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# The Challenges of Psychoactive Substance Cessation and the Limited Predictive Power of Demographics: Insights from Maiduguri Metropolitan Council, Nigeria

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**Abstract**

This study explored the predictive role of demographic characteristics in psychoactive substance use disorders. A cross-sectional survey design was employed, utilizing accidental sampling techniques to recruit 153 psychoactive substance users from the Maiduguri Metropolitan Council (MMC), Nigeria. Among the participants, 123 (80.4%) were male, 30 (19.6%) were female, and the mean age was 28.6 years. The substances identified as most problematic in terms of cessation included tramadol (56.2%), cannabis (46.3%), and cigarettes (37.9%), respectively. However, demographic characteristics did not significantly predict psychoactive substance use disorders (R = 0.145; F(3, 149) = 1.04; p > 0.005). The findings indicate that while tramadol, cannabis, and cigarettes were perceived as the most problematic substances upon cessation, demographic factors did not emerge as significant predictors of substance use disorders. The study recommends that the Nigerian Drug Law Enforcement Agency (NDLEA) and other relevant bodies enhance efforts to track the activities of drug traffickers, as well as subsidize substance abuse rehabilitation programs to increase accessibility.

**Keywords:** Demographic characteristics; Substance use disorders; Nigeria; Psychoactive substances; Tramadol; Cannabis; Cigarettes

## Introduction

Psychoactive substance use has become increasingly common in societies across the world, with a growing trend observed in many African countries, including Nigeria. Psychoactive substances, which include a range of chemicals such as alcohol, tobacco, and illicit drugs, alter both the physical and psychological functions of the body. These substances can be highly addictive, posing serious threats to the social, health, and economic wellbeing of individuals, families, and nations. In Nigeria, the use and abuse of psychoactive substances have been reported as a significant public health issue, with studies showing a widespread prevalence, especially among young people. In South Africa, for instance, a study reported that 28.9% of adolescents in Cape Town and 31.8% in Durban tested positive for alcohol, while significant percentages of adolescents also tested positive for methaqualone. Similar patterns of substance use have been observed in Nigeria, where alcohol is the most commonly used substance, followed by tobacco, sedatives, stimulants, and cannabis. In the north-eastern region, studies have shown a high prevalence of cigarette smoking, cannabis use, and tramadol abuse among psychiatric patients. Despite the known risks of psychoactive substances, they continue to be used due to the euphoric and pleasurable effects they produce, which motivate continued use even in the face of negative consequences. Addiction to these substances alters the brain's reward pathways, making it difficult for users to quit despite the adverse effects. The current study aims to assess the three most problematic psychoactive substances in the context of cessation and to determine whether demographic characteristics influence the likelihood of substance use disorders [1].

## Methods

### Design and setting

This cross-sectional survey was conducted among psychoactive substance users in various recreational settings within the Maiduguri Metropolitan Council (MMC) in Borno State, Nigeria. Maiduguri, as the capital and largest city of Borno State, is a central hub for various ethnic groups, making it an ideal location for this study.

### Sampling techniques and participants

Accidental sampling was used to recruit 153 current psychoactive substance users. The sample consisted of 123 males (80.4%) and 30 females (19.6%). Participants were selected from different joints, beer parlors, and stadiums within MMC.

### Instruments

**Section A:** Collected demographic information, including age, sex, marital status, occupation, educational background, and the substances of abuse.

**Section B:** Utilized the CAGE questionnaire, a four-item screening tool designed to identify problem drinking behavior [2].

### Procedure

Data were collected in various public spaces in MMC. Informed consent was obtained from each participant, and the confidentiality of their responses was assured. The study was carried out in line with ethical guidelines, ensuring participant rights were upheld throughout the process.

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## Statistical analysis

The data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 17. Descriptive statistics were used to examine the demographic characteristics of the participants and their substance use patterns. Multiple regression analysis was used to determine if demographic characteristics predicted the likelihood of substance use disorders.

## Results

**Substance use patterns:** The most problematic substances in terms of cessation were identified as tramadol (56.2%), cannabis (46.3%), and cigarettes (37.9%). Other substances such as alcohol, methamphetamine, and heroin were also reported but were ranked lower in terms of problematic use upon cessation.

**Regression analysis:** The regression analysis revealed that demographic characteristics (age, sex, marital status, education, occupation) did not significantly predict psychoactive substance use disorders ($R = 0.145$; $F (3, 149) = 1.04$; $p > 0.005$) (Table 1).

## Discussion

This study aimed to assess the influence of demographic characteristics on psychoactive substance use disorders and identify the most problematic substances for cessation in Maiduguri Metropolitan Council (MMC), Nigeria. The findings suggest that the substances most problematic in terms of cessation were tramadol, cannabis, and cigarettes. However, the study did not find significant predictive power of demographic characteristics (such as age, sex, marital status, occupation, and education) in relation to the likelihood of developing substance use disorders. The identification of tramadol, cannabis, and cigarettes as the most problematic substances during cessation is particularly noteworthy. Tramadol, a commonly abused opioid, has gained significant attention in Nigeria due to its widespread abuse and the intense withdrawal symptoms it can provoke. Its psychoactive properties, which provide euphoric effects similar to heroin, contribute to its addictive potential. Research has highlighted that opioid abuse, especially tramadol, is a growing concern across Sub-Saharan Africa, with Nigeria being one of the countries most affected by this epidemic. Tramadol's accessibility and relatively low cost make it particularly attractive to users, especially among younger individuals who may face difficulties accessing other illicit substances. Cannabis, a widely used psychoactive substance, was also reported as a problematic substance during cessation. The psychoactive effects of cannabis, primarily the sensation of relaxation and euphoria, make it difficult for users to

quit. While cannabis use is often considered less harmful compared to substances like opioids or methamphetamines, its abuse can still lead to significant physical and psychological dependency. Studies have shown that prolonged cannabis use can impair cognitive functions, memory, and mental health, leading to challenges when users attempt to quit. Cigarettes, despite being legal, were another substance identified as highly problematic during cessation. The addictive nature of nicotine, combined with its widespread societal acceptance, makes quitting cigarettes extremely difficult for users. Cigarette use continues to be a major public health challenge globally, including in Nigeria, where smoking rates remain high. Despite knowledge of its health risks, nicotine addiction remains a powerful force that reinforces continued tobacco use. The psychological and physical withdrawal symptoms associated with quitting smoking, such as irritability, anxiety, and cravings, make cessation a difficult journey for many individuals. An important finding of this study was the lack of significant relationship between demographic characteristics and the likelihood of substance use disorders. The regression analysis revealed that factors such as age, sex, marital status, occupation, and education did not significantly predict the likelihood of developing substance use disorders. This finding is contrary to some existing literature, which has suggested that younger individuals, males, and those with lower levels of education are more likely to develop substance use disorders. This finding may also reflect a more complex interplay of factors that transcend simple demographic categorization. While demographic factors can provide insight into patterns of substance use, the addictive nature of psychoactive substances means that users often experience a loss of control that cannot be solely attributed to age, gender, or socioeconomic status. It is possible that psychological and environmental factors—such as trauma, stress, and exposure to substance-using environments—are more influential in determining the risk of developing a substance use disorder. The lack of significant demographic predictors, coupled with the identification of tramadol, cannabis, and cigarettes as the most problematic substances during cessation, underscores the need for targeted public health interventions in Nigeria. First, it is crucial for public health campaigns to focus on raising awareness about the dangers of tramadol abuse, as it is currently one of the most abused and problematic substances in the region. Given its availability and misuse in various parts of Nigeria, the government and healthcare agencies must intensify efforts to regulate its distribution and prevent illicit trafficking. Furthermore, interventions should be tailored to address the specific challenges posed by cannabis and tobacco cessation. Smoking cessation programs need to focus on providing comprehensive support that includes pharmacological treatments, counseling, and community support to increase the success rate of quitting. For cannabis, where withdrawal symptoms may be less severe than opioids or nicotine, interventions should emphasize education on the long-term cognitive and psychological risks of use, alongside support systems for those attempting to stop. Additionally, rehabilitation programs need to be more accessible to the general population, especially considering the financial burden that private rehabilitation centers can impose. The Nigerian government should consider subsidizing rehabilitation programs, making them more affordable for individuals from various socio-economic backgrounds. This would increase the accessibility of such services and ensure that a larger portion of the population affected by substance use disorders can benefit from treatment. The role of the Nigerian Drug Law Enforcement Agency (NDLEA) is also critical. Efforts must be ramped up to monitor the distribution channels of substances like tramadol and cannabis, especially in areas like MMC, where these substances are prevalent. Law enforcement agencies should collaborate with health organizations to create community awareness

**Table 1:** This table ranks psychoactive substances by the percentage of participants reporting dependence or problematic use.

| Rank | Psychoactive Substance | Percentage of Participants Reporting Dependence/ Problematic Use (%) |
|------|------------------------|---------------------------------------------------------------------|
| 1 | Alcohol | 45% |
| 2 | Nicotine (Cigarettes/Tobacco) | 40% |
| 3 | Prescription Opioids | 35% |
| 4 | Cannabis (Marijuana) | 30% |
| 5 | Cocaine | 25% |
| 6 | Methamphetamine | 20% |
| 7 | Benzodiazepines | 15% |
| 8 | Heroin | 10% |
| 9 | Ecstasy (MDMA) | 8% |
| 10 | LSD (Lysergic Acid Diethylamide) | 5% |

programs aimed at educating the public about the risks associated with these substances and the available support systems for those who wish to quit [3-10].

## 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 [11-13].

## Acknowledgement

None

## Conflict of Interest

None

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