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PSYCHO-SPATIAL PREDICTORS OF DRUG USE AMONG INNER CITY YOUTHS IN UYO

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ABSTRACT

This study examined psycho-spatial predictors (psychological – optimistic bias and stress: spatial-drug availability, neighborhood density and proximity) of drug use among inner city youths of Uyo. A descriptive cross-sectional survey design was used to interview 228 youths in Uyo, Akwa Ibom State. Participants, with an average age of 31.46, were 75% male. A standardized questionnaire, consisting of Drug Use Disorder Identification Test (DUDIT), the Perceived Stress Scale (PSS-10), and the Revised Life Orientation Test-Revised (LOT-R) were used for data collection. Drug availability was assessed in this study in terms of ease of difficulty in obtaining the drug ranging from very easy to very difficult. Environmental proximity was assessed by asking the respondents the proximity between their residence and where the drug they used are sold- ranging from "On the same street" to "not available in my neighborhood". Neighborhood density was assessed by asking the respondents their area of residence in Uyo – as high density or low density. Result showed that drug availability [β= -4.23; t = - 4.22; p < 0.05] stress level [β=0.33; t =2.96; p < 0.05] and optimistic bias [β= - 0.52; t=-3.18; p< 0.05] predicted drug use. The study concluded that these psychospatial variables are very important in understanding drug use among young persons and the need to situate intervention within this psychospatial domain was emphasized.

Key words: Optimistic bias, stress, proximity, neighbor-hood density, drug use

INTRODUCTION

Globally, drug use has surged across the regions of the world in recent years both in terms of extent of use as well as patterns of use (Abikoye & Obot, 2023; Ignaszewski, 2012). In the 2019 World Drug Report (WDR, 2019), it was estimated that about 5.5% of the world population within the ages of 15 and 64 used drugs during the past year, an increase of about 30% over what obtained between 2009 to 2017 within the same population. Over the last decade in Nigeria the extent of use has not only grown but there has been a diversification of the substances available on the drug markets. In 2017, an estimated 271 million people worldwide aged 15–64 had used drugs at least once in the previous year (UNODC, 2018). This corresponds to 5.5 per cent of the global

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population aged 15–64, representing one in every 18 people (WDR, 2019). In the same year, 188 million people reported past-year use of cannabis, 53 million people used opioids in the past year, 29 million used amphetamines and prescription opioids, 21 million used ecstasy and 18 million used cocaine (UNODC, 2018).

Drug use is one of the problematic issues in Nigeria. Although several figures have been reported in the available epidemiological data on drug use in Nigeria, the most credible epidemiological data, however, are from the national drug use survey (UNODC, 2018) and the descriptive national survey of substance use in Nigeria (Adamson et al., 2015). Findings from these large-scale surveys indicate that the level of drug use in Nigeria is high. For instance, the past year prevalence of any drug use in the same age group was reported as 14.4% or 14.3 million people (UNODC, 2018), a figure that is almost three times that of the global prevalence of 5.5%. Results of these and several other surveys (e.g. Abikoye et al., 2021: Obot, 2019; WDR, 2019) indicate high levels of lifetime, 12-month and 30-day drug use, especially the use of cannabis, the non-medical use of prescription opioids and cough syrups across diverse populations.

Although drug use constitutes a serious issue among various populations worldwide (Abikoye & Obot, 2023; Atilola et al., 2016), a major concern is the escalating drug misuse among inner-city youths (Abikoye et al., 2021) with far-reaching consequences at personal, family, community, and national levels. The National Agency for Campaign Against Drug misuse (NACADA, 2004) has aptly characterized drug misuse as a social evil, leading to behaviors that deviate from normal social conduct, often associated with criminality and social depravity. The deleterious psychosocial effects of drug misuse such as impairment, loss of inhibition, loss of motivation and a host of other behavioural issues have been documented (Inciardi et al., 1993; Idowu et al., 2019; Maguire & Pastore, 1999). According to the United Nations Office on Drugs and Crime (UNODC, 2018), approximately 13.8 million youths aged 15 to 18 used cannabis in recent years, and the number of drug users is estimated to be around 275 million worldwide.

Evidence has shown that salient psychological and spatial variables can provide useful insights into drug use among inner-city youths (Abikoye, 2012). Such insights could prove very useful in designing relevant intervention aimed at mitigating the problem. Specifically, factors such as drug availability, neighbourhood density, environmental proximity, stress levels, and optimistic bias have been implicated (Abikoye, 2010; Adekoye & Abikoye, 2014; Idowu et al., 2019) but results are mixed, highlighting the need for more studies to further illuminate the issue.

Recent research continues to support the significance of drug availability and neighborhood density as key predictors of drug use behaviors among inner city youths. A study by Canan et al. (2021) examined drug availability within inner city neighborhoods and found a direct

correlation between the concentration of drug markets and the prevalence of drug misuse among young individuals. The researchers emphasized the urgent need for targeted interventions to disrupt drug trafficking routes and reduce the accessibility of illicit substances in these communities. Similarly, a recent study by Johnson and Lee (2022) explored the impact of neighborhood density on drug use behaviors. The researchers conducted a survey among inner city youths and found that those residing in neighborhoods with a higher density of drug users were more likely to engage in substance abuse. They highlighted the need for community-based initiatives that foster a sense of belonging and social support, as a means of reducing drug use within these neighborhoods.

Regarding environmental proximity to treatment facilities, a study by White et al. (2020) investigated the barriers to accessing treatment services among inner city youths. The researchers identified perceived stigma and limited treatment options as significant deterrents to seeking help for drug-related issues. They recommended the expansion of outreach programs and the integration of mental health services within community centers to improve accessibility and reduce the stigma associated with seeking treatment.

Stress levels continue to be a major concern for inner city youths, with recent research highlighting the detrimental effects of chronic stress on mental health and substance use. A longitudinal study reported by Brown et al. (2023) followed inner city adolescents over several years and found that higher levels of chronic stress were associated with an increased risk of drug misuse. The findings underscored the importance of early intervention programs that address stress management and coping skills to prevent substance use among vulnerable youths.

Prior studies has implicated optimistic bias in addictive behaviours generally, and drug use specifically (Adekoya & Abikoye, 2014; Chen et al. 2022). Chen et al. (2022) examined the influence of optimistic bias on drug use behaviors among inner city adolescents and found that youths with higher levels of optimistic bias were less likely to perceive drug use as a risk and were less motivated to seek treatment. This finding emphasizes the need for targeted educational campaigns that address risk perception and promote informed decision-making regarding substance use.

Given the multifaceted nature of drug use among inner city youths, a comprehensive understanding of the interplay between these psychological and spatial factors is necessary in developing evidence-based interventions. This study aims to contribute to the existing knowledge by investigating how drug availability, neighbourhood density, environmental proximity, stress levels, and optimistic bias influence drug use behaviors in this vulnerable population. Through a mixed-methods approach, incorporating quantitative surveys and qualitative interviews, this research seeks to shed light on the complexity of drug misuse

among inner city youths in Uyo. By illuminating the psycho-spatial predictors of drug use, this study aims to inform targeted prevention and intervention strategies, ultimately fostering healthier communities and empowering inner-city youths to make positive life choices. It was hypothesized that special factors (neighbourhood density, drug availability and proximity) would predict drug use among inner-city youths. We also hypothesized that optimistic bias and stress would predict drug use among inner-city youths.

METHOD

Participants and Setting

A total of two hundred and twenty-eight (228) inner-city youths participated in the study, ranging in age from 17 to 54 years, with an average age of 31.46 years and a standard deviation of 9.07. The majority of participants were male (75%), while 23.2% were female, and 1.8% did not specify their gender. Regarding education, 38.2% had either an HND or BSC qualification, 26.3% had an OND qualification, 21.9% had an SSCE, 7.5% had a primary education, and 2.6% reported having an MSC or MBA qualification. In terms of marital status, 55.3% were single, 24.6% were married, 7.5% were divorced, and 12.7% did not specify their marital status. The majority identified as Christians (66.7%), followed by 7.9% who identified as Muslims, 1.8% from other religions, and 23.7% did not specify their religious status. The ethnic affiliation of participants was predominantly Ibibio (55.6%), followed by Annang (8.8%), Igbo (15.8%), Hausa (4.4%), Yoruba (0.4%), Igala (0.8%), and 14.0% did not specify their ethnicity.

The study was conducted in the inner city of Uyo, the capital of Akwa Ibom State, situated between latitude 4058'N and 5004'N and longitude 7051'E and 8001'E. The city covers an area of approximately 214.31 km2 and has a population of 1,329,000 as of 2023. Uyo is accessible via several roads, including Abak Road, Nwaniba Road, Uyo-Itu/Calabar Road, Aka Nung Udoe Road, Ikot Ekpene Road, and Oron Road. The primary language spoken in the region is Ibibio, and Christianity is the dominant religion.

Measures

The study utilized three standardized research instruments: The Drug Use Disorders Identification Test (DUDIT). Drug use was assessed using the Drug Use Disorders Identification Test (DUDIT), a 11-item questionnaire with scores ranging from 0 to 44. Stress was measured using the Perceived Stress Scale (PSS-10), a 10-item questionnaire by Cohen, Kamarck and Mernelstein (1983). Optimistic bias was assessed using the 10-item Revised Life Orientation Test (LOT-R) by Scheier, Carver, and Bridges (1994).

Drug availability was evaluated based on the ease of obtaining drugs, and environmental proximity was assessed in terms of the distance between the respondents' residence and where drugs are sold. Neighbourhood density was classified into "high density" or "low density" based on Akwa Ibom State government official classification.

Procedure

Data was collected within the Uyo inner-city area over a period of four weeks. Using purposive sampling technique, data was collected in person by the Researchers and two trained Assistants.

At the end of the two-week period, 241 copies of questionnaire were administered while 228 were returned with usable data representing a 94.61% response rate. Participation in the study was voluntary and informed consent was implied by completion of the questionnaire. Participants were informed that they were at liberty to opt out of the interview or not answer any question if they so choose. Confidentiality and anonymity were also guaranteed. Each participant received refreshments and a toilet soap upon completion of the questionnaire. The study protocol was approved by the Research Ethics Review Committee of the Ministry of Health, Akwa Ibom State, Nigeria.

Data analysis was performed using the Statistical Package for Social Sciences (SPSS) version 23. Simple frequency count and percentage were used to provide a demographic profile of the respondents and Pearson Moment Product Correlation was employed to show the bivariate relationships between variables of study. Multiple Regression Analysis was utilized to demonstrate the relative contributions of independent variables to dependent variable.

Bivariate analyses, using Pearson r, were performed to establish the relationship between variables of study. A zero-order table showing the various relationships is presented in Table 2. The results indicate that age of participants was inversely related to sex ($r = -.26$; $p<0.01$); level of education was directly related to age ($r = .33$; $p<0.01$); marital status was positively related to age ($r = .66$; $p<0.01$). Religion also correlated with ethnicity ($r = .30$; $p<0.01$). Further, optimistic bias is directly correlated with age and stress level ($r = .17$; $p<0.05$; $r = .23$; $p<0.01$). Lastly, drug use was inversely related to ethnicity and optimistic bias; while positively linked to religion and stress level in that order ($r= -.26$; $p<0.01$; $r= -.18$; $p<0.01$; $r = .19$; $p<0.05$; $r = .17$; $p<0.05$).

Results presented in Table 3 indicate that neighbourhood density, drug availability, proximity, optimistic bias, and stress level resulted in a coefficient of multiple correlation (R) of 0.421 and a multiple correlation square (R2) of 0.177, meaning that 17.7 percent of the variance in drug use was explained by the joint influence and association of neighbourhood density, drug availability, proximity, optimistic bias, and stress level. Table 3 reveals that drug availability ($\beta = -4.23$; $t = -4.22$; $p<0.05$), stress level ($\beta = 0.33$; $t = 2.96$; $p<0.05$) and optimistic bias ($\beta = -0.52$; $t = -3.18$; $p<0.05$) were independent predictors of drug use. Conversely, table 3 shows that proximity ($\beta = -0.07$; $t = -0.07$; $p>0.05$) and neighbourhood density ($\beta = -0.06$; $t = 0.04$; $p>0.05$) were not independent predictors of drug use. Summarily, Table 3 indicates that there was a significant joint contribution of neighbourhood density, drug availability,

RESULTS

Participants' demographic characteristics are presented in Table 1.

Table 1: Demographic background information of participants

Variables	Category	Frequency	%
Age			
17-54 years (Mean = 31.46; SD = 9.07)			
Gender			
	Male	171	75.0
	Female	53	23.2
	No Response	4	1.8
	Total	**228**	**100**
Level of Education			
	Primary	17	7.5
	SSCE	50	21.9
	OND	60	26.3
	HND/BSC	87	38.2
	MSC/MBA	6	2.6
	No Response	8	3.5
	Total	**228**	**100**
Marital Status			
	Single	126	55.3
	Married	56	24.6
	Divorced	17	7.5
	No Response	29	12.7
	Total	**228**	**100**
Religion			
	Christianity	152	66.7
	Islam	18	7.9
	Others	4	1.8
	No Response	54	23.7
	Total	**228**	**100**
Ethnicity			
	Ibibio	127	55.6
	Annang	20	8.8
	Igbo	36	15.8
	Hausa	10	4.4
	Yoruba	1	0.4
	Igala	2	1.0
	No Response	32	14.0
	Total	**228**	**100**

proximity, optimistic bias, and stress level on drug use: $F(5, 215) = 9.04$; $p < 0.05$. This implies that neighbourhood density, drug availability, proximity, optimistic bias, and stress level jointly predicted drug use among participants. Thus, the first and third hypotheses were not confirmed with respect to drug use, whereas the second, fourth, and fifth hypotheses were confirmed.

Table 2: Summary of zero-order correlation matrix showing inter-correlations of study variables in exploring demographic variables, stress level, optimistic bias, treatment facility, and drug use

Var	Sex	Age	LE	ET	MS	RE	SL	OB	DU
Sex									
Age	-.26**								
LE	.02	.33**							
ET	.03	.06	.03						
MS	-.07	.66**	.13	.03					
RE	.02	.01	-.06	.30**	.15				
SL	.05	-.09	.04	-.01	-.02	.15*			
OB	-.11	.17*	.07	-.11	.10	-.06	.23**		
DU	-.02	.04	-.08	-.26**	.03	.19*	.17*	-.18**	

NB: LE = Level of Education; ET = Ethnicity; MS= Marital Status; RE = Religion; SL = Stress Level; OB = Optimistic bias; DU = Drug Use.
**Correlation significant at 0.05 level*
***Correlation significant at 0.01 level*

Table 3: Summary table of multiple regression analysis showing relative contributions of neighbourhood density, drug availability, proximity, optimistic bias, and stress level on drug use among inner city drug users in Uyo

Variables	β	t	Sig.	R	R^2	F	df	P
Neighbourhood density	0.06	0.04	>0.05					
Drug availability	-4.23	-4.22	<0.05					
Proximity	-0.07	-0.07	>0.05	0.421	0.177	9.04	5	<0.05
Optimistic bias	-0.52	-3.18	<0.05					
Stress level	0.33	2.96	<0.05					

Note: AR2 = 0.045; Dependent Variable = Drug use

In addition, the step-wise multi-regression analysis was conducted, and the findings revealed that drug availability was the best predictor of drug use to the extent that 17.7 percent of the variance in drug use was due to the association of drug availability, F (1, 215) = 28.09; p<0.05. The second-best predictor was optimistic bias, as up to 2.6 percent of the variance of drug use was due to the association of optimistic bias, F (2, 215) = 17.63; p<0.05. The third best predictor was stress level, as up to 3.5 percent of the variance of drug use was due to the association of stress, F (3, 215) = 15.22; p<0.05.

DISCUSSION

The primary objective of the present study was to investigate the psycho-spatial predictors of drug use among inner city youths in Uyo. The results from the Multiple Regression Analysis provided valuable insights into the factors that influence drug use behaviors in this population. Specifically, drug availability, stress level, and optimistic bias were identified as significant independent predictors of drug use among inner city youths. These findings were consistent with prior research by Abikoye (2012), who also identified optimistic bias as a predictor of heavy alcohol consumption among drivers in Ibadan. However, the variables of proximity and neighbourhood density did not demonstrate significant independent predictive power for drug use, contrary to the findings of Abikoye (2012) regarding hazardous drinking among drivers in Ibadan.

The finding that drug availability independently predicted drug use is consistent with prior research and aligns with the common understanding that the availability of drugs plays a crucial role in drug use behaviors (Williams, 1992). In areas where illicit substances are easily accessible, individuals are more likely to engage in drug use due to the heightened temptation and reduced barriers to obtaining drugs. The presence of drug markets and trafficking routes within inner city neighborhoods may contribute to the increased drug availability, making it more likely for inner city youths to be exposed to drugs. Another significant predictor of drug use among inner city youths was stress level. This result suggests that higher stress levels may contribute to an increased likelihood of drug use as a coping mechanism. This aligns with APA (2018) and SAMHSA (2020), that inner city living can be associated with various stressors, such as socioeconomic challenges, crime rates, and limited access to resources. Under such conditions, individuals may turn to drugs to alleviate stress and escape from the pressures of their environment. Stress reduction strategies and mental health support could potentially play a role in mitigating drug use tendencies among inner city youths.

The presence of optimistic bias as a predictor of drug use among inner city youths indicates that individuals with a more positive outlook on life may be more susceptible to drug use behaviors. This agrees with O'Sullivan and Owen (2015) who revealed that optimistic bias influences drug use among inner city youths. Optimistic bias refers to the tendency to underestimate personal vulnerability to negative outcomes. In the context of drug use, individuals with optimistic bias may believe that they are less likely to experience the negative consequences associated with drug misuse, leading them to engage in risky drug use behaviors. Education and awareness campaigns that address the potential risks and consequences of drug use, even for optimistic individuals, may be beneficial in reducing drug use tendencies.

Contrary to expectations, proximity and neighbourhood density did not

demonstrate significant independent predictive power for drug use among inner city youths. Possible reasons for this finding could be attributed to the complexity of drug use behaviors and the multitude of factors that influence drug use in urban environments. Additionally, individual differences and unique life circumstances may overshadow the impact of these particular factors in predicting drug use behaviors. Also, this study was carried out in bunks of drug users, hence, neigbourhood density might have little or no effect on the users.

The joint contribution of neighbourhood density, drug availability, proximity, optimistic bias, and stress level in predicting drug use suggests that drug use behaviors are influenced by a combination of psycho-spatial factors. The interplay of these factors may create a complex environment that affects drug use tendencies among inner city youths. Understanding the multifaceted nature of drug use behaviors is essential for developing comprehensive intervention strategies to address drug misuse in inner city communities.

Conclusions

The study investigated the psycho-spatial predictors of drug use among inner city youths of Uyo by focusing on the contributive roles of neighbourhood density, drug availability, proximity to a drug environment, optimistic bias, and stress level on drug use among inner city youths of Uyo. Empirical, theoretical, and statistical data revealed that drug availability, stress level, and optimistic bias were significant predictors of drug use among inner city youths in Uyo. However, proximity and neighbourhood density did not demonstrate significant independent predictive power for drug use. This finding may imply that other factors not considered in this study, and the use of drug users in bunks could have overshadowed the impact of proximity and neighbourhood density on drug use behaviors among inner city youths.

Recommendations

Based on the study's findings, it is recommended to strengthen law enforcement efforts to control drug supply and distribution, implement stress reduction programs for inner city youths, develop targeted interventions challenging optimistic bias, foster positive community engagement through safe spaces and mentorship programs, enhance prevention and early intervention efforts with screening programs, adopt a comprehensive and holistic approach involving collaboration among various stakeholders, promote public awareness campaigns about psycho-spatial factors influencing drug use, invest in accessible treatment and rehabilitation services, conduct further research to understand evolving drug misuse trends, and foster community resilience through strong networks and positive relationships, all of which can work collaboratively to mitigate drug use predictors and create a healthier and safer environment for inner city youths while reducing drug misuse and promoting their overall well-being.

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