises of residential and commercial areas with a population of about 390,800 persons and twelve Government Secondary Schools.[16]

b. Study Design

This is a descriptive cross-sectional study focused on determining the knowledge of, attitude to and prevalence of substance abuse among Senior Secondary School Students in Eti-Osa Local Government Area.

c. Study Population

The study population are Senior Secondary Students in SS1 to SS3 of Secondary Schools in Eti-Osa LGA.

i. Inclusion Criteria

Adolescent students between the ages10-19 years from SS1- SS3.

d.   Sample Size Determination

The minimum sample size was determined using the Cochran formula ($n=z^2{\times}p{\times}q/d^2$), with a standard normal deviate z at 95% confidence interval of 1.96, prevalence p from pre-study estimate of proportion of illicit drug use in secondary schools = 50.7% = 0.5070[4] and the error of precision set at $\pm$ 5% (0.05). q is the estimated proportion of subjects without attribute = 1-p = 0.493

Therefore, the calculated minimum sample size n = 384

The possibility of attrition during the study made it imperative to add an extra 10% therefore increasing the questionnaire size to 422.

e.   Sampling Technique

A multistage sampling technique was used to select respondents for this study.

Stage 1 (Selection of schools): A simple random sampling technique via balloting was used to select a total of four Senior Secondary Schools out of the registered public secondary schools in Eti-Osa Local Government Area using the list of schools obtained from the Local Government Education Authority. Namely, Kuramo Senior Secondary School with 504 Students, Gbara Community Secondary School with 474 Students, Ilasan Senior Secondary School has students and finally Victoria Island Senior Secondary School with 388 Students.

Stage 2 (Number of Respondents): The population of the Senior Secondary School Students in each school was obtained from the school authorities. Proportionate sampling technique was used to recruit the number of respondents across the schools.

Stage 3 (Selection of Respondents): The respondents were then selected using systematic technique. Eligible students were recruited and questionnaires systematically distributed using a sampling interval of 4 till the desired sample size was achieved.

Using the formula: K (sampling interval) =N/n
Where N (Total Population of Senior Secondary School students in the four schools)= 1815

n (Desired sample size)= 422.
K = 1815/422 = 4. Therefore K = 4

f.   Method Of Data Collection

Self-administered questionnaires were used to collect data. The structured questionnaire was adapted from studies that used WHO student

drug use questionnaire that has been previously validated in the country and slightly modified for simpler local use.[4] The questionnaire had four sections: Socio-demographic information of the respondents, including age, sex and family size, knowledge on Substance abuse, attitude to substance abuse and commonly abused substances with the influencers.

Pretesting of Questionnaire

The questionnaire was pre-tested on forty-two Senior Secondary School students from Comprehensive High School Isolo in Oshodi-Isolo Local Government with similar setting to the study population., after which the questionnaires were modified.

g.   Research Assistants

Two research assistants with minimum qualification of Senior Secondary School Certificate were trained four hours daily for 2 days on the application of the sampling techniques and how to distribute the questionnaires accordingly.

h.   Data Analysis

Scoring system[16] was used to assess both the knowledge of substance abuse and attitude towards illicit drugs. Level of knowledge of substances that can be abused or are currently being abused was elicited by using 12 questions. Each correct response was scored one (1) and an incorrect response or not sure was scored zero (0). A score from the mean and above the mean or average score was graded ''Good'' and the score below the mean or average score was graded ''Poor''.

The representation of the knowledge score will be distributed as 'good level of knowledge' which is equal or more than 50 % and 'poor level of knowledge' is less 50%.

Attitude to substance abuse was assessed using 10 questions. The attitudinal scores were two points for agreement, one point for disagreement and zero point for respondents who were not sure or gave no response. The students who get score from 18 to 36 considered positive attitude and those with less than 18 are considered as negative attitude.

Data was analysed using SPSS Version 21. The results were presented in tables showing frequencies and proportions. The Chi-square and Fisher's exact tests were used to test the associations between categorical variables, while the level of significance was set at ($p < 0.05$).

i.   Ethical Considerations

Ethical approval was obtained from the Health Research and Ethics Committee of the Lagos University Teaching Hospital with assigned number

ADM/DCST/HREC/APP/2968. Approval to conduct the study in the schools was obtained from the Head of Public Service Office before going to the Local Government District Office. Written and oral consent was obtained from the parents of respondents who were below 18 years of age and same taken from adolescents above 18 years of age. There was provision of adequate information on the nature of the study with the assurance that findings from the study will be treated with confidentiality and used for the research purposes. Data obtained had no way in which responses could be traced to names of individuals.

Results

Table 1. Socio-demographic characteristics of respondents

Variable	Frequency (n=422)	Percentage (%)
Age group (years)		
10 – 14	48	11.4
15 – 19	374	88.6
Mean ± SD	16.30 ± 1.72	
Sex		
Male	205	48.6
Female	217	51.4
Highest level of Education of father		
Primary	43	10.2
Secondary	203	41.8
Tertiary	131	31.0
None	45	10.7
Highest level of Education of mother		
Primary	63	14.9
Secondary	231	57.1
Tertiary	80	19.0
None	38	9.0

Table 1 represents the socio-demographic characteristics of the respondents. The highest number of respondents, 374(88.6%) were between 15 – 19 years of age. The mean age was 16.30 ± 1.72 years with an age range of 10 to 19 years. The highest level of education of both parents was the secondary school.

Table 2. Awareness of substance abuse and sources of information on illicit drugs

Variable	Frequency	Percentage	Awareness of Substance abuse (n=422)	
Yes	378	89.6	No	
	44	10.4		
Source of first knowledge about Substance abuse(n-378)				**Percentage**
Facebook or internet	25			6.6
Health facility	10			2.6
Health workers/health outreaches	16			4.2
Newspaper	51			13.5
Radio	52			13.8
School	86			22.8

Telephone message	4	1.1
Television	134	35.4

Table 2 represents the number of respondents who have heard or seen messages on illicit drugs. Majority of the respondents 378(89.6%) stated that they have heard or seen massages on illicit drugs. A greater part of these respondents 134 (35.4%) stated that their source of message on illicit drugs were from the television. However, the lowest number of the respondents 4(1.1%) stated that their source of information on illicit drugs was via telephone messages.

Table 3. Respondent's overall knowledge and attitudinal score on substance abuse

Variable	Frequency (n=378)	Percentage(%)
Knowledge	Good 253	66.9
	Poor 125	33.1
Attitude		
	Positive 233	61.6
	Negative 145	38.4
Total	**378**	**100**

The knowledge score of substance abuse among the respondents that was good was 66.9% and the attitudinal score that was positive was 61.6%.

Table 4. Substances abused by respondents and influencers

Variable	Frequency	Percentage (%)
Tranquilizers, sedative and hypnotic (n =35)		
	Peer 8	22.9
	Parents 8	22.9
	Family friends 11	31.4
	Environment 2	05.7
	Others 0	00.0
	Non response 6	17.1
Amphetamines like stimulants (Methamphetamines, ecstasy: n =20)		
	Peer 1	05.0
	Parents 5	25.0
	Family friends 5	25.0
	Community 4	20.0
	Others eg pharmacy 2	10.0
	Non response 3	15.0
Hallucinogen (Lysergic Acid Diethylamide, Mescaline: n = 21)		
	Peer 3	14.3
	Parents 7	33.3
	Family friends 3	14.3
	Community 4	19.0
	Others e.g pharmacy 0	00.0
	Non response 4	19.0
Opiates **(Codeine containing cough syrup, Tramadol: n = 44)**		
	Peer 6	13.6
	Parents 6	13.6
	Family friends 8	18.2

Community 15   34.1
Others e.g pharmacy 0   00.0
Non response 9   20.5

Table 4 represents substance abuse by the respondents and influencers. Opiates such as codeine-containing cough syrup and tramadol are the substances most frequently abused by the respondents from this study. The majority of the respondents reported that environmental influence was the main influence on the use of opiates.

Table 5. Association between knowledge score and substance abuse

Variable	Substance abuse			X^2	df	P-value Fisher's exact (F)
	users n=35	Non users n=343	Total n=378			
Knowledge(tranquillizers)						
Good	21(60.0%)	322(67.6%)	253	0.837	1	0.231
Poor	14(40.0%)	111(32.4%)	125			
Knowledge(amphetamines)						
Good	10(50.0%)	243(67.9%)	253	2.735	1	0.082
Poor	10(50.0%)	115(32.1%)	125			
Knowledge(hallucinogens)						
Good	10(47.6%)	243(68.1%)	253	3.747	1	0.048*
Poor	11(52.4%)	114(31.9%)	125			
Knowledge(opiates)						
Good	27(61.4%)	226(67.7%)	253	0.697	1	0.251
Poor	17(38.6%)	108(32.3%)	125			

Table 5 shows the association between the knowledge score and substance use. There was no statistically significant association between the knowledge score of the respondents and the use of tranquillizers, amphetamines and opiates. However, there was an association between the

use of hallucinogens and the knowledge score of the respondents. Majority of the respondents have good knowledge of the substances abused,

Discussion

The public health burden of substance abuse in Nigeria especially among youths is of concern especially with the changing pattern and demographics of illicit drug users, associated crime rate and possibility of reduced productivity.[17] This study assessed the prevalence of substance abuse among students of government-funded public senior secondary school in Eti-Osa LGA of Lagos State.

The mean age (16.3 years) in our study falls within the adolescent (10-19 years) period which is the high-risk age group for substance abuse according to results from a previous study conducted in Lagos, Nigeria.[4] In contrast to our study, Oladele and Olufunmilayo found out that the prevalence of substance abuse was found to be below 21 years of age.[18] This phenomenon can be explained by easier access to substances and increased psychological pressure.

Identifying the sources where drug abusers obtained drugs is essential in preventing drug abuse. Interventions to block the supply of these drugs from identified sources could reduce the increasing prevalence of drug abuse. In this study, majority of respondents (89.6%) stated that they had seen and heard messages on the dangers of substance abuse, out of which 35.4% reported their major source of information being the television with 22.8% alluding to the fact that they had their information from an official school source. This level of information from television could be of benefit to households since a lot of households in Nigeria have access to television sets finding which was consistent with data reported from an Indian study.[19] This study revealed that majority of respondents (66.9%) had good knowledge of substance abuse which agrees with the results of a similar study conducted in south-western Nigeria.[17] The overall attitude of the respondents towards illicit drugs is good, with close to two-thirds of the respondent (61.6%) having positive attitude towards illicit drug use. It can be deduced that their good knowledge influenced their attitude to the use of illicit drugs. This finding is similar to that obtained in a study conducted in Imo state, Nigeria[20] and another study conducted in .[21]

Evolutions in drug use behavior continue to pose new challenges to these set of individuals. Drug use among secondary school children calls for new approaches to prevention and treatment. Generally, the use of illicit drugs is low among the respondents studied. Though data from this study shows that different drugs have been used by the students; few of them 9.3% stated they have ever used tranquillisers, sedatives and hypnotics. While 5.3%, 5.6% and 11.6% reported to have used amphetamines, hallucinogens

and opiates respectively. The overall most frequently used drugs being the opiates (11.6%) and this is similar to the findings in a study done in Imo, Nigeria.[20] These proportions were related to what was found in studies conducted in the United States where the prevalence of abuse of codeine, hallucinogens and ecstasy was 11.0%, 6.5% and 5.0% respectively.[22,23] The high prevalence could be explained by the fact that the drug is illegally sold in parge quantities in local drug markets and pharmacies in Nigeria. Peer influence could also be a major factor as most of the respondents stated that they got these drugs from friends.

It was noted that for tranquillisers, sedative and hypnotics, an equal number of the respondents 8(22.9%) reported that their parental and peer influence contributed to the onset of substance abuse, However, thirteen of the respondents (37.1%) stated that they abused these substances both individually and in-groups. Respondents who got the drugs from friends were eleven out of the respondents (31.1%). Likewise, a large proportion of respondents who abused substances 7(33.3%) stated that their use of hallucinogens (Lysergic Acid Diethylamide, Mescaline) was influenced by their parents. This is similar to the outcome of a study conducted in the United States which showed a relationship between parental use of illicit drugs and adolescent drug abuse.[24] This implies that the presence of a family member involved in substance abuse contributed to initiation of substance abuse by the student.

Six of the respondents reported that they purchased illicit substances was from a government-registered pharmacy outlet. This was contrary to what was found on the three other classes of drugs examined in this study, where some of the respondents 8 (18.2%) admitted that their family friends influenced their use of codeine containing cough syrup and tramadol. A greater percentage of them reported that they purchased these drugs from friends and they used it both as an individual and in groups.

Conclusion

It is important to focus on prevention and early intervention efforts in in-school youth and young adult population due to the heightened vulnerability to substance abuse during these phases of life. Positive behavioral change interventions could be implemented among these students because, despite the relatively high knowledge of the effects of substance abuse, many of then still indulged in it. Governmental needs to take the initiative to improve supply-reduction activities while exploring demand reduction alternatives in this population.

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