

Prevalence of Psychoactive Substance use and its Contributing Factors among Patients Admitted into the Federal Neuro-Psychiatric Hospital, Benin City: A Retrospective Study

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ABSTRACT

Psychoactive substance use is a proliferating public health and social problem that leads to negative multidimensional impact especially among the youths. The aim of this study was to determine the prevalence of psychoactive substance use and its contributing factors among patients admitted between 2015-2020 into federal neuropsychiatric hospital, Uselu, Benin City, Nigeria between. A descriptive retrospective survey design was adopted. A validated proforma was used to audit the record of the inpatients admitted between the years under review. Data were analysed using descriptive and inferential statistics at 5% level of significant. Result showed that the overall prevalence of psychoactive substance use was 62.2% and was more in males (59.9%) than in females (3.2%). Among the 11 psychoactive substances observed in this study, Cannabis (73.2%), Alcohol (9.9%), Opioid (5.4%) were the most commonly used. The most common factors contributing to substance use were friends/peer group (56.3%), Fun/party (26.2%) and inherent family use (5.5%). A statistically significant difference existed between substance use and gender ($p < 0.05$). Multiple logistic regression showed that male are twice (OR = 1.86, CI = 0.343-2.159) more likely to use psychoactive substance than females. Respondents between 23-30 years are twice (OR 2.466 CI; 0.108-2.822) more likely to use psychoactive substance than others. Conclusion/recommendation: Substance use is a significant problem in this generation and continues rise considerably. Alcohol, cannabis, codeine, tramadol, tobacco, and caffeine have been found to be the most commonly used psychoactive substance. It is recommended that a routine screening policy be put in place to identify substance use in all patients admitted to hospital for psychiatric reasons. This should become a critical component of mental health delivery.

Keywords: Psychoactive substance, Prevalence, Use, Associated factors. Patients, Neuro-psychiatric.



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INTRODUCTION

In recent times, the abuse of psychoactive substance appears to be on the increase and experts in this field indicated that if this trend is not controlled, it may aggregate into serious health problems. According to the World Health Organization, substance use refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs.^[1] It is now a major public health challenge all over the world. Substance use and abuse is a complex behaviour that is seen amongst young people all over the world.^[2] Reports from epidemiological studies in Nigeria^[3], Ghana^[4], South Africa^[5], Kenya^[6], and the United States^[7] have shown increasing figures of substance abuse among young people globally, and abuse of substance is now recognized as a significant public health problem worldwide.^[8] Substance abuse is now recognized as a significant public health problem worldwide.^[9] It is estimated that 1 in 20 adults, or a quarter of a billion people between the ages of 15 and 64 years used at least one drug in 2015.^[10] Likewise, United Nations, reiterated that cannabis was by far the most widely consumed drug worldwide in 2016, with 192.2 million past-year users, corresponding to 3.9 percent of the global population aged 15-64 years. High annual prevalence rates of cannabis use continue in West and Central Africa (13.2 percent).^[11] Furthermore, in Nigeria, one in seven persons aged 15-64 years had used a drug (other than tobacco and alcohol) in the past year corresponding to 14.3 million people of this age group who had used a psychoactive substance in the past year for non-medical purposes.^[11] It was reported that the southern geopolitical zone of Nigeria has the highest prevalence of drug use.^[11] According to Akindipe et al, a report from Federal Neuropsychiatric Hospital, Yaba Lagos, in 2018 the number of patients diagnosed with substance abuse was 251 while in 2019 (January to May) 167 patients reported abuse substances. In Neuro-Psychiatric Hospital Aro, Abeokuta, the number of patients diagnosed with substance abuse without

comorbidity was 97 in 2018 whereas 71 cases of substance abuse were reported from January to May 2019.^[12] Other studies in Nigeria have revealed high burden of substance abuse among adults and young adults. For instance, it was reported that about two-third of young adults in Osun State had used substances in both rural (65.7%) and urban areas (66.0%) respectively.^[13] This trend shows evidence that substance use is a concern in our society. The physical, psychological, social, and economic consequences of drug use among youth and young adults are becoming more obvious and alarming. Increase crime rate, insecurity, domestic violence, rape, poor academic performance and health-related problems such as mental illness have been attributed to substance abuse.^[14] Some of the factors contributing to substance use have been identified by the previous studies.^[14] These factors varied and may include age, marital status, religion, education, income, longer trips, driving in the night shift, long or short sleep duration, fewer hours of rest, little experience of the driver, presence of multiple sex partners, and previous involvement in road traffic accidents.^[15] The World Health Organization, reports that young people are more vulnerable to suffer physical, emotional, social harm from direct or third party drug use. It also identifies strong links between the high rate of drinking, violent sexual behaviours, sex trafficking and other accidents to drug use.^[16] This is because youths tend to form gangs and is often seen "hanging" around with peers experimenting with new things including the use of substance.^[17] Also psychoactive use has been shown to be more common in males than in females. However, reports have shown increasing participation of female in substance use.^[18] The study carried out in Nairobi, indicates that 52% of young people believed that drug abuse causes poor performance as 30% agreed that their colleagues who abuse drugs develop aggressive behaviour.^[19] People who use substances lowered commitment to education,

declining grades, increased potential for dropout and truancy.^[20] Despite the damaging outcomes of substance use, there is an increasing rate of substance use among young people globally. Psychoactive substance use and related issues continues to receive research attention across the globe, however, due to increasing urbanization of the country, there is a tendency of changing patterns in psychoactive substance use therefore, the need to constantly update information on the use of these substances among adults and young adults. Though studies are abound focusing on prevalence of psychoactive substance in Nigeria there dearth of empirical studies focusing on the contributing factors Edo state. Therefore this study was conducted to investigate the prevalence of psychoactive substance use and its contributing factors among patients in the Federal Neuropsychiatric Hospital, Edo State, Nigeria.

The specific objectives are to

Determine the prevalence of psychoactive substance use among neuropsychiatric patients admitted between 2015 to 2020 in Federal Neuropsychiatric Hospital, Edo State

Determine the pattern of psychoactive substance abuse among neuropsychiatric patients admitted between 2015 to 2020 in Federal Neuropsychiatric Hospital, Edo State

Identify the contributing factors affecting the use of psychoactive substances among neuropsychiatric patients admitted between 2015 to 2020 in Federal Neuropsychiatric Hospital, Edo State

MATERIAL AND METHODS

Research design/setting

This study adopted a non-experimental, retrospective, descriptive survey design in Federal Neuropsychiatric Hospital in Benin City, Edo State in Nigeria, among all patients between the ages of 15-45 that was admitted into the Federal Neuropsychiatric hospital, Uselu, from January 2015 to December 2020.

Instrument for data collection

An observational checklist (PROFORMA) developed by the researchers for manual collection of primary data of patient's was used to audit case notes and hospital records of patients admitted during the year under review. The proforma consist of two section A: consist of socio-demographic characteristic of the patients admitted for psychoactive substance use for the period under review. Section B consist of items such as; number of patients admitted, number of patients diagnose for psychoactive substance use, contributing factors, and psychoactive substance commonly used. The instrument was subjected to face and content validity by experts in the field of psychiatry, measurement and evaluation. Remarks and feedback, comments and observations from the experts were put into consideration for further make correction on the checklist before it was subjected to reliability test.

Method of data collection

Data were collected with the help of two research assistants who were medical record officer working in the medical record unit. These research assistants were brief on the objectives of the study, after which they assisted in bringing out the case file of the patient for auditing and returning them to the appropriate cabinet from which they were taken after the audit. While the researcher go through these case file to pick out the necessary information as indicated in the proforma. This was done after ethical clearance certificate have been obtained and shown to the head of the medical record unit for consent which was granted. Date collection was done every day from Monday to Friday between the hours of 8am -12pm. For 4 weeks.

Ethical consideration

Ethical approval with protocol number PH/A.864/VOL.XIX/230 was obtained from the research and ethical committee of the Federal Neuropsychiatric Hospital Benin City, Edo State.

The purpose, benefits and intent of the study was well explained. Thus, all patient information obtained was treated confidentially.

Method of data analysis

The data gathered was analysed using descriptive statistics such as mean, frequency and percentages and bar chart as well as inferential statistics such as chi square, multivariate logistics.

RESULTS

Table 1 shows the demographic characteristics of patients. It showed that 45 (38.4%) of the patients are in the age cohort 31-40 years, 1124 (94.9%) are males, 1171 (98.8%) are Christians, while 309 (26.1%) are Binis. The table showed total inpatients from 2015-2020. It reveals that the highest number of cases of psychoactive substance use was recorded in the year 2016 and 2017 with 304 cases respectively, while the least psychoactive substance use was reported in the year 2015 with 113 cases.

Table 2 shows that there is a significant association in the prevalence of substance use by gender as males reported significant higher prevalence than females.

Table 3 shows the multivariate logistic regression association between socio-demographic characteristics and psychoactive substance use. The result shows that males are two times ([OR] = 1.86, [CI] = 0.343-2.159) more likely to use psychoactive substance than females. Respondents between 23-30 years are twice more (OR 2.466 CI; 0.108-2.822) likely use psychoactive substance than others. Those with secondary school education are eight times more likely use psychoactive substance than others. Respondents who are Bini are seven times more likely to abuse psychoactive substance than other Ethnic groups. Those who are Christian are eight times likely to use psychoactive substance than others. Level of Education, age and marital status show a

significance difference ($p < 0.05$).

Figure 1 shows the prevalence of psychoactive substance use. It shows that the highest prevalence was reported in the year 2016 with 96.5% while the least reported in the year 2015 with 33.2%. The overall prevalence in the period under review was 62.2%.

Figure 2 shows the overall age specific prevalence. It shows that the age cohort 23-30 years were most involved in psychoactive substance use with a prevalence of 30.7%, while the least was those 15-22 years with a prevalence of 2.9%.

Figure 3 shows the annual prevalence by gender. It was reported that the highest prevalence of psychoactive substance use was highest among males, with a prevalence of 15.1% in 2016 and 2017.

The lowest prevalence among males was reported

Demographic characteristics of patients

	Frequency	Percentage
Age group (Years)		
15 – 22	56	4.7
23 – 30	584	49.3
31 – 38	455	38.4
39 – 46	90	7.6
Mean(SD)	30.51±0.5	
Sex		
Male	1124	94.9
Female	61	5.1
Religion		
Christian	1171	98.8
Muslim	14	1.2
Ethnicity		
Bini	309	26.1
Igbo	211	17.8
Urhobo	174	14.7
Esan	128	10.8
Ijaw	99	8.3
Others	264	22.3

Year	Number of inpatients	No of patient diagnose with psychoactive substance use
2015	340	113
2016	315	304
2017	400	304
2018	308	170
2019	205	120
2020	337	174
Total admission	1905	1185

Table 2: Association between male and female gender with regards to prevalence of substance use

	Observed prevalence	Expected	Residual	χ^2	P
Male	59	31.0	28.0	50.581	0.000
Females	3	31.0	-28.0		
Total	62				

Table 3: Multivariate logistic regression analysis of Correlation between psychoactive substance use and social demographical characteristics.

	P	OR	95% CI for Or
Sex			
Male		1.86	
Female	0.49	1.00	0.343-2.159
Age			
15-22	0.001	0.060	0.000-0.114
23-30	0.476	2.466	0.108-2.822
31-38	0.191	0.423	0.117-1.535
39-46	0.237	1.00	0.132-1.651
Tribe			
Bini	0.326	7.96	0.031-3.177
Igbo	0.851	0.31	0.074-8.599
Urobo		3.92	12.392-12.392
Esan		1.00	0(0.0)
Level of education			
No formal	0.001	0.71	0.118-154
Primary	0.000	4.94	3.330-46.882
Secondary	0.000	8.03	2.664-49.673
Tertiary	0.000	1.03	24.401-1168.674
Religion			
Christianity	0.376	7.89	0.494-6.484
Islam	0.859	1.31	0.304-4.209

OR: Odds ratio. CI: Confidence interval.

in the years 2015 and 2019 with prevalence of 5.9%. The lowest prevalence for female was 0.0% in the year 2015 and 0.9% in the years 2016 and 2017.

Figure 4. Shows the annual prevalence by age group. It shows that the use of psychoactive substances is highest in the age cohort 23-30years, with 7.3% prevalence reported in reported in 2016 and 2017 respectively

Figure 5 shows the pattern of psychoactive substance abuse among neuropsychiatric patients. The highest substance use is Cannabis with 73.2% of the patients into it, while the least is cigarette with a proportion of 0.2%.

Figure 6 shows the annual prevalence by substance used. It shows that throughout the years, Cannabis was the most prevalent substance abused by the patients. The highest prevalence was reported in the years 2016 and 2017; while the least was reported in the year 2015.

Figure 7 shows the most contributing factor to the use of psychoactive substance was friend's pressure. The highest prevalent of psychoactive substance use of 10.2% contributed by friends pressure was reported in the year 2017.

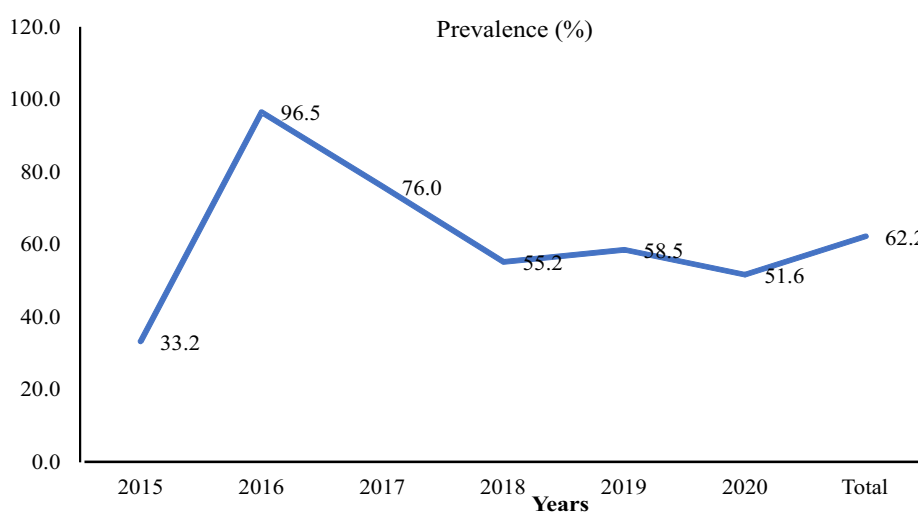


Figure 1: An Ogive showing prevalence of psychoactive substance use

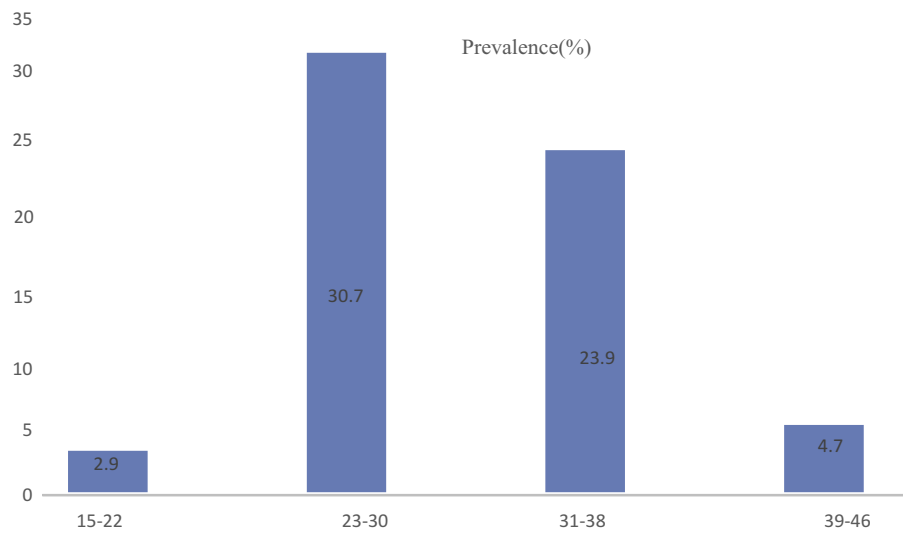


Figure 2: bar chart showing the age specific prevalence of psychoactive

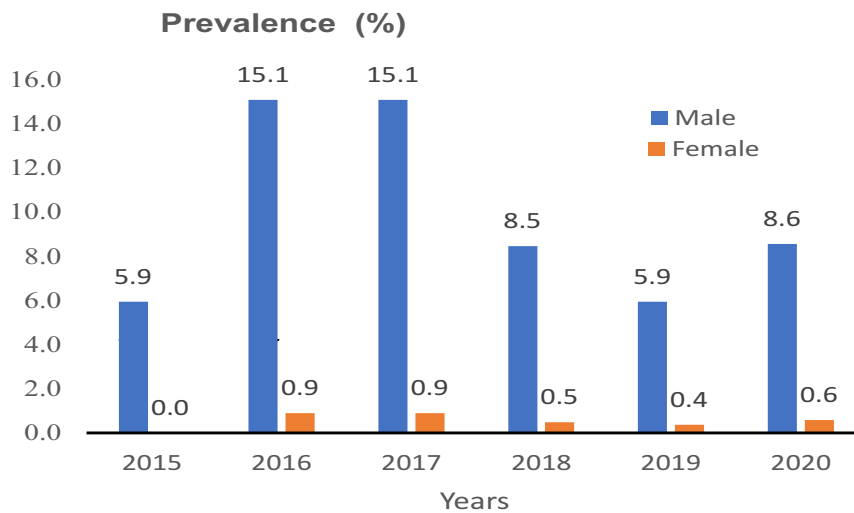


Figure 3: bar chart showing annual prevalence of psychoactive substance use by gender

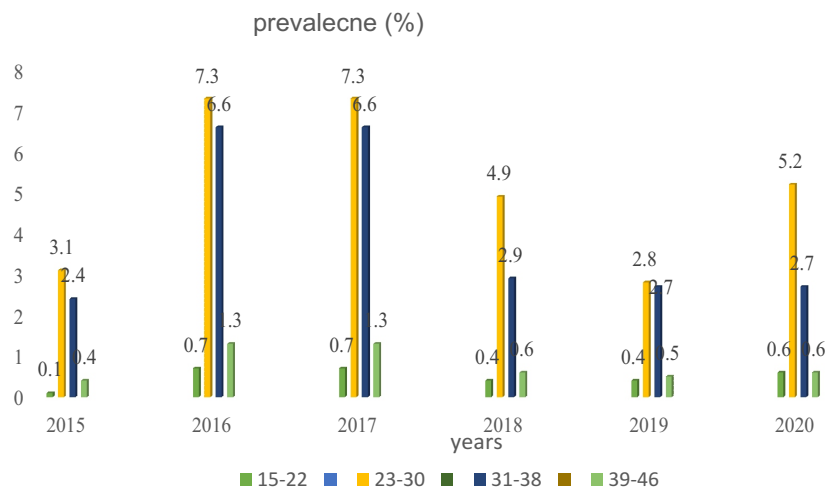


Figure 4: bar chart showing annual prevalence of psychoactive substance use by age

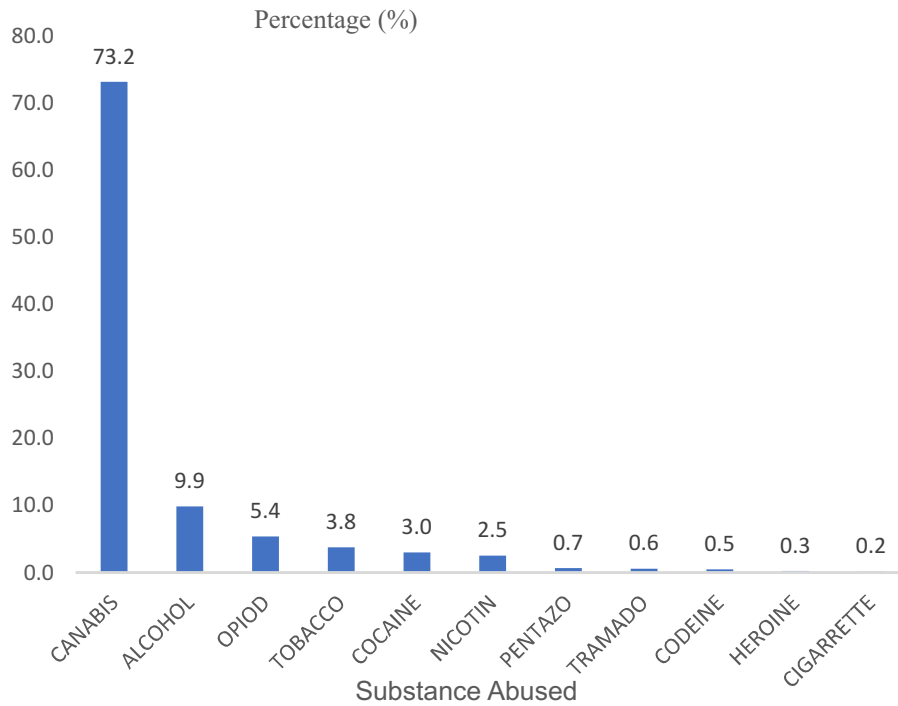


Figure 5: bar chart showing pattern of psychoactive substance use among neuropsychiatric patients

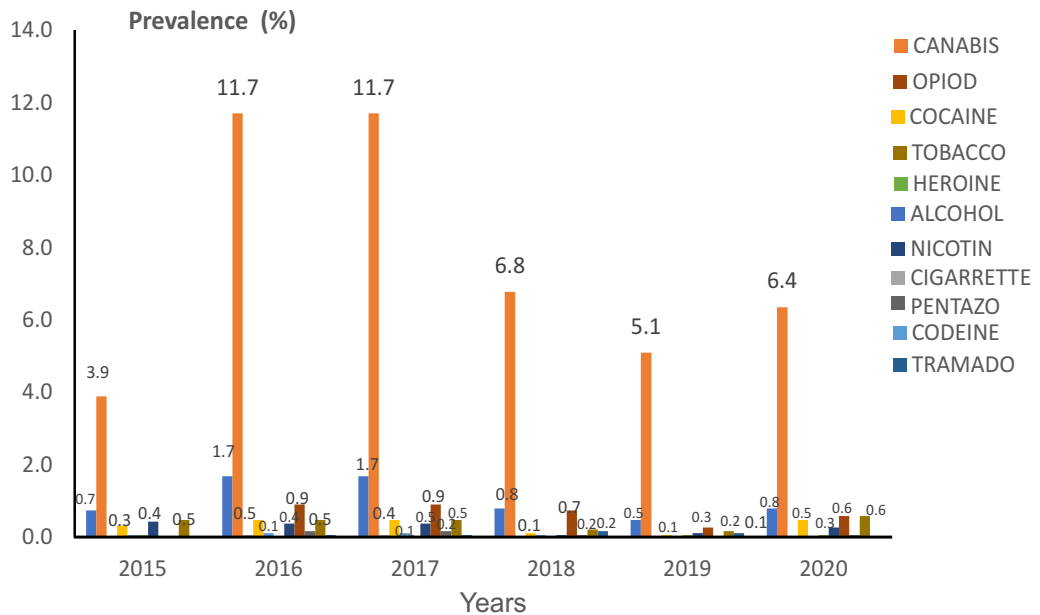


Figure 6: bar chart showing annual prevalence by psychoactive substance used

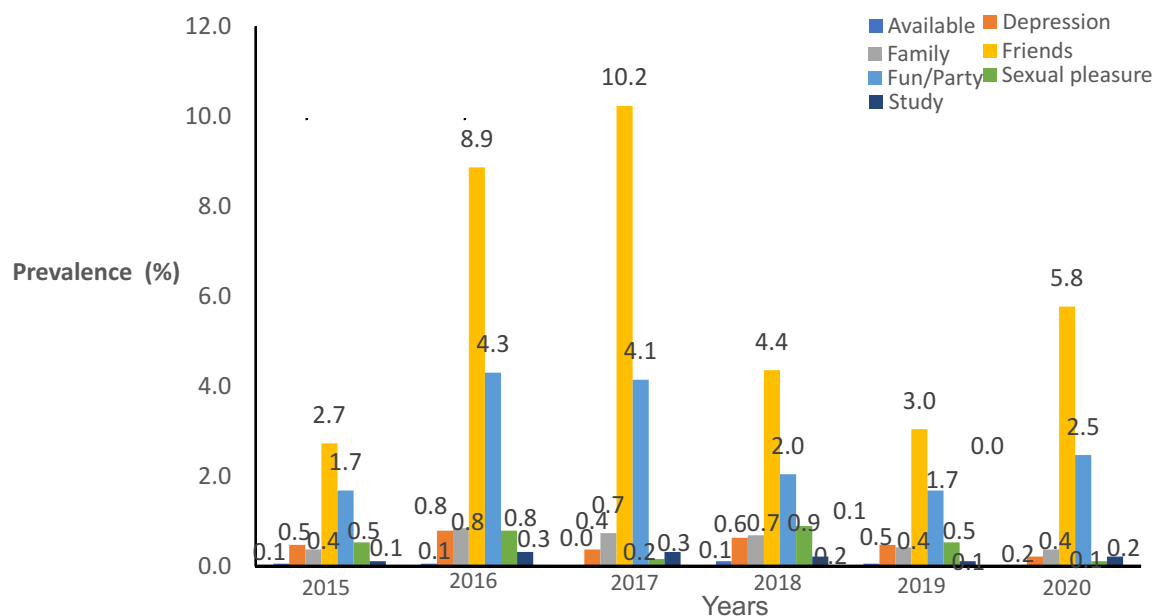


Figure 7: bar chart showing annual prevalence psychoactive substance use by contributing factors

DISCUSSION

Findings of this study shows that the highest prevalence of psychoactive substances use 96.5% was in the year 2016 with the least 33.2% in the year 2015. The overall prevalence in the period under review was found to be 62.2%. However, age group mostly involved in psychoactive substance use is 23–30 years with a prevalence of 30.7%. This finding is similar to that reported in Ethiopia, where the overall one-month self-reported prevalence of psychoactive substance use was 70% (n=280) Yosef et al 2021. Furthermore, in North West Nigeria, a study reported a lifetime prevalence of substance use among the patients on admission was 69.2%, active use of drugs (during the last month prior to admission) was reported (41%).^[21] Nevertheless the prevalence in the present study is far higher than the 32.3% reported in Moscow^[22], and 21.3% reported in Abeokuta, Nigeria.^[23] Other studies which reported lower prevalence as compared to the present study were the study in Uyo, Nigeria with (48.4%) and the prevalent rate of current use of alcohol was 33.3%

^[24], and 45.5%, in Jos, Nigeria.^[25] The observed variation in this study as against others with far lower prevalence rate may be due to the differences in socio-demographic and lifestyle factors of the study participants across the different studies. The study population may also play a great role in the variation observed, since some studies with allow prevalence of psychoactive substance use are associated with short-distance truck drivers compared to this study. Besides, the operational definitions used among researched substances to mean psychoactive substance use are varied across different studies; this study used variety of substance. However, others used alcohol substances alone to mean psychoactive substance use. Furthermore, it could be due to the difference between tools employed in this study (AUDIT of records) whereas in other study (Alcohol Screening Questionnaire) that assesses a lifetime history of alcohol drinking was used. Nevertheless the higher prevalent noted in the present study calls

for caution and for immediate action to forestall the immediate and long-term consequences of these act among the youth.

Evaluation of pattern of psychoactive substances abuse among respondents showed that the highest substance abuse is Cannabis, while the least is cigarette. Similar findings were reported in Zamfara, Nigeria, where cannabis (34.7%) and Tramadol (13.9%) were the mostly psychoactive substances abuse.^[26] Collaborating the finding of the present study is Unaogu et al^[27], who reported cannabis (81.4%) and alcohol (16.5%) as the mostly used substance^[27], and in South Africa, were the most common substance ever used was cannabis (37.4%).^[28] In contrast, a study in north eastern, Nigeria, found that most commonly used substances among the current users were tobacco (22.0%), stimulants (caffeine and kolanut) (17.1%).^[29] In Norway it was reported that substances used were alcohol, sedatives and cannabis,^[30] while another study in Sokoto, Nigeria reported that cannabis (90.7%), the cough syrup and Tutolin/Codeine 35 (81.4%) were the mostly abused substance.^[21] Prevention of the negative health and social consequences of drug use is critical for both drug users and society at large. For example as noted by UNAIDS, that Nigeria's HIV epidemic is the second largest epidemic globally and there have been reported practices of risky sexual behaviours among psychoactive substance users, and in particular among those who inject drugs,^[11] which of course increases the chances of contracting HIV further complicating the already high burden of HIV epidemic in Nigeria. In this study, the major factor contributing to psychoactive substances use are peer pressure, fun/entertainment during parties, while the least factor is availability of the substance. Corroborating these findings is the study south west Nigeria where accessibility, family usage, affordability and peer pressure, and psychological factors such as perception, impulsivity and self- gratification were reported.^[32] The role of peer pressure as a push-factor for drug use were similarly reported in study reported in

another southwest Nigeria study.^[12] However, a study in Morocco, which revealed that gender (male), school level, age group, smoking tobacco status, friends and family member smoking status, and feelings of insecurity within family were factors affecting psychoactive substance use.^[31] Also, a South African study reported male sex, younger age, owning a business, and being unemployed were significantly associated with higher odds of lifetime and past-year use of psychoactive substances.^[28] Apart from availability and accessibility of drugs, curiosity, a mental status that have been identified by various scholars, occupation, marital status peer pressure, personality trait have a significant influence on substance abuse. Identifying specific factors that influence patients to substance abuse during the initial assessment/interaction section with the patient may be helpful to give prompt/appropriate intervention that will be more effective. Also, the provision of substance abuse prevention initiatives in every institution such as schools, correctional centres, for prompt identification and treatment of individuals at high risk of substance use will be highly commendable. According to Akindipe, this program will help provide psychological intervention for those with personality disorders and toxicology screening.^[12] The flexibility of the school curriculum should be considered to accommodate those who may see schooling as stressful and use psychoactive drugs as a way of reducing stress

CONCLUSION

Findings from this study has shown that substance use is a significant problem in this generation and continues rise considerably. Alcohol, cannabis, codeine, tramadol, tobacco, and caffeine have been found to be the most commonly used. In addition, the pattern of their use indicates serious long term consequences if effective interventions are not developed. Because of the high prevalence of substance use among psychiatric inpatients, it is recommended that a routine screening policy be

put in place to identify substance use in all patients admitted to hospital for psychiatric reasons. This should become a critical component of mental health delivery. In addition, because substance use begins many years before a hospital admission, culturally appropriate outreach services are needed for prevention and early treatment. Therefore, services on substance use disorders have to be extended to the community level with wide-scale training for the town's health care providers, including health extension workers who have direct contact with these individuals. Accordingly, comprehensive and suitable interventions were advised to be provided on factors contributing to substance use disorders in general in this population

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nil

Conflict of interest

The authors declare no conflict of interest

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