*Ofili M.I.[1], Ugorume G.O.[1], Oyibocha E.O.[1], Eziashi E.[2]
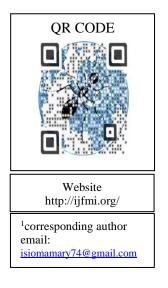
KNOWLEDGE OF AND ATTITUDE TO SUBSTANCE ABUSE AMONG UNDERGRADUATE STUDENTS AT A TERTIARY INSTITUTION IN NIGERIA

*Ofili M.I.[1], Ugorume G.O.[1], Oyibocha E.O.[1], Eziashi E.[2]

[1]Department of Nursing Science, Delta State University, Abraka, Delta State, Nigeria.

[2] Delta State School of Midwifery Asaba

QR CODE

[1]corresponding author email:
isiomamary74@gmail.com

ABSTRACT

Introduction: Substance abuse is a major public health problem globally and its prevalence is increasing rapidly amongst university students in many African countries. Some studies on knowledge and substance use among students have been conducted in Nigeria, but few within Delta State. We assessed students' knowledge of and attitude to substance abuse at a Nigerian University in Delta State.

Materials and Methods: A descriptive quantitative design was used. Study department was randomly selected. Sample size was determined using Yamane's formula for quantitative study: $n_y = N/(1+Ne^2)$. A stratified sampling technique was used in selecting the participants at four levels of study (levels 100, 200, 300 and 400). The final subjects were randomly selected proportionally from the different strata. Out of 156 students in the agricultural science education department, a total of 120 (64 males, 56 females) students constituted the sample for this study. A designed questionnaire form was used for data collection.

Result: Results showed that 68.3% of respondents had good knowledge of substance abuse. However, 40.0% exhibited negative attitude towards substance abuse. Inferential statistical analysis (Chi-square) showed significant association between students' knowledge of and attitude to substance abuse ($\chi^2 = 83.415$, p = 0.000) and age and knowledge of substance abuse ($\chi^2 = 16.816$, p = 0.001).

Conclusion: The students had good knowledge of substance abuse yet engaged in substance abuse. The study students frequently used substances like alcohol, cocaine, codeine, cigarette and tramadol. Effective counselling programme is recommended specifically in schools and families to help tackle this problem.

Keywords: Knowledge, Attitude and Substance abuse

* *Ofili M.I.[1], Ugorume G.O.[1], Oyibocha E.O.[1], Eziashi E.[2]*

INTRODUCTION

Substance abuse, also known as drug abuse is an intrinsic health behaviour affecting a large percentage of youths worldwide. The university education is a period when students experience independence and freedom from adult and parent supervision, self-decision making, and intense academic pressures, share living quarters with strangers, form new social groups, balance social engagements with academic and other life responsibilities, and may be exposed to normative values valued by the youth culture that differ from parental values.[1] These perceived norms motivate the youth to indulge in some unhealthy behaviours such as smoking, alcohol and substance abuse.[2] World Health Organization, defined substance abuse as a state of periodic or chronic intoxication, detrimental to the individual and to the society, as a result of repeated consumption of a substance (natural or synthetic).[3]

Substance use and abuse among students is a major concern, as most developing countries seem to be witnessing increase in the occurrence of substances use especially among students of tertiary institutions. It is estimated that about 246 million people (15 to 64 years of age) worldwide engage in substance abuse.[4] In Nigeria, studies have shown that substance abuse is quite prevalent among university students in these regions: Edo, Lagos, Osun and Ekiti at 77%, 33%, 80% and 42% rates respectively. [5-8]

Substance abuse is a global challenge with detrimental effects on health, wealth and security of nations.[9] It can impose social, health and economic costs on individuals, families, society and economy at large. At the individual level, substance abuse is been linked to depression, violent behaviour and various forms of crime, including many accidental and premeditated injuries. At the society level, society can lose the productivity of people affected by substance abuse. However, constant use of drugs and substances can cause serious and sometimes irreversible damage to physical and psychological development.[10] Students are expected to have canal knowledge of substance abuse vis-à-vis physical, psychological and social health effects of substance abuse. [11], in their study, were revealed some psychological and social health effects associated with substance abuse. These include emotional problems, inability to sleep, restlessness, altered family relationship, engagement in robbery and cultism. The substances most frequently used by university students are coffee, cola nuts, alcohol, spirits, cigarettes, cannabis, diazepam and diazepoxide.[10] Others include: cocaine, marijuana, acetaminophen and nicotine.[7] Studies have shown that students tend to use stimulants and depressants sequentially, mainly during and after sessional examinations.[10] The stimulants help to keep them alert while they are studying for an examination, and the depressants help them to rest after an examination is over.

The reasons for their engagement in this act include academic pressure, low grade point average, low academic performance, to be alert while reading, for relaxation, desire to experiment, the lure of popularity, availability of substances, high social class, poor mental health, to relieve stress, failure in love affairs, poor relationship with parents and family disputes.[12] The level of knowledge of substance abuse as well as the students' personal attitude towards

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substance abuse is crucial in the type of prevention strategy and intervention used in tackling the problem. This study is aimed at assessing students' knowledge of and attitude to substance abuse in a Nigerian University.

MATERIALS AND METHODS

Study design, sampling method and sample size

A descriptive quantitative design was used. The department was randomly selected. Sample size was determined using Yamane's formula for quantitative study: $n_y = N/(1+Ne^2)$. The population of the students in the department was 156 (levels 100 - 400). A stratified sampling technique was used in selecting the participants at four levels of study (levels 100, 200, 300 and 400). Stratified sampling was employed by dividing the entire population of students into different strata/ subgroups: subgroup 1 – level 100, subgroup 2 – level 200, subgroup 3 – level 300 and subgroup 4 – level 400. Then, the final subjects were randomly selected proportionally from the different strata. After the stratified sampling technique, which ensured that the four classes of students were represented in the study, a simple random sampling technique was used to select 20 students from year 1; 30 students from year 2; and 35 students each from year 3 and 4, because of the larger number in those classes. A total of 120 students constituted the sample size for this study.

Study procedures

A designed questionnaire form was used for data collection. It comprised three sections: sections A and C were self-constructed, while section B was adapted from Onifade *et al.*[12] The first section consisted of questions regarding the respondents' sociodemographic data and other background information. The second section evaluated their knowledge about substance abuse, while the last section elicited information on their attitude to substance abuse. The participants gave written informed consent before data collection. The questionnaire was distributed to selected students in their lecture areas, and was collected on the same day – after completion.

Data analysis

Data were processed and analysed using the statistical package for Social Sciences (SPSS) version 25.0 for Windows 8 and summary data was presented using descriptive statistical methods. For inferential statistical analysis, Chi-square ($\chi2$) test was conducted to establish the association between: knowledge and attitude towards substance abuse, age and knowledge of substance abuse, religion and knowledge of substance abuse and gender and attitude towards substance abuse.

Ethical considerations

The Delta State University Research and Ethical Committee granted ethical approval for this study (ref. no. REC/FBMS/DELSU/16/23).

Authors' contributions

Ofili (Delta State University) was responsible for the conception of the study and drafted and revised the manuscript. Ugorume (Delta State University) contributed to the conception of the study and acquisition of data. Oyibocha (Delta State University) contributed to the analysis of the data. Eziashi (Delta State School of Midwifery) contributed to the secondary analysis and re-analysis of the data. All authors read and approved the final manuscript.

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RESULTS

The instrument (questionnaire) was pilot tested by administering it to 20 respondents. Cronbach's reliability was computed to ensure internal consistency of the instrument. An alpha value of 0.83 was obtained which is greater than 0.7 standard value, which was an indication of good reliability as seen in table 1.

Table 1. Reliability Test of Questionnaire Used for Data Collection

Cronbach's Alpha	No. of Items
0.830	20

Table 2 presents a summary of the characteristics of the study participants (n = 120). Majority 58.4% (70) of the participants were from 300 and 400 levels. The age range of respondents was between 15 and 30 years with a mean age of 21.9 years ±3.05 (standard deviation). More male students participated in the study 53% (64). Majority of the participants (117/120; 97.5%) were single and all but one was Christian. Of the sample, 40 participants (33%) were from the Ibo ethnic group.

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Table 2. Distribution of respondents by the demographic characteristics.

		N=120
Age Distribution	Age Range	Frequency (%)
	15-18	18(15.0)
	19-22	56(46.7)
	23-26	41(34.2)
	27-30	4(3.3)
	30 & above	1(0.8)
Gender Distribution	Male	64(53.3)
	Female	56(46.7)
Marital status	Married	3(2.5)
	Single	117(97.5)
Level	100	20(16.7)
	200	30(25.0)
	300	35(29.2)
	400	35(29.2)
Ethnicity	Bini	8(6.7)
	Esan	2(1.7)
	Hausa	2(1.7)
	Ibo	40(33.3)
	Isoko	11(9.2)
	Itsekiri	6(5.0)
	Izon	3(2.5)
	Ukwani	3(2.5)
	Urhobo	28(23.3)
	Yoruba	17(14.2)
Religion	Traditional	1(0.8)
	Christian	115(95.8)
	Islam	4(3.3)

Table 3. Frequency distribution of respondents' knowledge of substance abuse

	N=120
Knowledge	Frequency (%)
Good knowledge	82 (68.3)
Poor knowledge	38 (31.7)
Total	120 (100.0)

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Table 3 presents the frequency distribution of respondents' knowledge of substance abuse. Analysis of scores of the respondents on the knowledge of substance abuse was determined using the 50th percentile (median score which was 14). Scores equal or greater than the 50th percentile were considered good knowledge and scores less than the 50th percentile were considered poor knowledge. Out of the 120 respondents, 82 (68.3%) scored above 14 (good) and 38 (31.7%) scored below 14 (poor). The result on the evaluation of students' knowledge of substance abuse showed that 68.3% (82) had good knowledge while 31.7 % (38) had poor knowledge as shown in table 3 below. The figures in table 3.1 show the respondents definitions of substance abuse, 90% of the respondents defined substance abuse as 'excessive use of drugs and alcohol', 'using substances illegally' (82.5%), 'taking of substances that intoxicate' (72.9%) while 69.2% defined substance abuse as 'taking of substances without medical prescription. On their responses on common substances abused by the students, 89.2% of respondents indicated alcohol and cigarette as commonly abused by students, codeine and caffeine (86.7%), cocaine and amphetamine (82.5%) while 70% reported drugs such as tramadol and paracetamol. The reasons for engaging in substance abuse as reported by the respondents were peer-group influence (91.7%), experimentation and curiosity (83.3%), depression (79.2%) and low self-esteem (71.7%). The students mentioned the following as effects of substance abuse: damage to vital organs of the body (89.2%), addiction (85%), and mental illness (77.5%) while 68.2% mentioned sharp decline in academic performance as one of the effects of substance abuse.

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Table 3.1. Distribution of respondents' responses to the knowledge of substance abuse

	Correct Frequency (%)	Wrong Frequency (%)
		N= 120
Meaning of substance abuse		
Excessive use of drugs and/or alcohol	108 (90.0)	12 (10.0)
Taking of substances that intoxicate	95 (79.2)	25 (20.8)
Using substances illegally	99 (82.5)	21 (17.5)
Taking substances without medical prescription	83 (69.2)	37 (30.8)
Common substances abused by students		
Stimulants such as cocaine and amphetamine	99 (82.5)	21 (17.5)
Alcohol and cigarette	107 (89.2)	13 (10.8)
Codeine and caffeine	104 (86.7)	16 (13.3)
Drugs such as tramadol and paracetamol	84 (70.0)	36 (30.0)
Reasons for engaging in substance abuse		
Peer group influence	110 (91.7)	10 (8.3)
Low self esteem	86 (71.7)	34 (28.3)
Experimentation and curiosity	100 (83.3)	20 (16.7)
Depression	95 (79.2)	25 (20.8)
Effects of substance abuse		
Sharp decline in academic performance	82 (68.3)	38 (31.7)
Addiction to substances being consumed	102 (85.0)	18 (15.0)
Damage to vital organs of the body e.g. liver	107 (89.2)	13 (10.8)
Poor mental health/ mental illness	93 (77.5)	27 (22.5)

Table 4. Frequency distribution of respondents' attitude to substance abuse

Attitude	Frequency (%)
	N = 120
Positive attitude	72 (60.0)
Negative attitude	48 (40.0)
Total	120 (100.0)

Table 4 presents the frequency distribution of respondents' attitude to substance abuse. Analysis of scores of the respondents on the attitude to substance abuse was determined using the 50th percentile (median score which was 8). Scores equal or greater than the 50th percentile were considered positive attitude and scores less than the 50th percentile were considered negative attitude. Out of the 120 respondents, 72 (60.0%) scored above 8 (positive) and 48 (40.0%) scored less than 8 (negative). The range of scores was 0 to 10 with a mean score of 8.09 ±1.91 (standard deviation). On the evaluation of their attitude towards substance abuse, 60.0% (72) had positive attitude while 40% (48) had negative attitude. The figures in table 4.1 show details of responses of respondents to the various attitudinal questions.

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Table 4.1. Distribution of respondents by their responses to the attitude to substance abuse

		N = 120
	Positive Frequency (%)	Negative Frequency (%)
The risk of substance abuse is increased by staying with people who practice substance abuse.	110 (91.7)	10 (8.3)
There is no problem in substance intake until it is revealed to others.	54 (45.0)	66 (55.0)
Many people engage in substance abuse because they come from families where substance abuse is considered as a normal behaviour.	60 (50.0)	60 (50.0)
Substance abusers may quit substance abuse anytime despite long intake of substance	45 (37.5)	75 (62.5)
There is no treatment for addiction.	72 (60.0)	48 (40.0)
Substance abusers are bad people so they should not be helped.	82 (68.3)	38 (31.7)
I take alcohol, codeine, cocaine, cigarette or tramadol regularly.	89 (74.2)	31 (25.8)
I keep friends who practice substance abuse.	55 (45.8)	65 (54.2)
Encourage one to engage in substance abuse to enable one understand its effect.	81 (67.5)	39 (32.5)
I have the confidence to say" no" when someone offers me a substance.	93(77.5)	27 (22.5)

The association between the respondents' knowledge of substance abuse and their attitude to substance abuse was statistically significant $\chi^2 = 83.415$, df = 1, and p-value 0.000 which is less than 0.05. The association between age and knowledge was also statistically significant $\chi^2 = 16.816$ and p-value 0.001. Furthermore, the association between religion and knowledge ($\chi^2 = 1.000$ and p-value 4.290), gender and attitude ($\chi^2 = 0.750$ and p-value 0.496) were not considered statistically significant.

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Table 5. Results of chi square (χ2) analysis of association between students' knowledge of and attitude to substance abuse

	Good attitude (%)	Poor attitude (%)	(χ2)	p-value
Good knowledge	72 (60.0)	10 (40.0)	83.415	0.000
Poor knowledge	0 (0.0)	34 (100.0)		

0.05 level of significant

Table 6. Results of Pearson's chi square (χ2) analysis of knowledge of and attitude to substance abuse organized according to demographic variables.

	Good knowledge	Poor knowledge	(χ2)	p-value
Age				
15-18	13 (27.8)	5 (72.2%)	16.816[a]	.001*
19-22	35 (71.4)	14 (28.6)		
23-26	38 (79.2)	10 (20.8)		
27-30	4 (80)	1 (20.0)		
Gender				
Male	47 (71.2)	19 (28.8)	0.555	0.290
Female	35 (64.8)	19 (35.2)		
Religion				
Christianity	78 (67.5)	37 (32.2)	1.000	4.920
Islamic	4 (80)	1 (20)		
	Positive attitude	Negative attitude		
Gender				
Male	61 (92.4)	5 (7.6)	0.750	0.496†
Female	49 (90.7)	5 (9.3)		

0.05 level of significant
†, Fisher's exact test

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DISCUSSION

The age distribution of respondents reflects that about 97 of them (80.9%) were within the age bracket 19-26 years while only one was 30 years and above. This clearly suggests that most of the respondents were youths at the prime age. The marital statuses show that 117 (97.5%) were single while only 3 (2.5%) were married. This suggests that majority of the respondents were not married and therefore not under marital obligations. Male students were more than their female counterparts and this may be attributed to the fact that men have higher tendencies of substance abuse than women which is similar to the reports of [15]

The level of knowledge of substance abuse as well as the students' personal attitude towards substance abuse is crucial in the type of prevention strategy and intervention used in tackling the problem. In general, respondents' knowledge of substance abuse was good (68.3%). In previous studies, it was reported that students were aware of substance abuse and had good knowledge of the health effects of substance abuse with respect to physical damage to vital organs of the body, social vices such as robbery and cultism and psychological damages such as mental illness.[8] [11] [13] [14] [15] Peer pressure, media and advertisement may explain students' adequate knowledge and awareness of drugs and substances because they portray drugs as socially acceptable, as it has been shown previously in a study in Niger State in northern Nigeria.[15] On the contrary, [6] in their study, deduced that the awareness, knowledge, practices and attitudes of Nigerian undergraduates towards drug abuse is very poor as well as their attitude towards drug addicts even after rehabilitation. This study also revealed alcohol, spirits, cola nuts, cigarette, marijuana, cocaine, amphetamine, codeine and caffeine as the most popular substances used by university students

which could be attributed to the fact that alcohol and cigarette are easily affordable and accessible to the students which agrees with the findings of [6] [8] [10] [12] [14-18] Furthermore, it was observed that undergraduate students use drugs and substances because their friends use them and because of curiosity. Previous studies have also shown that easy accessibility, peer group influence, curiosity, low self-esteem, for relaxation, to be in high mood and depression as the main reasons for engagement in substance abuse and this is in agreement with the observation from this study.[12] [14] [15] [18]

In this study, the observed 60.0% (72) attitude evaluation favors the continual use of substances as 74.2% (89) of these respondents personally consume substances such as alcohol, codeine, cigarettes and tramadol on regular basis, 45.2% (55) have friends who practiced substance abuse and many of these people, 67.5% (81) encourage their friends to engage in substance intake to understand how it feels when used. This observation is comparable to the findings of [7] [10] [12] Moreover, it was observed that majority would not allow their relation to marry drug addicts, thus predisposing them to seeking drugs again and subsequently addiction. Also, [14] reported that students (70%) had positive attitude towards alcohol consumption and felt that alcohol was acceptable as a social drink and for entertaining with friends compared. This was considerably higher than a Nigerian study, which reported that only 20% serve alcohol to friends as a social drink.[21] This difference may be attributed to cultural and religious beliefs.

Conversely, 40.0% (48) showed disapproval for the use of substances. Disapproval for the use of substances can influence one's attitude towards this social group (substance abusers). This in turn may result into public discrimination and prevent substance abusers from seeking the help they require.[13] A study conducted in Ireland, revealed that

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those who had personal experience of someone 'with a drug problem' tended to be less negative in their attitudes towards substance abusers [20] and their contact with substance abusers is found to reduce the associated prejudice. Similarly, [11], in their study revealed that male students' attitudes towards those with substance use disorders were more positive than female students.

Conclusion

The students had good knowledge of substance abuse yet engaged in substance abuse. Students frequently used substances like alcohol, cocaine, codeine, cigarette and tramadol. Our findings indicate that substance abuse is an important public health problem, especially amongst undergraduate students. Effective counselling and rehabilitation programme is recommended specifically in schools and families to help tackle this problem.

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