Original Research Article

Psychoactive substance use in a sample of community outreach participants; prevalence, correlates and ease of incorporating care

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ABSTRACT

Background: The misuse of licit and illicit substances has continued to constitute a profound effect and harm across various societies. This study examined the nature of substance use, abuse and dependence in a community setting in Jos, Plateau State and the ease of carrying out screening, brief intervention and referral for substance use problems.

Methods: Data for this study was gathered through a community-based medical outreach with a total of 1170 residence (M=36.97, SD=15.33), within the research area in participation. A cross-sectional research design was used to examine the prevalence and correlates of psychoactive substance consumption (excluding alcohol).

Results: Analysis revealed that tobacco 51%, marijuana 22%, opioids 15%, sedatives 6%, and amphetamine 2%, were the current most significant substances used within the population. The ASSIST and MINI diagnostic criteria noted a significant rate of substance abuse and dependence (p<0.05) for tobacco, marijuana, amphetamine, inhalants, sedatives, hallucinogens, and opioid. Brief intervention based on the FRAMES techniques as employed in this study, was used in a total of 211 participants among whom 36 further received counseling for substance abuse and 60 were referred for specialized drug treatment therapy due to substance dependence. Gender, living environment, employment status and occupation were significant predictors of substance use across the participants. Specifically, male, participants who have stable accommodation, those with regular employment and students were found to be the group with the most significant rates of substance and substance use disorders.

Conclusions: This study concludes among others, that the ASSIST, MINI and Brief Intervention were indeed effective for substance-related diagnosis in community-based medical programs and can be effectively incorporated into routine services with adequate planning, training and execution.

Keywords: ASSIST, Brief Intervention, Psychoactive substance use, Substance use disorders, Screening

INTRODUCTION

Over the last decades, tobacco, alcohol, and illicit drug use has shown to contribute to morbidity, mortality, and social problems worldwide. Substance use disorders (SUD) constitute a major public health problem which now results in unhealthy behaviours related to the use of alcohol, tobacco, and other drugs that fall along a substance use continuum at the points of misuse, abuse, and addiction.[1]

In Nigeria, the consequences of uncontrolled use of drugs have significantly placed a burden on the healthcare sector. Clinicians in general medical and mental health

care settings are likely to encounter patients with presumptive or possible substance use who are either referred, self-referred, or otherwise seek help related to substance use. These substance use conditions are also prevalent among outpatient clinic populations thereby resulting in a number of risk factors among different groups including intra-personal risk factors such as personality traits of impulsivity, negative affectivity, cognitive disability or extra personal risk factors which include peer pressure, neighbourhood disorganisation, lack of parental monitoring, among others.[2]

The World Drug Report 2014 has stated that "around 243 million people, aged 15-64 consumed an illicit drug in 2012. Out of this number, problem drug users, those who have most difficulties with drug consumption, account for around 27 million or 1 in every 200 people".[3] Similarly, the report exposed a gap in the treatment of drug abuse as only 1 in 6 drug users around the world receive the drug dependence treatment they need. It also stressed that drug control programmes can be more effective when supported by stakeholders including community leaders, families, media and individuals support anti-drug abuse programmes.[3]

Brief intervention is based on the FRAMES model and motivational interviewing techniques.[4] Brief interventions are found to be more effective than no counselling, and often as effective as more extensive treatment.[5] Brief interventions are found to be effective in primary care settings for substance users other than alcohol (e.g., cannabis smokers) if culturally appropriate intervention procedures are developed.[6] Indeed, the WHO Brief Intervention Study Group earlier asserted that five minutes of simple advice were as effective as 20 minutes of counselling.[7]

Although, several studies have examined the use of psychoactive substances among selected groups in Nigeria only a few have been carried out in primary care settings or in the community.[8-12] Some of the studies carried out in Nigeria are hospital based and are hardly a representative of the drug users nor do they show the extent of the problem in the population.[13] The main aim of this study therefore was to examine the prevalence and correlates of substance use, abuse and dependence among participants of a community outreach as well as investigate the ease of integrating care (screening, brief intervention and referral for treatment) into routine medical services in the community.

METHODS

This study employed the cross-sectional research design. The study population comprised participants of a medical outreach at an open field in front of Vitaform factory from communities of JIB village, "Mama Iyabo" and "Vitafoam forest" all close to old airport junction and within Jos North local government. Included were participants who were above the age of 18 years and consented to the study.

This study is part of a larger project examining the Alcohol and other psychoactive substance use and disorders in the community and the acceptability and ease of incorporating screening, brief intervention and referral for treatment into routine community medical services.

Research instruments

This study made use of a five-page composite questionnaire which consists of the socio-demographic section, the alcohol, smoking and substance involvement screening test (ASSIST) and the alcohol and drugs modules of the mini international neuropsychiatric interview (MINI). In addition to the actual test measure, the ASSIST feedback report card and the ASSIST-linked Brief Intervention based on the FRAMES model and Motivational Interviewing techniques were employed.

The socio-demographic section of the research questionnaire was structured to gather information on participant's gender, age, religion, nationality, state, ethnicity, living and marital status, educational qualification, employment and occupation.

The alcohol, smoking, and substance involvement screening test (ASSIST) section of this study consists of eight questions concerning the use of tobacco, alcohol, cannabis, cocaine, amphetamine-type stimulants, inhalants, sedatives, hallucinogens, and opioids. Questions 1, 2, 3, 6 and 7 of the ASSIST screen for dependence while questions 1, 2, 4, 5 and 6 screens for abuse. Finally, question 8 of the ASSIST screens for injecting behaviour. The ASSIST was developed by the World Health Organization for screening in primary and general medical care settings and has since been considered as an instrument of choice when the goal is to address a range of different psychoactive substances.[14] This test categorizes respondent's substance use into low, moderate and high risks on the bases of their scores. With scores of 0-10 for alcohol and 0-3 for illicit drugs, participants are considered as having low risk for health and other problems from their use of alcohol and other drugs (AODs), 11-26 for alcohol and 4-26 for other drugs indicate moderate risks while >26 indicate high risks for health and other problems from their current use of alcohol and other drugs and are likely to be dependent. The ASSIST as used in this study, took an average of 3.8-5.6 minutes to administer to the research participants.

The MINI-international neuropsychiatric interview section of this study was specifically targeted at measuring non-alcohol psychoactive substance use disorders. Responses are rated at the right of each question by circling either Yes or No. The MINI is a short structured clinical interview that helps researchers to make diagnoses of psychiatric disorders according to DSM-IV or ICD-10. The MINI was designed for

epidemiological studies and clinical trials and is divided into modules identified by letters, each corresponding to a diagnostic category.[15] At the beginning of each diagnostic module, screening question (s) are made to corresponding to the main criteria of the disorder and are presented after which diagnostic box (es) permit the clinician to indicate whether diagnostic criteria are met. This module took approximately 1-2 minutes to administer in this study.

The ASSIST Feedback Report Card was used in this study to provide substance-specific involvement scores based on calculated standard ASSIST scoring procedures. The scores ranged from 0-10=low, 11-26=moderate, and 27+=high. Research participants within Low score on the ASSIST are interpreted as being at LOW risk of health and other problems related to substance use. Finally, participants whose score falls within the High range are evaluated as being at HIGH risk of experiencing severe problems as a result of their current use and are likely dependence on substance.

Study procedure

Details of the procedure has been described elsewhere.[16]

Prior to the actual commencement of this study, community interaction was done to sensitize members of the community of the planned medical outreach and to obtain permission from the community leaders. Ethical Clearance was obtained from the Ethics committee of Jos University Teaching Hospital. Permission was obtained from the organizers of the medical outreach after explaining the benefit of the study to the participants beyond the physical illnesses they usually focus on. At the commencement of the general health outreach, initial registration and vital signs were taken by the general medical team. Consecutive participants who gave consent were automatically recruited into this study after they were assured of confidentiality. The questionnaire which included the socio-demographic section, the ASSIST and the Alcohol and Drugs modules of the MINI were then administered to the participants. This interview was done by 12 clinicians comprising of psychologists and social workers, who have previously been trained in the administration of the study instruments.

This study was concerned with examining substance-specific risk scores for tobacco, cannabis, cocaine, amphetamine-type stimulants, inhalants, sedatives, hallucinogens, and opioids based on responses to several questions about substance use and associated problems. The screening exercise for this study therefore included all psychoactive substance consumption with the exception of alcohol. Participants were assessed following initial screening based on their scores on the ASSIST Feedback Report Card. All respondents were asked if they wished to know what their rating on the measure was and the corresponding relevance. General health advice on abstinence was given to those respondents whose ratings fall within the NO to low use range while those with moderate risks were given Brief Intervention. Those who have moderate risks on ASSIST but diagnosed with Substance use disorder on MINI (abuse or dependence) as well as those with high risks with or without diagnosis of SUD on MINI were given brief intervention and enrolled to be treated in a specialized substance treatment facility as continuation of the programme after having a consultation with Psychiatrists who provided Motivational Interview during the outreach.

The Brief Intervention provided for participants was focused on the highest rated illicit substance on each respondents score. For this study, brief intervention lasted between 3 and 5 minutes. The structure of the brief intervention incorporated feedback, personal responsibility, advice, a menu of options, clinician empathy and promotion of self-efficacy. Similarly, the principle of creating discrepancy was also a predominant feature of the intervention as respondents were asked to consider the pros and cons of their substance use and their associated level of concern.[5]

Stastical analysis

Data analysis for this study was conducted using the Statistical Package for Social Sciences (SPSS) version 20. The research hypotheses were analysed using t test, ANOVA, Chi-square and Regression analysis, respectively. A one-sample t-test was used to ascertain the prevalence of non-alcoholic substance use within the study participants.

The One-Way Analysis of Variance (ANOVA) compared substance ASSIST scores based on MINI diagnostic criteria. Regression analysis was introduced to ascertain the different determinants of substance use that resulted from participant's demographic characteristics. The Chi-square test of independence was further employed to show the specific aspects of participant's demographic characteristic that resulted in the observed significant indicated by regression analysis. The overall statistical significance level for this study was set at P=0.05.

RESULTS

A total of 1170 participants out of all 1341 from a community-based medical outreach were involved in this study. Those not recruited either declined consent or did not meet the inclusion criteria. The participants mean age was 36.97, and their standard deviation equals to 15.33.

The sample was 64.9% females, 97.1% Christians, 99.8% Nigerians, and was mostly Plateau (66.2%) and Berom (30.2%) indigenes, respectively. Similarly, 96.3% of the participants live in a home / stable accommodation. A total of 54.2% of the participants are married. Participants who have completed secondary school constituted 31.3% of the population. Those with regular employment

formed 26.5% of the participants while students (39.8%) were the majority by occupation.

Table 1: Participant's demographic features.

Variable	Frequency	Percentages
Gender		
Male	418	35.7%
Female	752	64.3%
Age range		
<20	138	11.8%
20-29	291	24.9%
30-39	292	25.0%
40-49	185	15.8%
50-59	137	11.7%
60>	126	10.8%
Missing figure (s)	1	0.1%
Religion		
Islam	25	2.1%
Christianity	1138	97.3%
Traditional	2	0.2%
None	2	0.2%
Others	1	0.1%
Missing figure (s)	2	0.2%
Nationality		
Nigerian	1168	99.8%
Spanish	2	0.2%
Ethnicity		
Indigenous	798	68.2%
Hausa	166	14.2%
Igbo	40	3.4%
Yoruba	41	3.5%
Foreign	1	0.1%
Others	124	10.6%
Living environment		
Home/stable accommodation	1130	96.6%
Dormitory/institute	19	1.6%
No stable accommodation	11	0.9%
Others	3	0.3%
Missing figure (s)	7	0.6%
Marital Status		
Single (never married)	378	32.3%
Married	641	54.8%
Divorced / Separated	30	2.6%
Widowed	115	9.8%
Others	6	0.5%
Education		
Some (never completed) primary	167	14.3%
Completed primary school	202	17.3%
Some secondary school	179	15.3%
Completed secondary school	331	28.3%
Some tertiary / graduate	101	8.7%
Competed tertiary/graduate	184	15.8%
Adult education	3	0.3%
Missing figure (s)	3	0.3%

Employment		
Employment		
Regular employment	296	25.3%
Occasional employment	208	17.8%
Pupil / student	184	15.7%
Unemployed	173	14.8%
House wife	131	11.2%
Others	65	5.6%
Retired	8	0.7%
Missing figure (s)	105	9.0%
Occupation		
Student	461	39.4%
Professionals	8	0.7%
Civil servants	150	12.8%
NGO/private worker	20	1.7%
Military/=paramilitary	105	9.0%
Artisan	238	20.3%
Petty trader	114	9.7%
Clergy	4	0.3%
Others	63	5.4%

Table 1 indicates that females were the majority (64.3%) in this study. Participants aged 30-39 years old were more (25.0%). Christians constituted 97.3% of the study population. Nigerians formed 99.8% of the study participants. The ethnicity most represented were the indigenous ethnic groups of Plateau State (68.2%). Similarly, 96.6% of the participants live in a home/stable accommodation. A total of 54.8% of the participants are married. Participants who have completed secondary school constituted 28.3% of the population. Those with regular employment formed 25.3% of the participants while students (39.4%) were the majority by occupation.

A one-sample t-test was used to ascertain the level of non-alcoholic substance use within the study participants. The results on table one indicates a significant rate of substance use across various ASSIST domains. Particularly, there were significant ($p<0.05$) ASSIST scores for the use of Tobacco, $t_{(1169)} =8.65$, $p=0.000$; Marijuana, $t_{(1169)}=5.41$, $p=0.000$; Amphetamine, $t_{(1169)}=2.24$, $p=0.025$; Sedatives, $t_{(1169)}=3.06$, $p=0.002$; and Opioids, $t_{(1169)}=4.63$, $p=0.000$, among the participants. However, the proportion of each substance among the 307 found using substances were as follows: Tobacco (51%), Marijuana (22%), Cocaine (1%), Amphetamine (2%), Inhalants (1%), Sedatives (6%), Hallucinogens (1%) and Opioids (15%). These give prevalence rates of Tobacco 13.33%, Marijuana 5.72%, Cocaine 0.17%, Amphetamines 0.85%, Inhalants 0.34%, Sedatives 1.45%, Hallucinogens 0.34 and Opioids 4.02% respectively (Table 2).

Regression analysis indicates that gender ($\beta=-0.177$), living environment ($\beta=0.118$), employment status ($\beta=0.160$) and occupation ($\beta=0.156$) were the demographic features that significantly determined substance use among the study participants, $F_{(13, 1021)}=3.416$, $p<0.05$ (Table 3).

In Table 4, Chi-square test of independence reveals there was a significant difference within gender $\chi^2=31.537$, $p<0.05$. Males were found to have higher substance abuse and dependence rate compared to females. The difference between living environment was also significant, $\chi^2=32.189$, $p<0.05$. Participants who reside in a stable accommodation were found to have higher cases of substance abuse and dependence. Similarly, substance abuse and dependence was significant among participants who have a regular employment, $\chi^2=22.061$, $p<0.05$. Lastly, substance abuse and dependence was higher among students than other occupations, $\chi^2=31.188$, $p<0.05$.

Table 2: Rate of non-alcoholic substance use across study participant's.

Domain	N (%)	Mean	SD	95% confidence interval of the difference		t	Sig.
				Lower	Upper		
Tobacco	156 (51%)	0.13	0.53	0.10	0.16	8.65	0.000
Marijuana	67 (22%)	0.06	0.36	0.04	0.08	5.41	0.000
Cocaine	2 (1%)	0.00	0.06	0.00	0.01	1.00	0.318
Amphetamine	10 (3%)	0.01	0.13	0.00	0.02	2.24	0.025
Inhalants	4 (1%)	0.00	0.08	0.00	0.01	1.42	.157
Sedatives	17 (6%)	0.01	0.16	0.01	0.02	3.06	.002
Hallucinogens	4 (1%)	0.00	0.08	0.00	0.01	1.42	.157
Opioids	47 (15%)	0.04	0.30	0.02	0.06	4.63	.000
Other drugs	na	0.00	0.00[a]	na	na	na	na

na = not applicable so cannot be computed because the standard deviation is 0.

Table 3: Demographic determinants of substance use among participants.

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.192	0.177	-	1.086	0.278
Gender	-0.085	0.017	-0.177	-5.106	0.000
Age Range	0.017	0.021	0.110	0.811	0.418
Religion	0.023	0.037	0.020	0.613	0.540
Nationality	-0.047	0.167	-0.009	-0.281	0.779
State	-0.001	0.001	-0.035	-1.000	0.317
Ethnicity	0.001	0.000	0.070	-0.048	0.144
Living Environment	0.075	0.026	0.118	2.017	0.012
Living Status	-0.001	0.007	-0.004	-0.094	0.925
Residential Structure	0.003	0.021	0.004	0.133	0.894
Marital Status	0.003	0.011	0.010	0.224	0.823
Education Level	-0.001	0.005	-0.010	-0.291	0.771
Employment Status	0.023	0.009	0.160	2.021	0.022
Occupation	0.078	0.029	0.156	1.695	0.031
$R2 = 0.281$, $F (13, 1021) = 3.416$, $p = 014$					

a. Dependent Variable: Non-Alcoholic Substances; b. Predictors: Gender, Age range, Age, Religion, Nationality, State, Ethnicity, living environment, Living status, Residential structure, Marital status, Educational status, Occupation.

A One-Way Analysis of Variance (ANOVA) reveals there was significant substance abuse and dependence MINI diagnosis for participant's use of tobacco $F (2, 1167) = 114.96$, $p<0.05$; Marijuana, $F (2, 1167)=202.60$, $p<0.05$; Amphetamine, $F (2, 1167)=25.22$, $p<0.05$; inhalants, $F (2, 1167)=70.92$, $p<0.05$; sedatives, $F (2, 1167)=50.55$, $p<0.05$; hallucinogens, $F (2, 1167)=104.91$, $p<0.05$ and opioids, $F (2, 1167)=61.48$, $p<0.05$, respectively (Table 5). A total of 211 participants in this study received brief intervention for substance use. Those who underwent brief intervention and were counselled for substance abuse were 36. Finally, 60 persons were referred for in-depth psychotherapy due to substance dependence after they received brief intervention. Thus, this outcome further reveals the utility of the ASSIST and MINI not only as a screening and diagnostic tool, but also as a research instrument for making informed decision as regards the needed intervention following screening and diagnosis.

Table 4: Significant psychoactive substance use (excluding alcohol).

	No use N (%)	Abuse N (%)	Dependence N (%)	X^2	p
Non-alcoholic substances					
Gender				31.537	0.000
Male	399 (34.1%)	6 (0.5%)	13 (1.1%)		
Female	751 (64.2%)	1 (0.1%)	na		
Living environment				32.189	0.000
Home / stable accommodation	1112 (95.6%)	5 (0.4%)	13 (1.1%)		
Dormitory / institute	17 (1.5%)	2 (2.0%)	na		
No stable accommodation	11 0.9%)	na	na		
Others	3 (0.3%)	na	na		
Employment status				22.061	0.037
Regular employment	286 (26.9%)	3 (0.3%)	7 (0.7%)		
Occasional employment	205 (19.2%)	2 (0.2%)	1 (0.1%)		
Pupil / Student	181 (17.0%)	1 (0.1%)	2 (0.2%)		
Unemployed	173 (16.2%)	na	na		
Housewife	131 (12.3%)	na	na		
Others	62 (5.8%)	1 (0.1%)	2 (0.2%)		
Retiree	7 (0.7%)	na	1 (0.1%)		
Occupation				31.188	0.013
Student	454 (39.0%)	3 (0.3%)	4 (0.3%)		
Professional	7 (0.6%)	1 (0.1%)	na		
Civil servant	147 (12.6%)	2 (0.2%)	1 (0.1%)		
NGO / private worker	19 (1.6%)	na	1 (0.1%)		
Military / paramilitary	102 (8.8%)	na	3 (0.3%)		
Artisan	233 (20.0%)	1 (0.1%)	4 (0.3%)		
Clergy	4 (0.3%)	na	na		
Others	63 (5.4%)	na	na		

na = not applicable

Table 5: Comparison of substance ASSIST scores based on MINI diagnostic criteria.

Domains	Low risk N (Mean, SD)	Abuse N (Mean, SD)	Dependence N (Mean, SD)	F- value	Sig.
Non-alcoholic substance use					
Tobacco	121 (0.11, 0.46)	11 (1.57, 1.51)	24 (1.85, 1.14)	114.96	0.000
Marijuana	38 (0.03, 0.26)	10 (1.43, 1.40)	19 (1.46,1.45)	202.60	0.000
Cocaine	2 (0.00, 0.06)	na	na	0.01	0.991
Amphetamine	6 (0.01, 0.10)	2 (0.29, 0.76)	2 (0.15, 0.56)	25.22	0.000
Inhalants	Na	2 (0.29, 0.76)	2 (0.15, 0.56)	70.92	0.000
Sedatives	11 (0.01, 0.13)	4 (0.57, 0.98)	2 (0.15, 0.56)	50.55	0.000
Hallucinogens	Na	na	4 (0.31, 0.75)	104.91	0.000
Opioids	33 (0.03, 0.25)	7 (1.00, 1.29)	7 (0.54, 1.05)	61.48	0.000
Other drugs	na	na	na	na	na
Total = 1169	df = 2, 1167				

na = not applicable so cannot be computed because the standard deviation is 0.

DISCUSSION

We found significant prevalence rates of use among the participants using tobacco (13.3%), marijuana (5.72%), amphetamine (0.85%), sedatives (1.45%), and opioids (4.02%). This outcome re-echo's previous findings which also found a high prevalence rate for analgesic, cannabis, tobacco, sedatives cocaine, and opium among drugs used mostly in Nigeria and globally.[17-20] The prevalence rate of 13.3% for tobacco use that we found in this study was slightly higher than the lifetime prevalent rate of 12.2% found in a National Survey conducted in Nigeria in 2009 but lower than those found in some previous studies.[12,20,22]

Table 6: Participants who received brief intervention, counselling or referral for substance use, abuse or dependence.

Substance	N (%)	Received brief intervention	Referred for counselling	Referred to see psychiatrist
No use	863 (74%)	na	na	na
Low risk	211 (69%)	211	0	0
Abuse	36 (12%)	36	36	0
Dependence	60 (19%)	60	0	60

na = not applicable.

It should be noted that the National Survey was specific for a certain form of tobacco, cigarette as distinct from other forms of tobacco hence the possible reason for the lowest rate. Our prevalence rates of 5.72% for marijuana was slightly lower than 7.0% found by Adamson et al.[22] This in turn was lower than the 10.8% reported for Nigeria in 1989, the 42% reported in the US and New Zealand and the 24% reported in the United Kingdom.[23-25] While there are waves of legalization or decriminalization of the use of marijuana in different part of the world, the use of the substance is still illegal in Nigeria. This is likely responsible for the lowest rates recorded in our study coupled with the fact that the population comprised of participants in a community outreach organized by a Christian ministry.

The rates reported for Amphetamines, sedatives and Opioids are far lower than rates obtained from previous studies.[12,21] These may be explained by the relative size of the study population as against other studies which were National surveys. Although there has been a lot of public and media outcries concerning increase in the use of these substances by youths and women in the society, a previous study has identified them as problems more prevalent in the South-West and North-East geopolitical zones and mainly in the urban areas.[21]

This study found gender, living environment, employment status and occupation as significant predictors of substance use among the participants. Specifically, higher rates of substance use, abuse and dependence were found among males than females. This is in keeping with most other previous studies both in Nigeria and other parts of the world.[26-29] Those living in stable environment were also found to be more likely to use substances. This may not be unconnected with the study population being an outreach for general health conditions in which most members of the community normally would have stable living conditions. Finally, our study found that students were likely to be using and abusing drugs than people who were professionals and other forms of occupation. In the first instance, students constituted the majority of the participants. Secondly, studies have consistently demonstrated that substance use is more in the younger age group at which time they are likely to be in school.[12, 22]

Present study went beyond just using ASSIST which is essentially a screening instrument to using the MINI to make diagnosis of substance use disorders (abuse and dependence). We thereafter sought to find out if participant's substance ASSIST scores will correlate with MINI diagnosis for substance abuse and dependence. Consistent with some previous studies in which the ASSIST was proved to be an effective primary health care substance screening tool with good discriminative validity, particularly for alcohol, cannabis, ATS, opioids and cocaine specific substance involvement; ASSIST cut-points in this study also were able to provide substance-specific appraisal based on use and misuse with a high degree of accuracy among the study participants.[14,30] Potential substance abuse and dependence was noted for tobacco, marijuana, Amphetamine, inhalants, sedatives, hallucinogens, and opioid, based on ASSIST and confirmed by MINI.

We identified a number of participants who were in danger of developing substance use disorders who were given brief intervention and those with substance use disorders who were referred for either more intensive counselling or referred for more intensive treatment in a specialized drug treatment facility after the initial brief intervention offered during the outreach. Given the fact that most of these participants came only for consultation for other health conditions and not specifically for substance use issues, this study has further buttressed the fact that substance use disorders are usually missed in routine community medical treatment where the health care workers don't possess the index of suspicion to identify them. As noted in some previous studies,[31,32] this study further buttress that fact that it is possible to incorporate ASSIST-linked Brief Intervention into routine community primary care. The apparent seamless incorporation of substance use screening, brief intervention and referral services was achieved during the community outreach through proper planning, training and execution by a group of psychologists and social workers who were proficient in the administration of ASSIST and ASSIST-linked Brief Intervention. This may not be the case among health care workers in routine community or primary care where they are usually overburdened by other commitments. It is doubtful if the Nigerian Health system as it is presently operating can provide such high number of mental health workers for screening and brief intervention. This is one of the limitations of generalising the results of our study. While a previous study in Nigeria has highlighted the efficacy of community health extension worker delivered screening and ASSIST-linked intervention on problem

alcohol use, it stands to be seen if such could be replicated for other substances apart from alcohol given that alcohol is a socially accepted drug of use and a more accommodating attitude is displayed towards its use.[33] This may be the subject of further research. Finally, this study did not include follow up to assess the impact of ASSIST-linked brief intervention on the beneficiaries; nor feedback from the referrals. This constitutes another limitation of our study and may be the subject of further research.

CONCLUSION

It was concluded that there is significant psychoactive substance use in the study population especially with tobacco, marijuana, amphetamines, sedatives, and opioids. Those who are likely to use substances or have substance use disorders are most likely males, students or people with regular employment and people in stable living condition. With adequate planning, training and execution, screening with ASSIST, ASSIST-linked Brief Intervention, use of MINI and referral for specialized treatment can easily be incorporated into routine community treatment services for psychoactive substance use and disorders.

ACKNOWLEDGEMENTS

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