

Prevalence Of Psychoactive Substance Use And Drug Problem Among Medical Students Of Ladoke Akintola University Of Technology, Ogbomosho Nigeria

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Abstract- Study background: Medical students, like any other students, due to psycho-social factors and academic stress they go through, are at risk of psychoactive substance use. Therefore, this study aimed to determine the prevalence of substance abuse and drug problem among medical students in this study area.

Methodology: The cross-sectional study included medical students between 200-600 levels of the Ladoke Akintola University of Technology Ogbomosho. An adapted self-administered questionnaire was employed to capture sociodemographic data and a drug abuse screening test scale (DAST-10) was used for substance screening. SPSS version 21.0. Descriptive and analytical statistics were presented as frequencies, percentages, means, and standard deviations. The Chi-square test determined associations and significant associations at $P < 0.05$

Result: This work revealed that 20 respondents abuse at least one of the listed drugs and 3 abuse more than one. Cannabis is the most abused drug reported (40%) follow by tranquilizers (15%). Barbiturates, cocaine, Stimulants and Hallucinogens are abused accounting for 10% each and 5% for Narcotics. The Mean DAST 10 score was 0.830 ± 1.015 . 42.7% of the respondents reported no drug problem, 51.0% have a low level of drug problem, 5.8% have a moderate level of drug problem and only 0.5% have a substantial level of the drug problem. None of the respondents has a severe level of drug problem.

Conclusion: The prevalence of substance use in this study is 9.5% while the prevalence of drug problem is 57.3% with the majority within 20-25years age group among which 95.6% are classified under moderate level of drug problem from DAST 10 score.

Index Terms- drug abuse, psychoactive substance use, medical students, LAUTECH Ogbomosho.

I. INTRODUCTION

A psychoactive substance is a chemical substance that changes nervous system function and results in alterations in perception, mood, consciousness, cognition, or behavior.

Common psychoactive substances abused are alcohol, cannabis, cocaine, and heroin among others^{1,2}.

Because of the stress they go through in school and the bulky academic syllabus, medical students are at risk of abusing psychoactive substances. Apart from the stress of medical school and bulky syllabus, other factors implicated are unhealthy family background, high social class, peer-group influence, desire to remain awake at night, pressure to succeed in academic work, self-reported poor mental health, and easy accessibility to the drug.^{2,3} Psychoactive substance abuse among medical students may hamper learning capabilities and the development of technical skills and, therefore, the quality of care offered to patients is impaired. The use of psychoactive substances in early life has been linked with dependency later in life.^{1,4,5}

Studies have reported that medical students may resort to certain forms of "medication" to cope with challenges they face in the course of their studies.⁶ Previous studies have suggested an alarming rate of substance use among medical students.⁶⁻⁸ In a study in Enugu, south-east Nigeria, the lifetime prevalence rate of 56% was reported among a sample of medical students.⁹

Several studies have reported the prevalence of psychoactive substances among medical students but none among the medical students of this University. This study aimed to assess the prevalence and pattern of abuse of different psychoactive substances among medical students.

II. METHODOLOGY

Study area

The institution is owned by Oyo state with over twenty-five thousand undergraduates and about four hundred medical students in both pre-clinical and clinical years. It welcomes and admits prospectus medical students from all angles of the Country with her College of Health Sciences located in Ogbomosho. It also has her Teaching Hospitals located in Ogbomosho where her main University campus is located on Latitude $8^{\circ} 08' 00''$ East and Longitude of $4^{\circ} 16' 00''$ North of the Equator, within the savannah region and a gateway to the Northern part of Nigeria from the

West. About 57 kilometers South West of Ilorin (the Capital of Kwara State) 53 Kilometres North – East of Oyo, 58 Kilometers North – West of Osogbo (Capital of Osun State), and 104 Kilometres North – East of Ibadan (Capital of Oyo State).¹⁰

Study Design

The study adopted a descriptive cross-sectional design. This was a population study involving a total of medical students from 200 to 600 levels. There are 130, 133, 70, 75 and 67 students each in 200, 300, 400, 500 and 600 levels respectively. A total of four hundred and seventy-five (475) students in both the preclinical and clinical years.

Study Instruments

A self-administered questionnaire with consent was used to capture socio-demographic variables such as age, gender, marital status, level, religion, and source of funding for the medical school.

Drug Abuse Screening Test

The Drug Abuse Screening Test (DAST) is a 10-item self-administered tool that quickly assesses drug use problems. The DAST-10 has been validated in the varied setting; substance-abuse patients,¹¹ primary care, in the workplace,¹ and adapted for use with adolescents¹² Suggested scoring for the DAST-10: “0 No problem”, “1-2 Low level”, “3-5 Moderate level”, “6-8 Substantial level”, “9-10 Severe level”.¹¹

Study Procedure

Step 1: The total number of students in each level was obtained through each class representatives

Step 2: Self-administered questionnaires were distributed to all students separately according to their year of study. Introduction and explanation of the aim of this study followed with instructions for the proper process of filling.

Step 3: The questionnaires which were filled individually with the consent form alongside on the front page were collected and collated on the same day. The completion of the questionnaires was voluntary and anonymous.

Data analysis

The data obtained via questionnaires were computed and analyzed using Statistical Package for Social Sciences SPSS version 21.0. Descriptive and analytical statistics were presented as frequencies, percentages, means, and standard deviations. The Chi-square test determined associations and significant associations at P < 0.05.

Confidentiality of data

All information gathered was treated and kept with the utmost confidentiality.

Conflict of interest

The author declared no conflict of interest

III. RESULTS

The total number of respondents is 210. There is a slight female to male preponderance 52.3% to 47.6%. Most respondent are within the 20-25 years age bracket. 71.4% are Christians, 24.8% are Muslims. 96.2% are Yoruba, 2.9% Igbo and 1% Hausa. 94.7% are not married while only 5.3% are married. (Table I)

Table I: Sociodemographic Characteristics of respondents

Variables	Frequency	Percentage (%)
Sex		
Male	99	47.6
Female	108	52.3
Age		
< 20 Years	83	40.1
20 – 25 Years	111	53.4
> 25 Years	13	6.3
Religion		
Christianity	147	71.4
Islam	51	24.8
Traditional	6	2.9
Others	2	1.0
Marital Status		
Single	197	94.7
Married	11	5.3
Ethnic		
Yoruba	200	96.2
Igbo	6	2.9
Hausa	2	1.0

Most Respondents are in the second year (33.7%), fourth-year (25.5%) and Fifth Year (20.2%). Most respondent source of funding is Parent 92.8%, 4.8% are self-funded while 2.4% are on scholarship. The monthly income (in Nigerian Naira) of 48.2% of respondent is between 10,000 to 20,000NGN 23.0% earns less than 10,000NGN, 21.6% earns between 20,000 to 50,000NGN,

7.0% earns more than 50,000NGN. 87.3% have no previous tertiary qualification while 12.7% have a previous tertiary qualification. 47.8% have spent between 3 to 5 years in school, 34.3% has spent less than 3years and 17.9% have spent more than 5 years (Table II)

Table II: Academic information

Variables	Frequency	Percentage (%)
Level		
200L	70	33.7
300L	35	16.8
400L	53	25.5
500L	42	20.2
600L	8	3.8
Source of Funding		
Self	10	4.8
Parent	193	92.8
Scholarship	5	2.4
Monthly Income		
< 10k	46	23.1
10k – 20k	96	48.2
20k – 50k	43	21.6
> 50k	14	7.0
No of Year spent in Medical School		
< 3 Years	71	34.3
3 – 5 Years	99	47.8
> 5 Years	37	17.9
Had Previous Tertiary Qualification		
Yes	26	12.7
No	179	87.3

From table III, 88.5% are from monogamous setting while 11.5% are from polygamous setting. 87.0% has no family history of drug abuse, 8.2% does not know while 4.8% reported family history of drug abuse.

Table III: Family history

Variables	Frequency	Percentage (%)
Family Setup		
Monogamous	184	88.5
Polygamous	24	11.5
Family History of Subs Abuse		
Sibling	3	1.4
Extended Family	7	3.4
Don't know	17	8.2
None	181	87.0

Table IV showed that 20 people abuse at least one of the listed drugs, 3 people abuse more than one of the listed drugs. Cannabis is the most abused drug (40%) follow by tranquilizers (15%). Barbiturates, cocaine, Stimulants and Hallucinogens are abused accounting for 10% each and 5% for Narcotics

Table IV: Distribution of Substance abuse

Substance	Frequency	Percentage
Cannabis	8	40
Solvents	1	5
Tranquilizers	3	15
Barbiturates, cocaine	2	10
Stimulants	2	10
Hallucinogens (LSD)	2	10
Narcotics (heroin)	1	5
Others*	1	5
Total	20	100

NB: 3 people abuse more than one Substance
*except alcohol or Tobacco

The Mean DAST score is 0.830±1.015. From the DAST 10 score 42.7% of the respondents have no drug problem, 51.0% have low level drug problem, 5.8% have moderate level drug problem and only 0.5% has substantial level of drug problem. None of the respondents has a severe level drug problem. (Table V)

Table V: Prevalence of Substance Abuse Related Problem (DAST 10)

Variables	Frequency	Percent
No problem	88	42.7
Low Level	105	51.0
Moderate Level	12	5.8
Substantial Level	1	0.5
Severe Level	0	0
DAST Score		
Mean	0.830	
SD	1.015	

Table VI revealed that, 50.5% of females have drug problem from DAST 10 scale while 64.9% of males have drug problem, P-value 0.075. 71.2% of those between 20 and 25years have drug problem, 61.5% of those above 25years and 37.0% of those less than 20years have drug problem, P-value 0.001. 57.4% of singles and 54.6% of married people have drug problem P-value 0.981. 33.8% of those in 2001, 54.4% of those in 3001, 81.1% of those in 4001, 71.4% of those in 5001, 37.5% of those in 6001 have drug problem P-value <0.001. 70% of those who are self-funded, 56.6% of those who are funded by parent and 60% of those on scholarships have drug problem P-value 0.450. 58.7% of those who earn less than #10,000, 50.6% of those who earn between #10,000 to #20,000, 71.4% of those who earn between #20,000 to #50,000 and 50.0% of those who earn more than #50,000 have drug problem P-value 0.606.

Table VI: Prevalence of Substance Problem in the population

Variables	DAST score				p-value
	No Problem	Low Level	Moderate Level	Substantial	
Sex					0.075
Male	34 (35.1)	56 (57.7)	7 (7.2)	0	
Female	54 (49.5)	49 (45.0)	5 (4.6)	1 (0.9)	
Age					0.001
< 20 Years	51 (63.0)	27 (33.3)	2 (2.5)	1 (1.2)	
20 – 25 Years	32 (28.8)	69 (62.2)	10 (9.0)	0	
> 25 Years	5 (38.5)	8 (61.5)	0	0	
Marital Status					0.981
Single	83 (42.6)	100 (51.3)	11 (5.6)	1 (0.5)	
Married	5 (45.5)	5 (45.5)	1 (9.1)	0	
Level					0.000

200L	45 (66.2)	21 (30.9)	2 (2.9)	0	
300L	16 (45.7)	15 (42.9)	3 (8.6)	1 (2.9)	
400L	10 (18.9)	42 (79.2)	1 (1.9)	0	
500L	12 (28.6)	24 (57.1)	6 (14.3)	0	
600L	5 (62.5)	3 (37.5)	0	0	
Source of Funding					0.450
Self	3 (30.0)	6 (60.0)	1 (10.0)	0	
Parent	83 (43.5)	96 (50.3)	11 (5.8)	1 (0.5)	
Scholarship	2 (40.0)	3 (60.0)	0	0	
Monthly Income					0.606
< 10k	19 (41.3)	22 (47.8)	4 (8.7)	1 (2.2)	
10k – 20k	47 (49.5)	47 (49.5)	1 (1.1)	0	
20k – 50k	12 (28.6)	26 (61.9)	4 (9.5)	0	
> 50k	7 (50.0)	5 (35.7)	2 (14.3)	0	

IV. DISCUSSION

The total number of respondents was 210. The poor response rate was due to factors mitigating the smooth running of academic programs in Nigeria such as the ongoing nationwide industrial actions by various academic unions at higher institutions of learning. Thus, only available students participated in the study. Most respondents were within the 20-25years age bracket similar to the report by Onofa et al¹³. There was a slight female to male preponderance of 52.3% to 47.6% resonant with the report by Osman¹⁴. Contrary to our findings, similar studies have reported a preponderance of males in Nigerian institutions^{8,13,15}. The socio-cultural perspectives and attitude that seems to favour the male child could account for this. However, the education of the female child has been on the rise in Nigeria.¹⁵ as supported by our findings.

The study revealed that the majority of the respondent has no family history of drug abuse whereas, very few do not have knowledge about their family history of drug abuse. However, 4.8% reported a family history of substance use among siblings and extended family members. There is evidence of social consequences of drug use in this country. There were major social problems such as disruption in family lives, lack of productivity and legal problems as a result of substance abuse. Also, nearly 1 in 8 persons in the general population had experienced consequences due to other peoples' drug use in their families, workplace and communities¹⁶.

This study found that twenty students abuse at least one of the listed drugs in this study, and three students abuse more than one. From a previous report, poly-drug use was very common among high-risk drug users nearly all (95 percent) as compared to nearly half of the drug users in the general population reported

using either simultaneously or concurrently more than one drug in the past year¹⁶.

The prevalence rate of psychoactive substance use within the past 12 months in this study was 9.5%. This was lower than the 29.1% reported in South East¹⁷ and 45.5% reported by a similar study in South Western Nigeria¹³. The difference could be because alcohol was part of the psychoactive substance they studied, unlike our study in which alcohol and tobacco use were excluded. And as well the peculiarity of the study population could have accounted for the low prevalence rate due to their vast knowledge of the medical implications of substance use.

Cannabis is the most abused drug (40%) follow by tranquilizers (15%). It has been reported from Western countries that the relatively easy availability of cannabis, with perceptions of a low risk of harm, makes the drug among the most common substances abused. Cannabis is often used in conjunction with other substances and the use of other drugs is typically preceded by cannabis use¹⁸. Our findings were in contrast with the report from Northcentral Nigeria where the most currently used psychoactive substances were mild stimulants which accounted for 33.3% of their studied population and only 1% reported current use of cannabis⁸. Barbiturates, cocaine, stimulants and hallucinogens abuse accounted for 10% each and 5% for Narcotics as opposed to previous studies where no current use was reported of cocaine and heroin among medical students in Enugu¹⁹ and Ogun state²⁰.

The prevalence of drug problems in this study was 57.3%. The drug abuse screening test DAST scale revealed that half of the female respondents have drug problems while far more than half of the males have drug problem. Report has shown that among every 4 drug users in Nigeria is a woman. More men (annual prevalence of 21.8 percent or 10.8 million men) than women

(annual prevalence of 7.0 percent or 3.4 million women) reported past-year drug use in Nigeria.¹⁶

From our data, the male gender was significantly associated with greater psychoactive substance use. This was in line with reports from previous studies that showed substance use as predominantly male affair^{13,14} The use of psychoactive substances is more tolerable for males in most Nigerian cultures. The majority of those between 20 and 25 years have the highest drug problem, followed by those above 25 years and less among those less than 20 years. Similarly, the highest levels of any past-year drug use have been reported among those aged between 25-39 years¹⁶

There was a higher prevalence of drug problems among students at 400 level and then 500 level. This could be explained due to their transition into the clinical arms of their training which could be more challenging. Lesser problem pattern was recorded in the extreme levels compared to the mid-levels of medical training. Moreover, the majority of those with drug problems are found among the highest earners or those with higher monthly allowances. Previous studies have reported that, since clinical students tend to have more access to funds, they may be more predisposed to substance use²⁰ which perhaps could account for their drug problems.

Our study solely depended on information gathered via the questionnaires was limited by not assaying drug screening tests. As such, our findings may not be generalized as further exploring is required along with laboratory screening of respondents in order to categorize those with drug problems into interventional-based programs.

V. CONCLUSION

Although the prevalence of substance abuse is lower compared to other reports, the long and short-term effects of drug abuse cannot be over-emphasized as the training and practice of medicine required a perfectly sound mind for optimal cognitive functioning.

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