

## Original Research Article

# Assessment of knowledge and prevalence of drugs and substance abuse among the students of a selected tertiary health institution in Kano, Nigeria

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## ABSTRACT

**Background:** Drugs and substance abuse is one of the commonest emerging public health problems among both adults and adolescents in developing countries. This study aimed to assess the level of knowledge and prevalence of drugs and substance abuse among the students of a selected tertiary health institution in Kano, Nigeria.

**Methods:** A multistage sampling technique was used during selection of the participants and the study was conducted for a period of 4 months (July to November, 2019). A total of 151 students from school of health technology Kano, Nigeria were recruited and the data was collected using a self-administered semi-structured questionnaire. Data was analyzed by the use of statistical software (SPSS version 20.0) and the results were presented in the form of figures and tables with frequencies and percentage. In addition, a statistical test of significance ( $\chi^2$  test) was applied to determine the significant associations between variables,  $p \leq 0.05$  was considered statistically significant.

**Results:** The mean age of study participants was  $27.2 \pm 6.3$  years and majority of them (64.2%) were between 20-25 years. More than nine-tenths (94.0%) of the respondents were Hausa/Fulani, and 32.5% of the respondents were SCHEW students. Little above half (53.6%) of the respondents were earning less than 11000 naira per month and 62.3% of the respondents sourced the information regarding drugs and substance abuse from their friends. All the respondents have seen cigarettes before and 57.6% have seen inhalants (such as glue, petrol etc). Regarding the reason for substance/drug abuse; about 68.9% stated that it's an addiction and based to the factors enhancing drugs and substance abuse; 72.7% mentioned that it was due to peer pressure, and 72.2% mentioned unemployment. Based on societal factors that promotes drugs and substance abuse; more than three-fifths (64.9%) mentioned that it was reluctant attitude of people and 20.5% mentioned it was some cultural factors.

**Conclusions:** The prevalence of drug and substance abuse was 18.5%. Nevertheless more than three-fifths of them had good level of knowledge regarding drug and substance abuse. The ethnicity of the respondents was found significantly associated with level of knowledge regarding drug and substance abuse. There is need for more focused attention by parents, teachers, government and general public on the problem of drug and substance use.

**Keywords:** Prevalence, Substance/drug abuse, Knowledge, Kano

## INTRODUCTION

Substance or drug abuse poses a significant threat to the health, social as well as the economic fabric of families, communities and nations as a whole. In 2010 a study reported that over 230 million people or about 5% of the world's adult population are estimated to have used an illegal drug use at least once.<sup>1</sup> Substance abuse is a huge global health and critical problems which has made it a matter of significant public health importance in most countries around the globe.<sup>2</sup> Illicit drug use is associated with several social and economic consequences such as failure to meet work, family, or school obligations, interpersonal conflicts, legal problems, addiction etc. The use of illicit drugs among the young people has become a subject of public health concern worldwide; this is due to its potential role in the occurrence of intentional and unintentional problems.<sup>2</sup>

According to world health organization (WHO) report; globally there is estimation of about 2 billion alcohol users, 1.3 billion smokers and 185 million drug users.<sup>3</sup> In the year 2000 an initial estimate of factors responsible for the global burden of disease, tobacco, alcohol and illicit drugs contributed to about 12.4% of all deaths worldwide.<sup>3</sup> The health and social cost of abuse of any substance or drug in most cases reflect the most disturbing mortality and morbidity.<sup>4</sup>

In Nigeria, the use and abuse of some drugs (such as tramadol) has become a problem of National mental health and psychiatric significance. There seem to be an increasing prevalence of drug abuse amongst adolescents in Nigeria; despite the efforts of concerned bodies to control this problem.<sup>5</sup> The earlier studies conducted in Nigeria on students' substance use were largely hospital-based and confined to selected regions of the country.<sup>6</sup> Nevertheless, in the past years, these type of studies have taken the form of field work through employing some epidemiological techniques in order to provide more comprehensive information regarding the substance or drug use among the secondary school students in Nigeria.<sup>7,8</sup> Students who normally feel inadequate have been known to use substance or drugs in order to achieve social acceptance.<sup>9</sup> However the problem of drug or substance abuse knows no boundaries or social class. It prevents the development of any society; because it's a threat to life, health, dignity and prosperity of all individuals. This study aimed to assess the level of knowledge and prevalence of drugs and substance abuse among the students of a selected tertiary health institution in Kano, Nigeria.

## METHODS

### *Study settings and period*

The study was carried out among the students of school of health technology (SHT) Kano. SHT is a public tertiary health institution situated in Kano city of Nigeria.

The study was a descriptive cross-sectional type of study which was carried out for a period of four months (July to November 2019).

### *Study population, selection criteria, sample and sampling technique*

A total of 151 students from School of Health Technology Kano Nigeria were recruited. The study populations were all students of school of health technology (SHT), Kano. A multistage sampling technique was used during selection of the participants; at first stage one tertiary health institution out of the two was selected (i.e. SHT) using a simple random sampling method; at the second stage a total of six programs were selected out of the possible fifteen in this school using stratified sampling technique; and finally the study participants were selected purposively.

### *Data collection procedure and analysis*

The questionnaire used in this study comprised of three sections. Section A was based on socio-demographic data; Section B was used to assess the knowledge on drugs and substances abuse; Section C was used to assess the practice of drugs and substances abuse. The data was collected using a self-administered, semi-structured, pre-tested questionnaire. Data was analyzed by the use of statistical software (SPSS version-20.0) and the results were presented in the form of figures and tables with frequencies and percentage. Respondents' knowledge on drugs and substance abuse was assessed as follows: each correct response attracted one (1) point whereas wrong or I don't know attracted no point (0). Points were then converted into percentages. A score of  $\geq 60.0\%$  was classified as good knowledge and a score of  $< 60.0\%$  was considered as poor knowledge. In addition, a statistical test of significance ( $\chi^2$  test) was applied to determine the significant associations between variables,  $p \leq 0.05$  was considered statistically significant. Verbal and written consent was taken from study participants before starting the data collection. The respondents were sought by explaining the aims and objectives of the study to them as well as the fact that their responses will be handled confidentially and will be used only for the purpose of the study.

## RESULTS

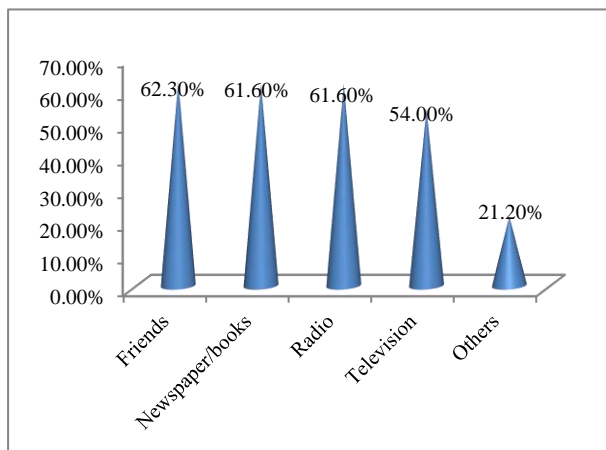
The mean age of the respondents was  $27.3 \pm 6.2$  years and most of the respondents (64.2%) were 24 years and below, followed by 27.2% who were between 25-29 years (Table 1). Based on ethnicity of the respondents; more than nine-tenths (94.0%) of the respondents were Hausa/Fulani, 4% were Yoruba and the rest (2.0%) were Igbo. About 32.5% of the respondents were SCHEW students, 29.8% dental students, 17.2% JCHEW students, 16.6% were health education students, 2% health information students and the rest (2%) were pharmacy students. Little above half (53.6%) of the respondents

were earning less than 11000 naira per month, followed by 29.1% who were earning about 21000-30000 naira in a month.

**Table 1: Distribution of respondents according to socio-demographic characteristics (n=151).**

Variables	Frequency	Percentage
<b>Age (years)</b>		
≤24	97	64.2
25-29	41	27.2
30-34	9	6.0
≥35	4	2.6
Mean±SD	27.3±6.2	
<b>Ethnicity</b>		
Hausa/Fulani	142	94.0
Yoruba	6	4.0
Igbo	3	2.0
<b>Program of study</b>		
Pharmacy tech	3	2.0
Health information	3	2.0
JCHEW	26	17.2
SCHEW	49	32.5
Dental	45	29.8
Health Education	25	16.6
<b>Monthly Income (Naira)</b>		
<11000	81	53.6
11000-20000	16	10.6
21000-30000	44	29.1
>30000	10	6.6

About 62.3% of the respondents heard about drugs and substance abuse from their friends, 61.6% from newspaper/books, and radio, 54.0% from television and the remaining (21.2%) from other sources (Figure 1).



**Figure 1: Distribution according to respondents source of information on drug/substance abuse (n=151).**

All the respondents have seen cigarettes before, 57.6% have seen inhalants (such as glue, petrol etc), 53.6% had

mentioned marijuana, 52.3% have seen beer, about 47.6% mentioned benzodiazepines, 20.5% have seen opioids and only 10.6% of them had mentioned cocaine (Table 2). Regarding the reason for substance/drug abuse about 68.9% stated that it's an addiction, 62.9% mentioned it's due to illness, 46.4% believed that it may be stress, 21.2% mentioned to improve performance and 9.9% have stated other reasons for substance/drug abuse.

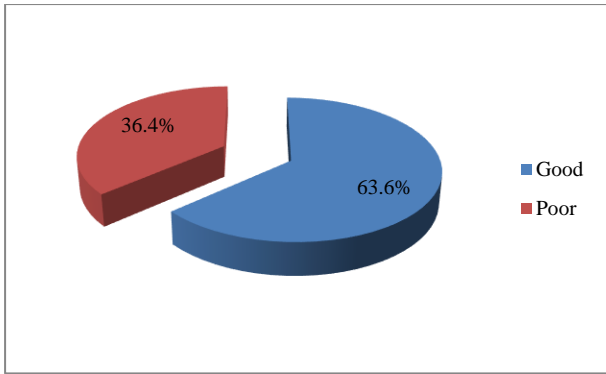
**Table 2: Distribution of respondents based on the substance/drug seen and reasons for substance/drug abuse (n=151).**

Parameters	N	%
<b>Substance/drug seen</b>		
Beer	79	52.3
Cigarettes	151	100
Marijuana	81	53.6
Benzodiazepines (valium)	72	47.6
Inhalants (glue, petrol)	87	57.6
Cocaine	16	10.6
Opioids (codeine, morphine)	31	20.5
<b>Reasons for substance/drug abuse</b>		
Addiction	104	68.9
Improve performance	32	21.2
Stress	70	46.4
Illness	95	62.9
Others	15	9.9

All the respondents had knowledge about cigarettes and more than eight-tenths (84.1%) of them knew marijuana, 77.5% had knowledge about beer, 76.2% cocaine, 74.8% opioids, 73.5% had knowledge on benzodiazepines and 70.9% knew about inhalants (Table 3). According to the factors enhancing drugs and substance abuse about 72.7% mentioned it was due to peer pressure, 72.2% mentioned unemployment, 43.1% believed that it was due to lack of danger awareness, 38.4% mentioned lack of strict law and the rest (2.7%) have stated other factors enhancing drug and substance abuse. Based on societal factors that promotes drugs and substance abuse; more than three-fifths (64.9%) mentioned that it was reluctant attitude of people, 20.5% mentioned cultural factors, 19.9% mentioned it was lack of relational activities and the rest (8.6%) mentioned other factors.

The prevalence of drug and substance abuse was 18.5% and most (39.3%) of the substance/drug use were cigarettes, followed by 25.0% stimulants, 21.4% benzodiazepine and the rest (14.3%) was marijuana (Table 4). However most (67.9%) of the respondents were using these drugs/substances occasionally and the remaining (32.1%) were regular users.

Little above three-fifths (63.6%) of the respondents had good level of knowledge regarding drug and substance abuse and the rest of them (36.4%) had poor level of on drug and substance abuse (Figure 2).



**Figure 2: Level of knowledge on drugs and substance abuse (n=151).**

Ethnicity of the respondents was found statically-significantly associated ( $p < 0.05$ ) with level of knowledge regarding drug and substance abuse (Table 5). However; age of the respondents, program of study and monthly income were not statistically-significantly associated ( $p > 0.05$ ) with level of knowledge regarding drug and substance abuse.

**Table 3: Knowledge based on types, enhancing and societal factors that promotes drugs and substance abuse (n=151).**

Parameters	N	%
<b>Knowledge on some specific drugs and substances</b>		
Beer	117	77.5
Cigarette	151	100.0
Marijuana	127	84.1
Benzodiazepines	111	73.5
Inhalants	107	70.9
Cocaine	115	76.2
Opioids	113	74.8
<b>Knowledge on factors enhancing drugs and substance abuse</b>		
Unemployment	109	72.2
Lack of strict law	58	38.4
Lack of danger awareness	65	43.1
Peer Pressure	109	72.7
Others	4	2.7
<b>Knowledge on societal factors that promotes drugs and substance abuse</b>		
Cultural factors	31	20.5
Lack of relational activities	14	19.9
Reluctant attitude of people	93	64.9
Others	13	8.6

**DISCUSSION**

This study aimed to assess the level of knowledge and prevalence of drugs and substance abuse among the students of a selected tertiary health institution in Kano, Nigeria. In this study the mean age of the respondents was  $27.3 \pm 6.2$  years and most of the respondents (64.2%) were

24 years and below. This age group is characterized to be at risk of substance or drug abuse as reported in the similar studies conducted in Nigeria.<sup>10,11</sup> Youngsters within these ages are always curious about how substances will affect their thinking or behaviour; due to this they get involved in a drug or substance use which always leads to abuse.<sup>12</sup> A study conducted in Kenya among University students reveals that curiosity is one of the factors that lead to substance or drug abuse.<sup>13</sup>

**Table 4: Prevalence, type and duration of drugs and substance abuse (n=151).**

Parameters	N	%
<b>Prevalence</b>		
Yes	28	18.5
No	123	81.5
<b>Type of substance/drug use (N=28)</b>		
Cigarette	11	39.3
Stimulant	7	25.0
Benzodiazepines	6	21.4
Marijuana	4	14.3
<b>Frequency of using substance/drug (N=28)</b>		
Occasionally	19	67.9
Regularly	9	32.1

**Table 5: Relationship between socio-demographic characteristics and level of knowledge on drugs and substance abuse.**

Variables	Level of Knowledge		P value
	Good N (%)	Poor N (%)	
<b>Age range (years)</b>			
≤24	60 (61.9)	37 (38.1)	>0.05
25-29	28 (68.3)	13 (31.7)	
30-34	6 (66.7)	3 (33.3)	
≥35	2 (50.0)	2 (50.0)	
<b>Ethnicity</b>			
Hausa/Fulani	84 (63.6)	48 (36.4)	<0.05
Yoruba	4 (66.7)	2 (33.3)	
Igbo	2 (66.7)	1 (33.3)	
<b>Program of study</b>			
Pharmacy tech	2 (66.7)	1 (33.3)	>0.05
Health information	2 (66.7)	1 (33.3)	
JCHEW	18 (69.2)	8 (30.8)	
SCHEW	32 (64.0)	18 (36.0)	
Dental	30 (66.7)	15 (33.3)	
Health education	17 (68.0)	8 (32.0)	
<b>Monthly income (Naira)</b>			
<11000	60 (74.1)	21 (25.9)	>0.05
11000-20000	11 (68.8)	5 (31.2)	
21000-30000	29 (65.9)	15 (34.1)	
>30000	6 (60.0)	4 (40.0)	

About 62.3% of the respondents sourced the information regarding drugs and substance abuse from their friends,

61.6% from newspaper/books, and radio, 54.0% from television and the remaining (21.2%) from other sources. A study conducted in Nigeria reported that; 10.9% people heard of substance abuse from hospital, while 8.7% heard from radio, 15.3% heard from television, 8.7% from poster, 25.4% from friends, 17.5% from school, 6.5% from seminar, while 6.5% heard from more than one source.<sup>14</sup>

All the respondents have seen cigarettes before, 57.6% have seen inhalants (such as glue, petrol etc), 53.6% had mentioned marijuana, 52.3% have seen beer, about 47.6% mentioned benzodiazepines, 20.5% have seen opioids and only 10.6% of them had mentioned cocaine. A study conducted in Nigeria found that; 10.0% are familiar with cigarette while 20.0% are familiar with opioids, 16.7% are familiar with amphetamines while 53.3% are familiar with alcohol.<sup>14</sup>

The prevalence of drug and substance abuse was 18.5%. A study reveals that nearly 15% of the adult population in Nigeria (about 14.3 million people) reported a considerable level of use of psychoactive drug substances.<sup>15</sup> This prevalence was also less than that of similar study conducted in Pakistan (34.4%).<sup>16</sup> In this study most (39.3%) of the substance/drug use were cigarettes, followed by 25.0% stimulants, 21.4% benzodiazepine and the rest (14.3%) was marijuana. A study conducted in Nigeria reported the high prevalence rate of alcohol, (39% lifetime), cannabis (6.6% lifetime), and inhalants use was 6.8% lifetime.<sup>17</sup> Little above three-fifths (63.6%) of the respondents had good level of knowledge regarding drug and substance abuse. A study conducted in Lagos, Nigeria among youth reported a good level of knowledge regarding substance abuse.<sup>12</sup>

## CONCLUSION

The findings of this study revealed that the prevalence of drug and substance abuse was 18.5% among the respondents. Nevertheless more than three-fifths of them had good level of knowledge regarding drug and substance abuse. The ethnicity of the respondents was found statically-significantly associated with level of knowledge regarding drug and substance abuse. However the level of knowledge was not significantly associated with age, program of study, and monthly income of the respondents. Most of these substances commonly abused are widely available in the ghetto/jungle, pharmacy and provision stores. Therefore, there is need for more focused attention by parents, teachers, government and general public on the problem of drug and substance use. People must be made to understand that the consequences are already with us and that our society cannot continue to pay the price any longer.

## Recommendations

Strict laws should be imposed on the sale and use of substance by National drug law enforcement agencies

(NDLEA) and other law enforcement agencies so as to reduce and/or eliminate access and subsequent use of illicit drugs. Positive behavioral change interventions should be implemented among students because, despite the fact that the respondents knew that substance use had some negative consequences, yet some still indulged in it. Governmental and non-governmental bodies should also continue to plan and implement campaigns against substance abuse, not only among students but the society at large. Government should provide job opportunities and recreational facilities for young people. Health education on substance abuse and their harmful effects should be included into school's curriculum, which should be taught right from primary schools. Students should be encouraged by their families, friends, community and teachers to function within their normal psychological capacities and discouraged substance abuse.

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## REFERENCES

1. UNODC. World drug report. USA: United Nations Publication; 2014:11-25.
2. Global burden of disease study. Mortality and causes of death, global, regional, and national age-sex specific all-cause and cause-specific mortality for 240 causes of death, 1990-2013: a systematic analysis for the global burden of disease study 2013. *Lancet.* 2014;385:117-71.
3. Prevention of psychoactive substance use; 2002. Available at: [https://www.who.int/mental\\_health/evidence/en/prevention\\_intro.pdf](https://www.who.int/mental_health/evidence/en/prevention_intro.pdf). Accessed on 8 December, 2020.
4. Olsson MO, Öjehagen A, Brådvik L, Kronstrand R, Håkansson A. High rates of tramadol use among treatment-seeking adolescents in Malmö, Sweden: a study of hair analysis of nonmedical prescription opioid use. *J Addict.* 2017;2017:6716929.
5. Suleiman GT, Adeyemi SO, Adeponle AB. An overview of psychoactive substance use and misuse in northern Nigeria. *Nigerian J Psychiat.* 2006;4(1):8-14.
6. Oshodi OY, Onajole AT, Aina OF. Substance use among secondary school students in an urban setting in Nigeria: prevalence and associated factors. *Afr J Psychiat.* 2010;13:52-7.
7. Fatoye FO, Morakinyo O. Substance use among secondary school students in rural and urban communities in South Western Nigeria. *East Afr Med J.* 2002;79(6):299-305.
8. Omalase CO, Afolabi OT, Omalase BO, Ihemedu CO. Drink-driving among commercial drivers in a Nigerian community. *Middle East J Psychiat Alzheimer.* 2011;2(2):15-8

9. Fareo DO. Drug Abuse among Nigerian Adolescents Strategies for Counselling. *J Int Social Res.* 2012;5 (20):1-7.
10. Gudaji MI, Habib ZG. Socio demographic factors associated with psychoactive substance use among commercial motorcycle operators in Kano, Nigeria. *J Psychiat.* 2015;6:76-85.
11. Adeyemo FO, Ohaeri B, Okpala PU, Oghale O. Prevalence of drug abuse amongst university students in Benin City, Nigeria. *Public Health Res.* 2016;6(2): 31-3.
12. Anetor GO, Oyekan-Thomas MF. Knowledge and attitude of youths to substance abuse in Alimosho Local Government area of Lagos State. *Int J Biol Chem Sci.* 2018;12(2): 822-36.
13. Didarloo A, Pourali R. University Students' Views Regarding Reasons for Drug Abuse Among Youths. *Int J High Risk Behav Addict.* 2016;5(1):e24778.
14. Akinsefunmi B, Rita O, Aminat H, Rufus B. Assessment of substance abuse among students of college of health sciences and technology. *Global J Med Res.* 2016;16:4.
15. Kazeem Y. A national Survey has confirmed the massive scale of Nigeria's drug problem. Available at: <https://qz.com/africa/1538843/nigeria-drug-abuse-14-million-adults-use-drugs/>. Accessed on 11 December 2020.
16. Malik AA, Nawaz S, Tahir AA, Ahmed S, Hanif N, Aslam J et al. Knowledge and awareness of harmful effect of substance abuse among users and non-users: a cross sectional study. *J Pak Med Assoc.* 2012;62(4): 412-5.
17. Adamson TA, Ogunlesi AO, Morakinyo O, Akinhanmi AO, Onifade PO. Descriptive National Survey of Substance Use in Nigeria. *J Addict Res Ther.* 2015;6:234.

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