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ORIGINAL ARTICLE

PSYCHOACTIVE SUBSTANCE USE AMONG NIGERIAN COHORT WITH HIV/AIDS: FREQUENCY, TYPES AND DEMOGRAPHIC CORRELATES

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ABSTRACT

Introduction: *There are good pointers from literature to the detrimental impacts of psychoactive substance use in HIV/AIDS patients. This study aimed at investigating the prevalence, types and demographic correlates of psychoactive substance use among people living with HIV/AIDS.*

Methods: *The study participants consisted of 295 adults with HIV/AIDS and were interviewed with a designed questionnaire that consisted of two parts. The first part contained questions to elicit socio-demographic and treatment related information of the participants, while the second part focused on psychoactive substance use.*

Results: *The mean (SD) age of participants was 37.6 (±8.6) years, and majority (61.0%) of them were made up of females. Most of the subjects were married, 181 (61.4%) and employed 174 (59.0%). Of the total participants, 64 (21.7%) reported use of a form of psychoactive substance, among which the largest proportion (19.3%) reported use of alcohol, 1.4% use cannabis while 1% admitted to use of nicotine. Following regression analyses, being male (Odds Ratio =2.38; 95% Confidence Interval: 95% CI = 1.26 - 4.49; p=0.008) and increasing educational attainment (Odds Ratio = 1.62; 95% CI: 1.07 - 2.45; p=0.02) correlated positively with psychoactive substance use, while being single (Odds Ratio = 0.59; 95% CI: 0.35 - 0.99; p=0.047) correlated negatively.*

Conclusion: *Proactive and targeted intervention strategies against psychoactive substance use among people living with HIV/AIDS using what is known about vulnerability are implied. Further research on the complex relationship between HIV/AIDS and psychoactive substance use is indicated.*

Keywords: *Demographic Correlates; HIV/AIDS; Nigerians; Prevalence; Psychoactive Substance*

INTRODUCTION

According to the 2014 United Nations estimate, up to 3.7 million people are living with HIV/AIDS (PLWHA), and about 170,000 deaths due to AIDS occurred in Nigeria same year (1). In comparison to the global trend, Nigeria accounts for approximately one-tenth of PLWHA worldwide (2). Closely linked are the clear indicators in literature of the contributory roles of psychoactive substance use to HIV epidemics, disease burden and poor treatment adherence through a complex relationship (3-6). For example, psychoactive substance use has been associated with increased risk of contracting HIV and could be deplored for coping with the crisis of testing positive to HIV infection among others (7,8). While intravenous drug use (IVDU) has recognised and known risks among PLWHA, the roles of non-injection drugs (including alcohol, cannabis and nicotine among others) use in HIV spread, progression and care cannot be neglected despite their less recognition. Particularly because the addictive or intoxicating effects of these drugs can alter judgement, lead to engagement in impulsive behaviours and neglect of life preserving behaviours. (1,9-11)

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In general, teasing out the temporal relationship between psychoactive active substance use and HIV infection is often complex. Whether as a risk for HIV infection or as its sequelae, psychoactive substance use problems seem largely common among PLWHA and portend grave consequences (3-6,9). In comparison to the general population, higher prevalence of psychoactive substance use has been reported among PLWHA (12), with up to 28% prevalence previously noted in USA and 25.5% prevalence rate among Nigerians attending HIV clinic (7,13). Beyond the foregoing, substance use has been associated with increased sexual risk for HIV infection or re-infection, reduced medication adherence and poorer overall wellbeing among PLWHA (14-16).

Unfortunately, few studies in Nigeria have examined the extent of use and demographic correlates of substance use among PLWHA. This study is aimed at investigating the frequency and types of psychoactive substance use along with describing the demographic pattern of PLWHA with psychoactive substance use. Overall, this study will assist in service planning as well as risk identification by providing information on those PLWHA that may be potentially vulnerable to psychoactive substance use. We postulated that psychoactive substance use among PLWHA would be influenced by identifiable demographic characteristics.

MATERIALS AND METHODS

This study is based on secondary analyses of data collected using a cross-sectional research method that explored psychiatric morbidity among 295 HIV-positive adult attendees of an outpatient clinic in Lagos, Nigeria. The sample size of 295 used was computed using the formula for calculating sample size for cross sectional studies (17,18), and participants were recruited using a systematic random sampling technique. Further description of the study population, sampling technique and participants' recruitment has been done in previous studies (19-21). Ethical approval was obtained from the health, research and ethical committee of the Lagos University Teaching Hospital before commencement of the study. In addition informed consent was obtained from each participant following full description of the nature of the study and objectives. Participants' data were treated with confidentiality and assurance about their freedom to decline consent at any point without any negative effect on participants' care was given.

This study is focused on the data collected using designed questionnaire that consisted of two parts. The first part contained questions to elicit socio-demographic and treatment-related information of the participants, while the second part focused on psychoactive substance use behaviour and its related issues. Data collection was done through face to face interview and collection of relevant information from case notes. Data inquired include age, gender, marital status, educational level, religion, HIV disclosure, protected sexual intercourse and medication adherence. Current psychoactive substance use was elicited with probe questions adapted from standardised instrument to cover the period of 30 days prior to interview (22,23).

Data analyses were done with the Statistical Package of Social Sciences for windows Version 16 (SPSS-16) (24). Descriptive statistics using frequencies, percentages and tests of significance were used as appropriate p-value was set at ≤ 0.05. Lastly, regression analyses were carried out to control for effects of confounders.

RESULTS

Socio-demographic profile of participants: The participants' ages ranged from 20 and 63 years, while their mean (SD) age was 37.35 (±8.75) years. Majority of the participants were females (61.0%), 44.1% of them belonged to the age group 31–40 years and 24 (7.2%) were within the age group 51–63 years. One hundred and eighty one (61.4%) participants were married; while 174 (59.0%) were employed. In terms of religion, Christianity is predominantly practiced by most of the participants, 265 (89.8%); 134 (45.4%) participants reported having had secondary school level of education, while 40 (13.6%) and 121 (41.0%) participants attained primary and tertiary school level of education respectively.

Prevalence and types of psychoactive substance use among participants: The frequency and pattern of psychoactive substance use are depicted in table 1. Among the study participants, 64 (21.7%) reported use of a form of psychoactive substance, among which the largest proportion (19.3%) reported use of alcohol, 1.4% use cannabis while 1% admitted to use of nicotine.

Table 1: Frequency and types of Psychoactive Substances use among Participants

Variables	Frequency (n)	Percentage (%)
Psychoactive substance use		
Yes	64	21.7
No	231	78.3
Total	295	100.0
Types of psychoactive substance		
Alcohol	57	19.3
Cannabis	4	1.4
Nicotine	3	1.0
None	231	78.3
Total	295	100.0

Factors associated with psychoactive substance use in participants: Table 2 shows the factors associated with psychoactive substance use. Significantly, a greater proportion (30.7%) in the age group of >40 years uses psychoactive substance when compared with 17.0% in the age group ≤40 years who also use psychoactive substance (p=0.01). Also significant association was found between gender and psychoactive substance use, as higher proportion of males (33.0%) when compared to females (14.4%) reported current use of psychoactive substance (p<0.001). There was also a significant association observed between marital status and use of psychoactive substance. Fewer respondents (12.2%) who were single as compared to 32.5% respondents amongst the group who were either divorced or separated were found to use psychoactive substance (p=0.01).

The proportion of the employed (25.9%) was higher than the unemployed (15.7%) who uses psychoactive substance. This was also found to be statistically significant (p=0.04). Likewise, a significant association was noted between the educational status and use of psychoactive substance. The proportion of respondents using psychoactive substance were found to decrease as educational attainment increases, p=0.01. However, there was no significant difference between religion, practice of protected sexual intercourse, medication adherence, HIV status disclosure and psychoactive substance use.

Correlates of psychoactive substance use following regression analyses: Table 3 presents the demographic correlates of psychoactive substance use among participants. In order to adjust for possible confounding effects and to determine the specific contributions of all significant variables to the use of psychoactive substance among the participants, all variables with significant associations (p≤0.05) were subjected to logistic regression analyses so as to determine the extent to which each of these independent variables would predict use of psychoactive substance (dependent variable). It was found that the males were more likely to report use of psychoactive substance (OR = 2.38; 95% 95% CI: 1.26 -4.49; p=0.008). Similarly, higher educational attainment positively predicted the use of psychoactive substance (OR = 1.62, 95% CI: 1.07 - 2.45, p=0.02). On the other hand, participants who are single were less likely to use psychoactive substance (OR=0.59, 95% CI: 0.35 - 0.99, p=0.047).

Table 2: Factors Associated with Psychoactive Substance use among Participants

Variables	Psychoactive substances use		χ^2	df	p-value
	No n (%)	Yes n (%)			
Age (Years)					
≤40	161 (83.0)	33 (17.0)	7.3	1	0.01*
>40	70 (69.3)	31 (30.7)			
Gender					
Male	154 (86.6)	38 (33.0)	1.4.2	1	<0.001*
Female	77 (67.0)	26 (14.4)			
Marital Status					
Single	65 (87.8)	9 (12.2)	6.95	2	0.01*
Married	139 (76.8)	13 (32.5)			
Divorced/Separated	27 (67.5)	42 (23.2)			
Employment Status					
Unemployed	102 (84.3)	19 (15.7)	4.3	1	0.04*
Employed	129 (74.1)	45 (25.9)			
Religion					
Christianity	22 (73.3)	56 (21.1)	0.49	1	0.49
Islam	209 (78.9)	8 (26.7)			
Educational Level					
Primary	26 (65.0)	14 (35.0)	6.89	2	0.01*
Secondary	102 (84.3)	19 (15.7)			
Tertiary	103 (76.9)	31 (23.1)			
Protected Sexual Intercourse					
Yes	137 (76.5)	42 (23.5)	0.86	2	0.38
No	40 (81.6)	9 (18.4)			
Not applicable	54 (80.6)	13 (19.4)			
Medication Adherence					
Poor	19 (57.6)	14 (42.4)	10.99	2	0.44
Good	27 (73.0)	10 (27.0)			
Not on ARV	185 (82.2)	40 (17.8)			
HIV status disclosure					
Yes	202 (79.5)	52 (20.5)	1.61	1	0.21
No	29 (70.7)	12 (29.3)			

X^2 –Chi-square test, df- degree of freedom, *significant at p value <0.05

Table 3: Logistic Regression of Predictors of Psychoactive Substance use

Variables	*B*	S.E	Sig	Exp (B)	95% C.I*	
					Lower	Upper
Age	-0.263	0.328	0.422	0.769	0.404	1.461
Sex	0.865	0.325	0.008	2.376	1.258	4.489
Marital status	-0.524	0.264	0.047	0.592	0.352	0.994
Employment	-0.348	0.328	0.289	0.706	0.371	1.343
Educational level	0.483	0.211	0.022	1.621	1.072	2.453

*95% CI- 95% Confidence interval

DISCUSSION

This study is focused on psychoactive substance use and HIV/AIDS- two contiguous public mental health issues with global significance. Some important findings on the burden and pattern of psychoactive substance use among PLWHA were observed in our study. For example, about one-fifth of the study participants reported current use of psychoactive substance with alcohol use being the most preponderant; although nicotine and cannabis use were also reported. Again, a number of demographic factors were identifiable correlates of psychoactive substance use among the participants.

In general, previous studies among PLWHA have documented appreciable use of psychoactive substances; however the reported prevalence rates and type of psychoactive substances fielded vary across studies among PLWHA. For instance, 28% prevalence was fielded in a study done in US (13), while prevalence rates that ranged from 10-50% have been reported in earlier studies done in Nigeria (7,9,25, 26). Some of the plausible reasons for the wide range in the observed prevalence of drug use as well as the variation noted in the studies cited above and our study include methodological issues like study setting, study population, ascertainment tools and recruitment among others. Comparatively, our finding of current psychoactive substance use in one out of every five PLWHA falls within the earlier mentioned range for studies conducted in Nigerian settings, but more importantly depicts a significantly higher burden when compared with what is obtainable in the general population. Specifically, it is about four folds what has been reported among the Nigerian general population (27), thereby underscoring the shared and vicious relationship between HIV/AIDS and psychoactive substance use (3-7,9-11). Again, PLWHA have been identified as vulnerable population for psychoactive substance use in previous literature. Some of the explanatory reasons given by PLWHA for use of psychoactive substances include coping with psychosocial crisis of living with HIV, to improve sleep, for recreation and improvement of appetite along with vigour or energy among others (26).

In respect to the types of psychoactive substance, alcohol use was predominant with a prevalence of 19.3% when all study participants were considered. By extension, it means that nine out of ten PLWHA with positive use of any form of psychoactive substance had current use of alcohol. Again, the three psychoactive substances- alcohol, nicotine and cannabis elicited in our study are the commonly encountered local drugs among PLWHA. This is not surprising on one hand as it is in keeping with findings of previous researchers (7,9,25); it is however interesting that none of the participants reported IVDU. Such poor report of IVDU in this setting have been noted and partly explained by denial and stigma (7,8,27). Indeed, it has been adjudged that the adoption of snow ball technique (use of previously identified intravenous drug user to recruit others) in recruitment seems preferred for IVDU population over the systematic random recruitment done in our study (7). Beyond the forgoing, findings in our study seem to provide supporting evidence for better recognition of the roles of non-IVDU among PLWHA.

Findings on the correlates of psychoactive substance use among PLWHA from this study showed that male gender and higher educational attainment correlated positively with current use of psychoactive substance. On the other hand, being single correlated

negatively. Compared to females, males have been linked with increased propensity for novel seeking and use of psychoactive substances (27-29). Thus, finding on male gender having up to two-fold odds of current psychoactive substance use largely buttressed previous observations among PLWHA as well as the general population (7,26-28). Conversely, the finding on educational status and marital status contradicts earlier Nigerian studies (7,27). In contrast to previous studies, we observed that PLWHA with higher education were more likely to report current use of psychoactive substance, while those who are single were less likely to use psychoactive substance (7). Better educational attainment may imply worse experience of distress due to enhanced cognitive processing of the impacts of living with HIV/AIDS and in turn increased vulnerability to use of psychoactive substance. On the other hand, it is also possible that this finding is more reflective of the distribution of educational attainment of the study participants.

A number of limitations were identified in this study, including its cross sectional design as well as clinic based setting, thus its extrapolation to other populations needs to be done cautiously. The explanatory factors of psychoactive substance use investigated in this study are mainly demographic and by no means exhaustive. Similarly, causality with respect to the associated factors of psychoactive substance use cannot be inferred due to the study design. Overall, future research needs to focus on the complex relationship between psychoactive substance use and HIV/AIDS using prospective longitudinal control study.

Conclusion*:* Findings in our study suggest an appreciable higher prevalence of psychoactive substance use among PLWHA in comparison to the general population, and demographic factors like male gender, higher educational attainment and single marital status constituted the identifiable correlates. Considering findings in this study, proactive and targeted intervention strategies against psychoactive substance use among PLWHA using what is known about vulnerability are implied. Further research on the complex relationship between HIV/AIDS and psychoactive substance use is indicated**.**

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