

The Influence of Perception, Social, and Environmental Factors on Psychoactive Substance Use

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Abstract

Substance use disorders have become a significant public health issue in Abuja, Nigeria. Despite efforts to enforce preventive measures, drug laws, and treatment strategies, the problem of psychoactive substance use remains significant in the area. This study is a cross-sectional community survey that examined how perceptions, social factors, and environmental influences contribute to psychoactive substance use. The study was conducted in Abuja, with participants aged 14 to 64 years. Data were analyzed using SPSS version 26. Results: Alcohol was the primary substance for both initiation (36.6%) and sustained use (30.1%), closely followed by cannabis (29.4%). Key motivations for use included peer influence (21.7%) and a desire for emotional regulation (22.3%). A notable finding was that 29% of participants did not recognize any negative consequences from their substance use, indicating a significant gap in awareness. Social and environmental factors, especially those related to peer and family networks, are important predictors of substance use behaviors. The Nagelkerke R value for social and environmental factors was 0.04, with a p-value of 0.013, showing statistical significance. Although significant, these factors account for only a small portion (4.0%) of the behavioral variation. In conclusion, the risk of developing psychoactive substance use is influenced by a range of factors, including social and environmental influences. Recognizing these factors can contribute to improving treatment outcomes and reducing stigma for patients.

Keywords : Environmental Factors, Psychoactive Substance, Perception, Social.

Introduction

Substance use involves the non-medical consumption of certain substances that can change mental states in manners considered inappropriate, undesirable, hazardous, or socially unacceptable [1]. Addiction is a chronic, relapsing brain disorder marked by obsessive drug-seeking behavior and consumption, despite adverse consequences. The alterations in the brain's reward system, stress regulation, and self-control mechanisms

persist long after the individual has stopped taking these substances [2].

The biopsychosocial model of etiology is more comprehensive and aligns better with the etiological process of substance use. The biological elements include an individual's genetic composition, gender, the presence or absence of mental illness, and characteristics associated with the substance ingested. The social elements encompass peer pressure, parental supervision, stress levels, socioeconomic status, and quality of life. The

pharmacological effects of the substances employed may primarily influence the progression of drug usage into dependency. At the same time, additional factors may also significantly affect the probability of unfavorable consequences or successful recovery from dependence resulting from drug use [3]. The beginning of substance or drug use and the progression from use to addiction are influenced by both genetic and environmental factors.

The Social Control Theory

The use of some drugs may have ties to or commitment to conventional values, norms, practices, or organizations. When the link is strong, drug use for recreational purposes is rare. The lack of social constraints that encourage conformity to societal norms is, in this perspective, the fundamental cause of drug use and most forms of aberrant behavior.

The theory states that most people don't do illegal things or deviant behaviors because they're part of or related with more traditional, mainstream groups, beliefs, and activities. Disruption to these bonds causes people to act in ways that are not expected [1].

This theory posits that drug users are attracted to drugs due to their lack of social links with mainstream, conformist groups. The absence of these connections elucidates illegal recreational drug usage. The concept posits that an individual's behavior is increasingly deemed conventional as their societal stakes, such as romantic relationships, strong familial bonds, parenthood, education, satisfying employment, and/or a career escalate [1].

Socioeconomic Status

In a study by Onah and Dele they examined three variables: locality (rural, urban, suburban), economic status (wealthy, impoverished, average), and educational status, to ascertain the correlation between demographic factors; locality, economic status, educational status, sexual behavior, and the

consumption of psychoactive substances among secondary school adolescents in Abuja Municipal Area Council (AMAC). The findings indicated that each local predictor variable had a significant correlation with the consumption of psychoactive substances [4].

Perception, Attitudes, and Beliefs

The variance in perspective is notably influenced by an individual's degree of exposure to drugs. This could profoundly influence public perception of drugs and the extent of awareness surrounding them. Many parents and adolescents with minimal or no experience with drugs tend to perceive various substances in alignment with their education or the information they have received regarding them [5]. There is a link between substance usage and perceived ease of access to substances and their adverse effects [6]. Fear of the Nigerian Police Force in Lagos State, Nigeria, did not dissuade youths who used drugs from engaging in boldness, gang activities, committing crimes, armed robbery, and vandalism despite efforts to curtail such activities [6]. Adolescents' attitudes and beliefs shape their substance use behavior. Most substance abuse begins with "gateway" drugs, such as alcohol and cigarettes. Adolescents' use of substances is influenced by their perception of the risks associated with these substances [6]. Surveys indicate that socially acceptable substances, or the so-called "gateway drugs," like alcohol and tobacco, are commonly used and often lead to the use of illegal substances [7].

Several factors, including cultural norms, peer pressure, and the media, influence Nigerian people's perceptions and attitudes toward substance use. While alcohol consumption is often seen as a gateway to social acceptance, drug use has negative effects on young people, such as homelessness and criminal behavior [8]. Peer pressure plays a significant role in adolescent drug use, as young individuals are in a vulnerable stage of

development and may be more prone to experimentation and struggle to assess dangers [9]. Issues like perfectionism and bullying, which affect self-worth and mental health, can be intensified by the media, especially social media [5]. Parental involvement and supervision are essential for guiding children's behavior and social interactions to reduce these influences [4]. The risk factors associated with substance use initiation and progression include individual factors, social influence, family dynamics, and the effect of social media.

A family consists of a dynamic system wherein its members engage in continuous interaction and experience perpetual transformation. The consumption of tobacco, alcohol, and illicit substances has been associated with strained and precarious familial relationships. A variety of familial dynamics, such as recurrent disputes with parents, insufficient family engagement in activities, poor communication between parents and offspring, and even the constraints imposed by guardians in their educational and protective roles, may play a significant role in the exposure to and perpetuation of precarious circumstances among adolescents [10].

Six themes have been identified as social variables contributing to substance usage: peer pressure among friends, curiosity, parental neglect, enhanced stamina, adverse neighborhood conditions, and familial hostility. Notably, three recurring themes—friends, curiosity, and parental neglect—emerged from this analysis. Three distinct motifs contributing to substance misuse were identified: booster/strength, adverse neighborhood conditions, and animosity toward family or a desire for revenge [1, 11].

Environmental Factors

The familial environment is one aspect that could potentially discourage or deter an individual from abusing drugs, according to observations. It is possible that socioeconomic circumstances will have a negative impact on

the ability of parents and legal guardians to protect their children against substance abuse. The probability that an individual may use drugs increases in the presence of risk factors such as being in a location where drugs are readily available, having a poor income, and facing challenges in accessing programs that provide knowledge on health-related issues [10].

Environmental factors also affect the type of substance used. The preferred stimulant drug varies by country and region. The Type B class, which includes cannabis-like drugs, is typically the main drug category in each nation or area. It is likely that among frequent or heavy drug users, different stimulant medications are preferred (for example, there are more past-year users of cocaine in Australia than methamphetamine, but among regular users, who consume larger overall amounts, methamphetamine dominates), because the dynamics of the drug industry and other factors are closely linked to these differences (such as norms, social context, etc.). For instance, higher use may be linked to greater availability of some stimulants at affordable prices (like cocaine in Latin America) and increased production (such as methamphetamine in Mexico) [12].

Methamphetamine, often called crystal meth, is becoming increasingly common among youth in southeastern Nigeria and is spreading rapidly, posing a potential threat to the entire country. In this region, crystal meth is colloquially known as MKPURU MMIRI, a term from the Igbo language meaning "seed of water." Mkpuru Mmiri use can lead to paranoia and hallucinations. Methamphetamine, also known as "meth," "crystal," or "ice," is a powerful stimulant with a high potential for addiction and serious health and social consequences [13].

1. Availability and Accessibility of Substance

The availability of these psychoactive substances is one of the factors cited as

contributing to the high prevalence of substance misuse in our society, the presence of substances, and the ease with which they can be sold at any point and time, the cost, the desire to fit in and the need to endure the harsh financial facts in the environment are essential factors [14].

2. Societal Norms and Perceptions

In Nigeria, alcohol consumption has a long history; the use of fermented grains known as "ogogoro" and distillates of palm wine made up most alcoholic beverages. Many religious festivals and rituals included the priests drinking elaborate amounts of alcohol and making libations. It has been demonstrated that alcohol contributed to social harmony in certain societies and many traditional Nigerian communities were known for their carnival drinking at significant social gatherings. Due to the commercial agreement with European colonialists, which resulted in the slave trade, drinking patterns and quantities drastically changed. This led to a rise in alcohol use in African nations, particularly Nigeria [4].

Research Justification

There is an increasing public health and safety concern in Abuja due to the rising rate of substance misuse among youths. Traditional, government-led, and punitive approaches are not effectively addressing this issue. The influence of social factors, especially those originating from an individual's immediate social circle and the broader community, significantly affects the likelihood that adolescents and young adults in Abuja will use psychoactive substances. This research will enhance understanding of how perception, social, and environmental factors influence psychoactive substance use in Abuja, Nigeria.

Research Objectives

1. What are the perceptions, attitudes, and beliefs regarding substance use among individuals in Abuja?

2. What are the social and environmental factors that contribute to substance use behaviors in Abuja?

Hypothesis

Hypothesis 1: H_0 Perceptions, attitudes, and beliefs will significantly influence psychoactive substance use behaviors of individuals in Abuja.

Hypothesis 2: H_0 Social and environmental factors, such as peer influence, substance availability, and societal norms, will significantly contribute to substance use behaviors in Abuja.

Methodology

The research was carried out in Abuja, the Federal Capital Territory (FCT), Nigeria.

Study Design

This is a cross-sectional community study that investigated the influence of perception, social, and environmental factors on psychoactive substance use. The study subjects ranged in age from 14 to 64 years; data were analyzed using SPSS version 26.

Study Instruments and Procedure

A multi-stage sampling method was used to administer the questionnaire, which was employed to gather quantitative data, including:

Socio-demographic Information: This section collected basic demographic data, including age, gender, marital status, educational level, occupation, and living environment.

Perception, Knowledge, Attitude, and Behavior (KAB) Section: This part examined respondents' understanding of psychoactive substances, their attitudes toward substance use, and their reported behaviors related to it. Questions were formatted with Yes/No answers and a Likert scale where suitable. The KAB questionnaire was adapted from previously validated tools used in similar settings, and its

relevance and clarity were evaluated during a pre-test phase within the Nigerian context.

Administration: The questionnaire was administered by trained research assistants through face-to-face interviews.

Inclusion and Exclusion Criteria

Inclusion Criteria: Residents aged 14 years and older who provided informed, written consent to participate in the study.

Exclusion Criteria: Individuals who were severely ill or acutely intoxicated and unable to give coherent responses.

Participants who met the eligibility criteria and provided informed consent were included in the study.

Results and Discussion

The evaluation of clinical correlations provided insights into the patterns, motivations, and perceived outcomes associated with PAS

use. Analysis revealed varied patterns of multiple PAS utilization among respondents, indicating intricate substance use behaviors. The data indicate that the age group most commonly using multiple PAS is 20 to 29 years old, with 57 cases of multiple substance use and 18 cases of single PAS use. The 30- to 39-year-old age group follows closely, with 31 respondents using multiple PAS and nine using a single PAS. Refer to Table 1. This trend shows a significant prevalence of concurrent substance use among younger adults.

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Table 1. Patterns of Psychoactive Use and Age Group Distribution

		Age Group Distribution					
		10-19years	20-29years	30-39years	40-49years	50-59years	Total
Number of substances used	Single Substance	2	18	9	5	1	35
	Multiple substance use	11	57	31	12	1	112
Total		13	75	40	17	2	147

***Most respondents are using multiple psychoactive substances especially those in the 20-29 years age group*

Alcohol is found to be the most favored substance, followed by marijuana/cannabis; refer to table 2 below. The discovery that alcohol often acts as the primary "initial and

preferred substance" carries important implications for public health, particularly in Low- and Middle-Income Countries (LMICs).

Table 2. Favorite Substance Used

Substance	Frequency	Percentage
Tobacco products	28	19.6
Alcoholic beverages	43	30.1
Marijuana/Cannabis	42	29.4

Cocaine/crack	21	14.7
Sedatives/sleeping pills	4	2.8
Pain Medication/Opioids	2	1.4
Others	3	2.1
Total	143	100.0

***Detailed overview of the currently favored substance, Alcoholic beverages emerged as the most common substance reported for both first initiation and current favorite substance.*

This poses a significant challenge, reflecting a widespread phenomenon that reveals a deeply ingrained societal relationship with alcohol, which makes prevention and treatment more difficult. Early exposure to alcohol as a psychoactive substance, especially during adolescence, can increase the likelihood of future substance use.

The beginning of alcohol use is influenced by multiple factors that change over time and differ by geographic area. The main determinants include family environment, genetic factors, mental stressors, sociocultural influences, and policies. These factors often interact. Social pathways have proven effective in better understanding the link between parental and child alcohol consumption. Concerns have grown about increased exposure to parental drinking during the COVID-19 pandemic, a period marked by more time spent together at home. The relationship may manifest indirectly through social learning

mechanisms or directly through the provision of alcohol in a familial context [15]. Cultural practices often incorporate alcohol into traditions, rituals, and social interactions, thereby reinforcing its status and complicating efforts to challenge its use without addressing established social norms. The high prevalence of alcohol as the primary and preferred substance is directly associated with a significant public health burden.

The availability and accessibility of substances also influence the extent of psychoactive substance use. The price affects drug use to some degree, as seen in increased emergency room visits following declines in cocaine prices. Additionally, removing a specific drug from the market can change which stimulant is favored; for example, in Hungary, reduced availability of heroin and amphetamines led to a shift toward injecting more readily available synthetic cathinone [12].

Table 3. Consequences of PAS Use

Consequences	Frequency	Percentage
Unable to go to work early	4	3.7
Irresponsibility towards family	22	20.4
None	29	26.9
Mental Illness/memory loss	25	23.1
Disrespect from people	13	12.0
Hangover	2	1.9
Ulcer of the stomach	4	3.7
Financial difficulty	1	0.9
Addiction	1	0.9
Setback	4	3.7
Health challenges/poor eyesight	3	2.8
Total	108	100.0

Table 4. Reasons Why People Use Psychoactive Substances

	Frequency	Percentage
Peer Pressure	40	21.7
To change their feelings	41	22.3
Poor self-Management	5	2.7
Depression	20	10.9
To feel high and above	29	15.8
For fun	26	14.1
Strained Relationship	2	1.1
Coping with stress	8	4.3
Boldness to commit a crime	5	2.7
Addiction	1	.5
Curiosity	4	2.2
Social Reasons	2	1.1
Ignorance of the dangers	1	.5
Total	184	100.0

Note: 22% of respondents reported peer influence and the need to change their feelings as the main reason why they use PAS

Peer influence and societal dynamics are key drivers of psychoactive drug and substance abuse among undergraduate students in Abuja [16]. The desire for social acceptance and fear of rejection or exclusion by peers strongly motivate many adolescents to experiment with drugs. Studies show that many students start using substances in social settings, heavily influenced by their peers and social networks [4, 17].

Furthermore, peer groups exert influence that extends beyond initial assessments. Upon initiation of drug use during adolescence, peer

groups often promote ongoing consumption, thereby increasing the likelihood of continued substance use [17]. This illustrates a dynamic interaction where a pattern is initially established through peer influence and subsequently sustained by ongoing social reinforcement. Therapies focused solely on mitigating direct peer pressure may be insufficient. It is essential to address and challenge misconceptions regarding social group norms while promoting alternative and healthier social connections [17]. Refer Table 4.

Table 5. Possible Impact of Drug Use

Impacts of Drug Use	Frequency	Percentage
Affects the relationship with family	8	2.6
Regrets/sadness	198	64.1
Health challenges/illness	73	23.6
Addiction and dependence	3	1.0
Can lead to Death	10	3.2
Brings a Negative impact on society	17	5.5
Total	309	100.0

Note: 64% acknowledge sadness and regrets about their use of psychoactive substances

A significant finding was that 29% of respondents did not recognize any consequences associated with their substance use (see table 3). This perception is crucial from a public health standpoint and necessitates extensive discussion. This may reflect insufficient awareness of health and social harms, significant denial, or the normalization of substance use in specific social contexts. This finding has significant implications for the design of effective health education and prevention campaigns, which must address these perceptual gaps. The initiation of substance use was influenced by various factors, including the desire to fit in or experiment, peer influence, depression, and stress coping mechanisms. The identified factors underscore the intricate psychosocial vulnerabilities associated with substance use in this demographic. The factors contributing to psychoactive substance use in low- and middle-income countries are deeply rooted in the social structure and economic conditions of these regions. Cultural and sociological factors can both facilitate and intensify substance use [17].

The psychosocial vulnerabilities present in low- and middle-income countries exhibit complexity and diversity. Poverty and financial instability are significant factors contributing to substance use in these regions [18, 19]. In this study, the reasons for psychoactive substance use given are peer influence and the need to change one's feelings to euphoria, constituting 21.7% and 22%, respectively (see Table 4). The feeling of sadness and regret from using substances are some of the immediate impact's participants felt from psychoactive substance use, as indicated by 64%; see table 5. This can be of treatment advantage if translated to remorse and motivation to abstain.

Attitudes and behaviors related to substance use are heavily influenced by social and cultural factors. Limited healthcare access and a lack of viable alternatives can lead to increased drug and alcohol use. Social norms and expectations are the accepted standards of behavior within a

society or group. In some cultures, substance use, especially alcohol consumption, is seen as a sign of masculinity and is socially accepted. Peer pressure greatly influences adolescents [20]. Poverty and economic challenges, such as unemployment and underemployment, greatly limit access to mental health and addiction services. The absence of positive recreational and social activities, along with engaging alternatives to substance use, often creates a void that is filled by drug and alcohol consumption. Lack of organized activities, social isolation, and limited support are key factors. Social and cultural influences interact and reinforce each other, creating a high-risk environment for individuals [15].

Hypothesis 1 (H0): The null hypothesis states that "Perceptions, attitudes, and beliefs regarding psychoactive substance use can influence the substance use behaviors of individuals in Abuja." The analysis produced a p-value of 0.785, indicating a lack of statistical significance. The findings indicate that, within the parameters of this study, perceptions, attitudes, and beliefs did not have a significant impact on substance use behaviors. Therefore, we reject the null hypothesis and adopt the alternative. This finding seems to challenge established public health knowledge and warrants a comprehensive examination.

Hypothesis 2 (H0) posits that social and environmental factors will have a significant impact on the psychoactive substance use behaviors of individuals in Abuja. The analysis yielded a p-value of 0.013, signifying statistical significance. The Nagelkerke R-squared value was 0.04. Discussion: Despite being statistically significant, the Nagelkerke R-squared value of 0.04 suggests that the social and environmental factors assessed in this study account for only 4.0% of the variance in psychoactive substance use behaviors. This finding underscores a critical nuance: although these factors are significant, they account for only a minor portion of the overall variability. This indicates that a significant amount of

variance is not accounted for by the variables in this model. Future research should aim to identify and incorporate additional psychological, genetic, or biological factors that may significantly enhance the understanding of substance use behaviors within this population.

Conclusion

Numerous social and environmental factors significantly impact the consumption of psychoactive substances in Abuja, Nigeria. This phenomenon is shaped by the interplay of individual circumstances, community dynamics, and the wider social context [21].

The study's findings on the normalization of alcohol as a gateway substance and the paradox of perception among users provide new, critical insights that transcend simple prevalence data.

Social and environmental factors are statistically significant ($p = 0.013$) but account for only 4.0% of the variance in substance use behavior (Nagelkerke $R^2 = 0.04$). This finding suggests that a significant portion of the variance remains unexplained by the measured external social and environmental variables. This is consistent with the biopsychosocial model of etiology, as discussed in the literature review of the thesis. The model suggests that an individual's risk for addiction results from a complex interaction of biological, psychological, and social factors. The low R^2 value indicates that critical biological factors, such as genetic predisposition and neurochemical responses, along with psychological factors, including personality traits, co-occurring mental health disorders, and a history of trauma, significantly influence substance use behaviors more than the external variables assessed. Subsequent research should integrate these dimensions to establish a more predictive and comprehensive model.

The result indicates that the relationship between perceptions and substance use behavior was not statistically significant ($p = 0.785$), necessitating careful interpretation. A

substantial proportion of participants in this study (29%) reported perceiving "no consequences" from their own substance use, despite a high percentage of individuals in a previously cited study being aware of negative consequences. This paradox may be viewed as a manifestation of denial or cognitive dissonance, a psychological mechanism employed by individuals to rationalize their behavior. It suggests that merely disseminating information about health risks is inadequate for altering behavior. Effective interventions must extend beyond education to address underlying psychological barriers, including denial and rationalization, in order to enhance an individual's readiness for change.

Recommendation and Future Research

Future Research Priorities

Longitudinal Studies: Future research should employ longitudinal cohort designs to track substance use trajectories from adolescence through early adulthood (ages 15-25) across multiple Nigerian regions. Such studies would illuminate the natural history of substance use disorders, identify critical transition points, and examine the long-term academic, social, and health outcomes associated with different patterns of use. A 10-year prospective study following secondary school students into university and employment would provide invaluable insights into prevention targets and intervention timing.

Explanatory Factor Research: Given that social and environmental factors explained only 4.0% of substance use variance, urgent research is needed to identify the remaining 96.0% of explanatory factors. Future studies should investigate biological markers (genetic polymorphisms affecting substance metabolism), psychological variables (personality traits, trauma history, and mental health comorbidities), and cultural factors specific to Nigerian contexts. Mixed-methods research incorporating neuroimaging, genetic

testing, and comprehensive psychological assessments could reveal novel predictive factors.

Ethical Approval and Informed Consent.

The study received ethical approval from the FCT Hospital Management Board and the Abuja Municipal Area Council (AMAC) Research Ethics Committee. All participants were given detailed information about the study's purpose, procedures, risks, and benefits before their involvement. Informed and written consent was obtained from all participants, ensuring their voluntary participation and the right to withdraw at any time without consequences. Confidentiality and anonymity were maintained throughout the study.

Conflict of Interest

None Declared by the Authors.

Data Availability

The datasets created and analyzed during the current research are raw data and are available from the author upon reasonable request. Interested scholars can find the data used in the study in institutional archives; they can receive the data as open access, upon request, to validate the findings or to encourage the reuse

of the data for secondary analysis and/or meta-studies.

Author Contributions

The first author, AUDU HM, significantly contributed to the conception, design, and drafting of the manuscript under the guidance of Professor Zubairu Ilyasu, a prominent public health expert, to ensure accuracy and integrity. The last two authors, Dr. Mohammed Sambo and Dr. Oyelowo, were responsible for data collection and analysis of the research results, with Dr. Mohammed Sambo leading the data collection and Dr. Oyelowo leading the data analysis.

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