Demographic Characteristics as Predictors of Psychoactive Substance Use Disorders

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Abstract

This study investigated the predictive role of demographic characteristics of psychoactive substance use disorders. This cross sectional survey study used accidental sampling techniques to recruit 153 psychoactive substance users across Maiduguri Metropolitan Council (MMC) into the study, 123 (80.4%) were males, 30 (19.6%) were females and their mean (X) age was 28.6. Tramadol 86 (56.2%), cannabis 71 (46.3%), cigarette 58 (37.9%), respectively were ranked by participants as the most problematic psychoactive substance if cessation occurred, also demographic characteristics did not predict psychoactive substance use disorders; R =.145; $F_{(3, 149)}$ = 1.04; P > .005. This study revealed that tramadol, cannabis, and cigarette respectively were the most problematic substances for participants when cessations occur and demographic characteristics did not predict psychoactive substance use disorders. It therefore recommended that appropriate measure should be put in place by Nigerian Drug Law Enforcement Agency and other agencies in the country to tract the network of the drug barons that aids the circulation of these drugs, also substance abuse rehabilitation programme should be subsidize for affordability.

Keywords: Demographic characteristic; Substance use disorders; Nigeria

Abbreviations: MMC: Maiduguri Metropolitan Council; VAT: Value Added Tax; CAGE: Cutdown Annoyed Guilty Eye-Opener; AID: Adapted to Include Drugs.

Introduction

The use of psychoactive substances is gradually becoming a norm in our society today [1]. Psychoactive substance are chemicals which, when taken into the body alters its function physically and psychologically [2]. The problem of the drug abuse places a significant threat to the social, health, economic fabrics of the families, society and the entire nations [3].

In African countries, there is an increasing trend in psychoactive substance use and abuse [4,5]. In South

Africa, 28.9% of Cape Town adolescents and 31.8% of Durban adolescents who were presented at trauma units were found to have positive breath for alcohol, also 15.4% of Cape Town adolescents and 28.6% of Durban adolescents tested positive for methaqualone [6]. Studies have reported that psychoactive substance use is prevalent in Nigeria. Alcohol was reported to be the commonly use drug, both in terms of lifetime and recent use history, then tobacco, sedatives, stimulants and cannabis respectively meanwhile cocaine or other drugs was very rare [7]. Similarly, in another study conducted in south western Nigeria among tanker drivers, daily current use pattern for tobacco was the highest 45.5%, alcohol 43.3%, cannabis 16.5%, and caffeine 10.2% [8]. Moreover, in a study conducted in a psychiatric facility in north eastern Nigeria, Onyencho, et al. [9] reported that majority of the in-patients are currently uses cigarette 74%, cannabis 71% and tramadol 50%.

Psychoactive substances are been used for the euphoric and pleasurable effects on mood, perception, and behavior despite the obvious negative consequences of its use. The pleasurable experiences reported by people who use psychoactive substances partly explain why people continue to use them [10]. The normal part of our physiology that underlies addiction is also found in the manifestation of our need for nurturing, food, fluids, and our desire for sex. Activation in all of these circumstances is mediated through the brain's reward pathway [11]. Unfortunately, for substance abusers addiction hijacks this pathway that was met for basic needs like food and sex.

In a similar study, Bechara [12] revealed that the body responds to drug withdrawal much like it responds to hunger; hunger was conceptualized as a type of withdrawal. Hence, substance withdrawal results in increased motivation to use drugs in the same manner that hunger increased motivation to eat. Based on this, several studies have confirmed that search for pleasure motivates drug abusers to alter their state of consciousness [13]. And this eventually leads to substance use disorders.

The socio-demographic profiles of substance abusers in a south-western Nigerian Psychiatric facility, as documented by Abayomi, Ojo, Ibrahim, Adelufosi, & Obasan [14] revealed that males constituted the significant majority (85.7%), and their mean age was 31.8 years. Most of the respondents were never married (70.5%), about half of them were unemployed and 61.9% of them had less than secondary education. Another research in the southern part of the country by Eze, James, Omoaregba, & Osahon [15] looked at the psychosocial characteristics of patients admitted to a drug rehabilitation unit found similar outcomes. Onyencho, et al. [9] found more males, being single, lower educational achievement, and unemployed/underemployed among in-patients with substances use disorders in a mental health facility in Maiduguri metropolis. Ibrahim, Umar and Usman [16] examine the use of illicit drugs and dependency among youth in Bauchi, majority of the respondents (86%) indicated that they abuse drugs because it elevates their mood. While 80% of the respondents indicated they abuse drugs because it creates boldness in them, 56% of the respondents abuse drugs because it makes them calm.

Several measures which include correctional homes and rehabilitation programs have been put in place to prevent substance abuse by governmental and non-governmental agencies in Nigeria. Yet the prevalence of psychoactive substance use and abuse is still very high [7,17]. Also, psychoactive substance use is a gateway to substance abuse before other associated problem will emanate and no study has addressed the predictive role of demographic characteristics in north-eastern Nigeria. To the best of our knowledge, the only study that examines the use of illicit drugs and associated problems among the youth only explored the reasons [16]. Therefore, the aims of this study were in two-fold; to examine the first three psychoactive substances that are likely to be problematic when cessations occur, and to examine if demographic characteristics of the participants are predictor of psychoactive substance use disorders.

Methods

Design and Setting

This cross-sectional survey study was carried out among substance users patronising different joints (ghetto), beer parlours and stadium within Maiduguri Metropolitan Council (MMC), Borno State, Nigeria. Maiduguri is a city in north eastern Nigeria, and is the largest city and capital of Borno State.

Sampling Techniques and Participants

Accidental sampling techniques were used to recruit 153 current psychoactive substance users within Maiduguri Metropolitan Council (MMC) into the study, 123 (80.4%) were males, 30 (19.6%) were females.
Instruments Section A: This section taps information on demographic variables like Age, Sex, Marital Status, Occupational Status, Educational background, and Substance of abuse. **Section B:** The CAGE is a four-item screening tool developed by Ewing [18], the instrument was designed to identify problem drinking via four

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constructs (each its own question). Cutdown, Annoyed, Guilty, Eye-Opener. The CAGE-AID (Adapted to Include Drugs) is an equivalent tool developed to screen for drug use disorders. The items on the CAGE have good internal reliability [19]. In an early UK sample it was reported that using a cut-off point of ≥2 affirmative responses, the CAGE showed good sensitivity (84%) and specificity (95%) for detecting current high-risk drinking (defined as 8 or more standard drinks a day), a review found reliability of the CAGE to be varied with median internal consistency reliability across 22 samples reaching .74, but ranged from .52 to .90. Sample age was the only identified sample characteristic that demonstrated a statistically significant relationship with CAGE score reliability [20]. In this study, scores > 3 was regarded as a high score and hence ascribed to individual with substance use disorders, as against > 2 in the test manual.

Procedure

The data for the research was collected at Maiduguri Metropolitan Council (MMC). This is because MMC is the largest local government in Maiduguri the state capital of Borno State and the most populous town in the state, virtually all representative of major ethic group in the country are been represented in the city. Copies of the study questionnaire were administered to 153 psychoactive substance users across some selected joint and beer parlour. Verbal inform consent was sought from each participant and confidentiality of their responses was assured before the commencement of the questionnaire administration.

Statistical Analysis

The data obtained were analyzed using the Statistical Package for Social Sciences, version 17. Descriptive statistics were used to analyze the demographic characteristics of the participants and the substance of abuse. Furthermore, descriptive statistics were also used to examine the first three psychoactive substances that

are likely to be problematic, and multiple regression analysis were used to examine if demographic characteristics of the participants were predictor of psychoactive substance use disorders.

Results

Variables	N	%
Age	Mean age (28.6) yrs; SD (7.7)	
Gender:		
Males	123	80.4
Females	30	19.6
Marital Status:		
Single	91	59.5
Married	49	32
Separated	13	8.5
Educational Level:		
No formal Education	15	9.8
Islamic Education	22	14.4
Primary	21	13.7
Secondary	50	32.7
OND/NCE	29	19
HND/BSc	12	7.8
MSc	1	0.7
Occupational:		
Civil Servants	25	16.3
Business	48	31.4
Artisans	32	20.9
Farmers	10	6.5
Unemployed	38	24.8

Table 1: Showing Demographical information of the participants.

The above table show that verse majority of substance abusers are below the age of thirty. Mostly males 123 (80.4%), Single 91(59.5%), majority of the participants were SSCE and below. Occupational status revealed that only 38 (24.8%) were unemployed.

	First Ranking		Second Ranking		Third Ranking		Total Ranking	
Substances of Abuse	N	%	N	%	N	%	N	%
Tramadol	24	15.7	39	25.5	23	15.0	86	56.2
Cigarette	47	30.7	6	3.9	5	3.3	58	37.9
Cannabis	40	26.1	25	16.3	6	3.9	71	46.3
Rohypnol	4	2.6	5	3.3	8	5.2	17	11.1
Snuff	1	0.7	1	0.7	-	-	2	1.4
Diazepam	2	1.3	2	1.3	3	2.0	7	4.6
Codeine	6	3.9	8	5.2	12	7.8	26	16.9
Alcohol	18	11.8	11	7.2	7	4.6	36	23.6

Pentazocine	2	1.3	-	-	-	-	2	1.3
Heroine	1	0.7	-	-	-	-	1	0.7
Morphine	-	-	-	-	-	-	-	-
Cocaine	-	-	-	-	-	-	-	-

Table 2: Showing ranking of most Dependent or Problematic Psychoactive Substances as Reported by the Participants.

The above table show the ranking of most dependent or problematic substances as reported by the participants. In the total ranking, tramadol was ranked by 86 (56.2%) participants as the most problematic if cessation occurred, followed by cannabis 71 (46.3%), cigarette 58 (37.9%), alcohol 36 (23.6%), codeine 26 (16.9%) and lastly rohypnol 17 (11.1%).

Variables	R	R²	F	B	T	Sig.
Age				.125	1.46	.147
Gender	.145	.021	1.04	.044	.512	.610
Educational Level				-.082	-.989	.325

Table 3: Showing the Regression of Psychoactive Substance use Dependency on Demographic Characteristics.

The above table show the regression of substance use disorders on demographic characteristics of the participants. Demographic characteristics did not predict psychoactive substance use disorders; R =.145; F (3, 149) = 1.04; P > .005.

Discussion

The main objective of this paper is to examine if demographic characteristics of substance abusers are predictors of psychoactive substance use disorders and to find the most problematic substances when cessations occur in Maiduguri metropolis. Firstly, this study revealed that tramadol, cannabis, and cigarette respectively were the most problematic substances for participants when cessations occur either because of the withdrawal syndromes or euphoric effects. Though the previous studies did not look at the most problematic substances when cessations occur, they only considered the most abused substances [7-9]. In previous study, Onyencho, et al. [9] reported cigarette as the most popular substance of abuse in north-eastern, Nigeria, while Makanjuola, et al. [8] reported tobacco as the most popular substance of abuse in south-western, Nigeria. But in this index study, tramadol, cannabis and cigarette respectively was reported as the most problematic psychoactive substances when cessations occur.

Secondly, demographic characteristics did not predict psychoactive substance use disorders in this study. This study was of the same view with the previous studies which believed that search for pleasure, pleasurable experiences and withdrawal syndromes reported by people who use psychoactive substances partly explain why people continue to use them [10,12,13].

Conclusion and Recommendation

Based on the findings of this study, tramadol, cannabis and cigarette has been reported as the most problematic when cessation occur or highly addictive psychoactive substances by the participants. Though some studies exonerate cannabis among the highly addictive substances but individual preference or pleasure derived might influence participant's choice of substance. Also, demographic characteristics of substance abusers do not predict substance use disorders rather search for pleasure and pleasurable experiences play a significant role because the substance interact with reward pathway in the brain called the mesocorticolimbic area are involved. Also, the negative effect of withdrawal syndromes during substance cessation cannot be over emphasized.

It therefore recommended that appropriate measure should be put in place by Nigerian Drug Law Enforcement Agency and other agencies in the country to tract the network of the drug barons that aids the circulation of these drugs, also substance abuse rehabilitation programme should be subsidize for affordability at both detoxification and rehabilitation stages just as it was done for HIV medications. But on the other hands, value added tax (VAT) of some of the substances that are licit in the country but grossly abused should be increase exorbitantly so that the burden of the payment is borne by the final consumer of the goods since its users attached much important to its euphoric effects. This hike in price will discourage tramadol, cigarette and other substances of abuse consumption and subsequent prevent substance use disorders.

Study of this nature cannot be complete, without its own limitations; the total number of participants recruited into this study was relatively small for generalization, also similar study should be conducted in

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other part of the country for a comprehensive understanding of this phenomena.

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