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Research Article

Determinants of Substance Abuse Among Youth in Kanwuri Area of Sokoto Metropolis

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ABSTRACT

Substance abuse is a growing public health concern worldwide, affecting millions of people, particularly youth. In Nigeria, the determinants of substance abuse among youth are complex and multifaceted. This study aimed to investigate the determinants of substance abuse among youth in Kanwuri area of Sokoto state. A cross-sectional survey design was used to collect data from 225 youth aged 15-24 years, selected from a target population of 1500 using systematic random sampling. A structured questionnaire was used to collect data on socio-demographic characteristics, psychological factors, family factors, and peer factors associated with substance abuse. The data was analyzed using descriptive and inferential statistics to identify the determinants of substance abuse among youth. The results showed that socio-demographic factors, psychological factors, family factors, and peer factors were significantly associated with substance abuse among youth in Kanwuri area of Sokoto state. Specifically, the study found that socio-demographic factors such as age, sex, and occupation were significant determinants of substance abuse. Psychological factors such as stress, anxiety, and depression were also found to contribute to substance abuse. Additionally, family factors such as family structure and parental involvement were significant determinants of substance abuse. Finally, peer factors such as peer pressure and social influence were also found to play a role in substance abuse. In conclusion, the study found that the determinants of substance abuse among youth in Kanwuri area of Sokoto metropolis are complex and multifaceted.

Keywords: Determinants; Hard drugs; Peer pressure; Substance abuse; Youth

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INTRODUCTION

Substance abuse is a pressing public health issue that predominantly affects adolescents and young adults globally, with profound implications for individuals and communities. In Kanwuri, a locality within Sokoto metropolis in Nigeria, this problem is particularly severe. The researcher has personally observed that

youth in this area engage in substance abuse at alarming rates, resulting in abnormal behaviors that have earned them the nickname "Area boys" a term denoting youth who deviate from societal norms and cultural expectations. This local crisis reflects a broader global and regional challenge, necessitating targeted research and intervention to address its

multifaceted impacts on health, crime, and economic stability (Adebiyi *et al.*, 2018).

Substance abuse poses significant health risks, affecting both physical and mental well-being. It encompasses the harmful use of psychoactive substances such as alcohol, tobacco, cannabis, and illicit drugs, often leading to dependence and a host of associated disorders (Adejimi, 2021). In sub-Saharan Africa, the prevalence of substance use among adolescents is estimated at 41.6%, with commonly abused substances including alcohol, tobacco, cannabis, and khat (Sandra, *et al.*, 2021). In Nigeria, studies indicate that a substantial proportion of youth are exposed to these substances, despite possessing limited knowledge of their detrimental effects (Ugochukwu, 2020). Specific to Sokoto, research has identified a wide range of abused substances among youth, including cigarettes, cannabis, alcohol, inhalants, tranquilizers, opiates, and hallucinogens (Ugochukwu, 2020). These substances contribute to mental health issues such as depression and anxiety, infectious diseases like HIV/AIDS and hepatitis (often due to needle sharing), and non-communicable diseases such as liver cirrhosis from chronic alcohol use (James *et al.*, 2015). In Kanwuri, the high incidence of substance abuse among youth amplifies these health concerns, placing additional strain on an already resource-limited healthcare system.

In Nigeria, drug use is a menace especially among youths.

According to United Nations Office on Drugs and Crime (UNODC), there were 14.3 million drug users in Nigeria in 2018 while 3 million Nigerians suffer from drug use Disorders (UNDOC, 2022). This is almost times three the international prevalence of substance use. The report also shows that there are at least 11million Cannabis users in Nigeria. A scoping review by Jatau *et al.* (2021), revealed a prevalence of drug abuse to be as high as 20-40% and 20.9% among Nigerian youths and students respectively. The UNODC also revealed that 1 in 7 Nigerians aged 15-64 years are drug abusers, 1 in 4 drug abusers are women and 1 in 5 drug users suffer from the consequences of the drugs (NDLEA, 2016). Data from the National Drug Law Enforcement Agency (NDLEA) shows that all categories of illicit drugs are widely abused in all the states of Nigeria including Sokoto state (NDLEA, 2016).

The annual report by the NDLEA revealed that 9444 suspected drugs.

offenders made up of 8,535 males and 909 females were apprehended in 2019 alone (NDLEA, 2019).

Thus, we embark on this research to assess the determinants of substance use among youths in Kanwuri area of Sokoto metropolis, Sokoto state - Nigeria, because of its socio-economic impacts. Most of the past Nigerian studies on substance abuse were conducted among adolescents and youths in secondary schools and higher institutions (Idowu *et al.*, 2018; Ogunsola & Fatusi, 2017). Only a few studies have been community-based youths. Some studies have also indicated rural-urban variations in the pattern of substance abuse among Nigerian adolescents (Azuike, 2016; Ojule, 2022).

Despite the severity of substance abuse in Kanwuri, there is a critical gap in localized research. While national and regional studies provide valuable insights—such as the 41.6% prevalence rate in sub-Saharan Africa and the diversity of substances abused in Sokoto—they do not fully capture the specific dynamics of Kanwuri. Factors such as the predominant substances used, the age at which abuse begins, and cultural attitudes toward substance use remain underexplored in this context. For instance, a study in Sokoto by Sarkingobir & Dikko (2018) revealed differences in substance abuse patterns between in-school and out-of-school youth, suggesting demographic and environmental influences that may vary within Kanwuri. The absence of tailored data hampers the development of effective, context-specific interventions, making the researcher's proposed investigation into the determinants of substance abuse among Kanwuri youth both timely and essential.

MATERIALS AND METHODS

Description of the study area

The study was carried out in Kanwuri community of Sokoto, Sokoto North LGA, Sokoto State in the North Western part of Nigeria. Sokoto North LGA has a projected population of approximately 872,000 (NBS, 2020). The majority of the population is of Hausa ethnic group, but Yoruba and Igbos also inhabit the community. The predominant religion is Islam and farming is the predominant occupation, while others engage in petty trading and artisanship.

Kanwuri community has couples of area boys and drug peddlers who also sold these hard drugs for willing users.

Study Design

A cross-sectional design was used to collect data from a sample of youth at a single point in time.

Inclusion criteria

Those included in the study were all youths aged 15-24 years who gave their consent and were permanent residents of Kanwuri community, Sokoto State.

Exclusion criteria

All residents who were outside the stated age bracket and those lived in the in not more than six months as well as the who were critically ill and those that lived in other area other than the study area were all excluded in the study.

Sample Size Calculation

Minimum sample size for the study was calculated using Leslie Kish formula $n = (Z^2 * p * d) / e^2$ for a population which is less than 10,000. A standard normal deviate at 95% confidence limit was taken as 1.96. Based on findings from a Nigerian study, we envisaged that 26.3% of our respondents may have been abusing one substance or another (Sarkingobir, 2023). The margin of error was set at 5%. A 10% non-response rate was assumed and appropriate corrections made. Possible cluster effect was also corrected by multiplying the estimated sample size by 1.3. Hence a minimum sample size of 250 was estimated but 225 youths participated in the study.

Sampling Method

A multi stage sampling technique was used to select the sample. The population was initially categorized in to age groups (strata) as follows:

1. Youth aged 10-14
2. Youth aged 15-19
3. Youth aged 20-24

From each stratum, a random sample of youth was selected using a systematic sampling technique until the all-sample size was covered.

Data Collection Method and Instrument

Data were collected using an interviewer-administered, semi-structured questionnaire adapted from the UNODC Global Assessment Programme on Drug Use Toolkit (UNODC, 2023).

The questionnaire collected information on socio-demographic characteristics of respondents, knowledge about substance abuse, attitude towards substance abuse, prevalence and patterns of

substance abuse. It was translated to Hausa language for our respondents who preferred communicating in their local language. Back translation into English language was carried out by linguistic expert, to preserve the original meanings of the questions asked.

Data were collected by a group of 12 research assistants who were trained and supervised on data collection by the principal investigator.

Pre-testing

The questionnaire was pretested among forty youths in Alkanchi, Sokoto state, (a community different from the ones used for the main study) selected using convenience sampling method. The exercise helped in assessing the appropriateness of the questions in eliciting the desired responses from our respondents. Ambiguous questions were either rephrased or removed entirely in line with our study objectives.

Validity of the instrument

Content validity was used to measure the validity of the instruments; it was presented to the research supervisor for review and three other research experts, to ascertain the content validity index of the questionnaire items. The content validity index was determined to be 0.8, indicating validity. This ensures that all respondents comprehend the items on the questionnaire, thereby minimizing misunderstandings and ensuring that their responses align with the research questions they are intended to assess

Reliability of the instrument

Test and retest of the instrument was done to determine the consistency and stability. Test re-test of the instrument was conducted using 10% of the respondents. The instrument was found to be adequate and reliable for the study after analyzed data from the test re-test. Cronbach's Alpha of 0.745 was obtained, which is greater than 0.7 indicating that the reliability of the test instrument was strong enough.

Data Analysis

All data analysis was performed using International Business Machines corporation's (IBM) Statistical Package for the Social Sciences (SPSS) version 20. Categorical data were summarized using percentages and presented using Tables and Charts. Similarly, continuous data were summarized using mean and standard deviation (SD). At the bi-variate level, Chi-Squared Test was used to compare the relationships

between categorical variables. A binary Logistic Regression model was built at the multivariate level. Confidence Intervals (CIs) and Adjusted Odd Ratio (AOR) were obtained to examine factors which were significantly determining substance abuse status of our respondents and the level of statistical significance was set at $p < 0.05$.

RESULTS

Among the 225 respondents, 170 (75.5%) were males and 55 (24.5%) were females. The higher percentage of the respondents 44.4% belonged to the age group 10-15 years. Majority 218 (58%) were Hausas. All the respondents have received a formal education with 103 (45.8%) have attended primary schools and 122 (54.2%) secondary schools. Of the respondents 170 (75.5%) were singles with the 55 (24.5%) of the respondents were married and the respondents in the study area were predominantly Muslims as stated in the table 1. The identified factors contributing to substances used are ages, marital status, average monthly income and tribe. While the gender, level of education and occupation has no contribution to substances abuse among the youth.

Of the 225 respondents 90 (40%) consumed solution while 26 (11.6%) smoke tobacco as highlighted in the table 2. Reasons for the first attempt at the substances was curiosity (19.4%) in present study (Figure 1). Out of 225 youth in this study, 220 (90%) have experienced negative of health consequences of substance abuse (Figure 2).

Table 1. Demographic information of the respondents

Variables	Frequency (n=225)	Percentage (%)
Gender		
Male	170	75.5
Female	55	24.5
Age		
10 – 15	100	44.44
16 – 20	80	35.6
21 – 30	45	20.0
Literacy level		
Illiterate	0	0
Primary	103	45.8
Secondary	122	54.2
Tertiary	0	0
Marital status		
Single	170	75.5
Married	55	24.5
Income level (average monthly)		
Less than 10,000	73	32.4

The distribution of the respondents based on substance abuse in this study indicated that 11.6% abuse tobacco, 35.6% cannabis, 40% syrup solution and 10% reported other substances, details in table 2. There is a statistically significant relationship between substance abuse and psychological parameters with stress having ($\chi^2 = 53.94$, $p < 0.001$), anxiety ($\chi^2 = 53.84$, $p < 0.05$), pressure from home ($\chi^2 = 9.76$, $p < 0.002$) and accessibility ($\chi^2 = 61.35$, $p < 0.0001$).

This study identified key environmental determinants of substance abuse among youth, including easy access to substances, the absence of treatment centers, and strong peer influence. Specifically, the study found that 44% of respondents reported easy access to substances, 10% found it very easy, and 100% had been offered substances by friends or peers. Additionally, 100% of respondents reported no substance abuse treatment centers in the area, while 98.2% acknowledged substance use as a community problem, yet only 12% had participated in prevention programs. This comprehensive review expands on these findings by comparing them with relevant studies from across Nigeria, aiming to provide a detailed understanding of the environmental factors contributing to substance abuse and to propose evidence-based interventions. Details of the environmental factors leading to substance abuse in Kanwuri Area of Sokoto state is depicted in the Table 7.

10,000 – 20,000	102	45.3
21,000 – 30,000	50	22.3
Religion		
Islam	225	100
Christianity	0	0
Tribe		
Hausa	218	96.9
Yoruba	7	3.1

Table 2. Distribution based on substance abuse (N=225)

Substance abused	Frequency	Percentage (%)
Tobacco	26	11.6
Cannabis	80	35.6
Solution	90	40
Alcohol	10	4.4
Others	20	8.4
Total	225	100

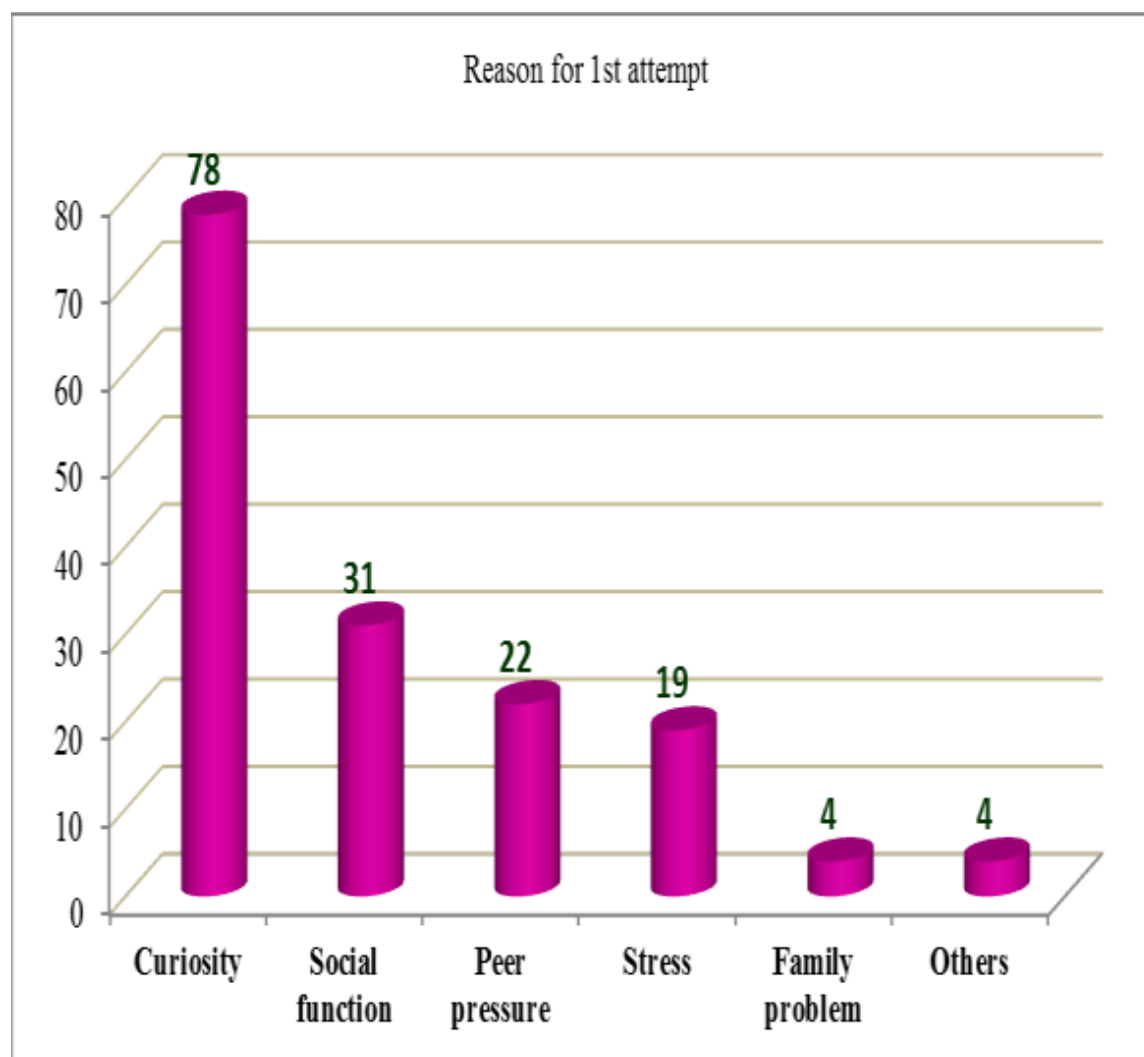


Figure 1. Reason for the first attempt of substance abuse

Experiencing Negative consequence

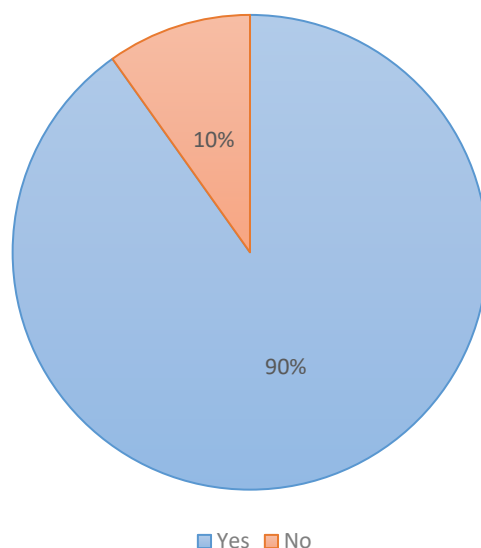


Figure 2. respondent ever experienced negative effect from substance abuse

Table 3. Relationship psychological factors and substance abuse

Variable	Tobacco	Others	P Value	X ²	DF
Stress	12	189	0.001*	53.94	1
Anxiety	10	183	0.05*	53.84	1
Pressure from home	26	81	0.002*	9.76	1
Accessibility	26	192	0.0001*	61.35	1

*Statistical significance at $P \leq 0.05$

Table 4. Environmental determinants of substance abuse

Statement	Correct responses (%) (n = 225)
1. Do living in an area with high crime rate?	10 (4.4)
2. Are there substance abuse treatment center in area?	0 (0)
3. How easy is it for you to access substance in your area?	
Very Easy	23 (10.2)
Easy	100 (44.4)
Difficult	82 (36.4)
Very difficult	20 (8.0)
4. Have you ever been offered substance by friends or peers?	225 (100)
5. Do you think substance use; is a problem in your community?	221 (98.2)
6. Have you participated in any substance abuse prevention programs?	27 (12)

DISCUSSIONS

Research across Nigeria indicates varying prevalence rates of substance abuse among youth, influenced by regional and demographic factors. For instance, a study in Ejigbo, Osun State, found that 12.3% of youths aged 15-24 had engaged in substance abuse, with commonly used substances including alcohol, Shisha, and Tramadol (Idowu *et al.*, 2023), this finding

is in tandem with the finding of this study but slightly higher with 24%. The sample size was 225, with a 98.3% response rate, and the mean age was 19.01 ± 4.18 years, with 89.0% having good knowledge and 96.0% a negative attitude towards substance abuse. In contrast, a scoping review reported prevalence rates of 20-40% among students and youths, highlighting a higher burden in educational settings

(Jatau *et al.*, 2021) this notion supports the finding this study where most the youth in this study (80%) were students.

In Sokoto State, where Kanwuri Area is located, a study on substance abuse among in-school and out-of-school youth found that both groups engage in substance abuse, with commonly used substances including cigarette, cannabis, alcohol, inhalants, tranquilizers, opiates, and hallucinogens (Sarkingobir & Dikko, 2020). The study noted that 93% of respondents were males, with an age range mostly 18-22 years, and 80% of in-school youth were at senior secondary classes, while 46.7% of out-of-school youth left school after primary education. While the exact prevalence in Kanwuri Area is not specified, the high percentage of respondents who find it easy to access substances (44%) and have been offered substances by peers (100%) suggests a significant level of substance abuse. The types of substances abused in Kanwuri Area are not detailed, but given its proximity to Sokoto, it is likely that similar substances are prevalent, potentially including codeine syrup and tramadol, as noted in national trends (Nabofa, 2021).

Easy access to substances is a recurring theme in studies on youth substance abuse in Nigeria, and it is a critical finding in Kanwuri Area, where 44% of respondents reported easy access, and 10% found it very easy. This aligns with national trends, where drugs like codeine syrup, tramadol, and rohypnol are increasingly abused due to their availability over the counter at medicine stores (Nabofa, 2021). Table 2 from this study shows the frequency of drugs empirically identified, with alcohol (12 studies), cannabis/bhang/Indian hemp or marijuana (10 studies), and tobacco (7 studies) being the most abused, indicating high accessibility and impact. Newer drugs like tramadol, rohypnol, and codeine, though less frequently reported (1–2 studies each), are noted as emerging trends due to easy access, potentially underreported due to limitations in the WHO Student Drug Use Questionnaire not adapted for Nigeria.

The absence of substance abuse treatment centers in Kanwuri Area is another critical environmental factor, with all 225 respondents reporting no local facilities. This lack of treatment options is a common issue in rural Nigeria, as seen in studies from Ejigbo, where the absence of adequate treatment facilities was

noted as a barrier to addressing substance abuse (Idowu *et al.*, 2023). Similarly, a study in Ogbomoso, Oyo State, highlighted the need for more treatment facilities to support youth struggling with substance abuse (Idowu *et al.*, 2018). This gap likely exacerbates dependency and limits recovery opportunities, particularly in rural areas like Kanwuri, where access to healthcare services is already limited.

Peer influence is a dominant factor in the initiation and continuation of substance abuse among youth in Nigeria, and it is particularly pronounced in Kanwuri Area, where 100% of respondents reported being offered substances by friends or peers. This finding is consistent with other studies. For example, in Ejigbo, 82.4% of substance abusers were introduced to drugs by friends, with reasons including "just to have fun" (37.3%), "to be more active" (30.5%), and "because my friends are taking it" (27.1%) (Idowu *et al.*, 2023). In Sokoto, both in-school and out-of-school youth cited social/peer pressure as a primary reason for substance abuse, with out-of-school youth introduced by friends (38%) and in-school youth by drug pushers 22% and then friends 16% (Sarkingobir & Dikko, 2020).

These effects underscore the pervasive impact of peer influence and the need for interventions that address social dynamics. Additionally, a study on substance uses among adolescent high school students in Nigeria found that parental substance abuse, marital status, and absence of parental care influence adolescent drug use and psychological health, suggesting that family dynamics also play a significant role (Elemile, 2023).

In Kanwuri Area, 98.2% of respondents acknowledged that substance use is a problem in their community, yet only 12% had participated in prevention programs. This gap between awareness and action is echoed in other studies. For instance, in Ejigbo, while 96.0% of youths had a negative attitude towards substance abuse, 12.3% still engaged in it, suggesting that awareness alone is not sufficient to prevent substance abuse (Idowu *et al.*, 2023). The determinants of substance abuse in Ejigbo included age (AOR=3.11; 95%CI=1.67-5.24 for 20-24 vs. 15-19), gender (AOR=1.87; 95%CI=1.53-9.25 for males vs. females), attitude (AOR=5.90; 95%CI=3.45-10.23 for positive vs. negative), and marital status (AOR=3.27; 95%CI=2.71-7.24 for single vs. married), all statistically significant at $p < 0.05$.

Studies by Gurung & Kaphle (2021) and Idowu *et al.* (2023) recommend comprehensive prevention programs that include education, peer support, and community involvement. For example, the Sokoto study suggested measures such as parental involvement, peer group educators, and national campaigns, with protection measures including parents not exposing children to drug abuse (38 for OSY, 10 for ISY) and national campaigns (14 for OSY, 44 for ISY) (Sarkingobir & Dikko, 2020). Implementing similar strategies in Kanwuri Area could help bridge the gap between awareness and action, particularly by increasing participation in prevention programs and addressing the lack of local facilities.

Cultural and socio-economic factors play a significant role in substance abuse among youth in Nigeria, particularly in rural areas like Kanwuri. Factors such as poverty, unemployment, and limited educational opportunities may contribute to higher rates of substance abuse. For instance, in Sokoto, 46.7% of out-of-school youth left school after primary education, and 26.7% never attended school, suggesting a link between educational attainment and substance abuse (Sarkingobir & Dikko, 2020). Additionally, traditional practices and cultural norms might influence attitudes towards substance use, with some communities accepting certain substances in social gatherings. A study on substance abuse among youths in Nigeria emphasized the need for interventions that address both individual and community-level factors, including socio-economic conditions (Elemile, 2023).

In comparison, urban areas might have different dynamics, with higher availability of substances and more exposure to global trends in drug use. However, the core issues of easy access, peer influence, and lack of treatment facilities are common across both rural and urban settings, as seen in studies from Lagos and Oyo, where state-specific data showed drugs like caffeine, cannabis, and cocaine being abused (Nabofa, 2021).

CONCLUSION

The findings from this study align with broader trends in Nigeria regarding the environmental determinants of substance abuse among youth. Easy access to substances, the absence of treatment centers, and strong peer influence are critical factors that need to be addressed through targeted interventions. Comparative studies from other parts of Nigeria, such

as Ejigbo and Sokoto, provide valuable insights into the prevalence, patterns, and determinants of substance abuse, highlighting the need for comprehensive strategies that include improving access to treatment, enhancing prevention programs, and addressing peer influence. In the Kanwuri Area, establishing substance abuse treatment centers, increasing participation in prevention programs, and involving community leaders and parents in awareness campaigns could be effective steps towards reducing substance abuse among youth. Further research is needed to understand the specific cultural and socio-economic factors that influence substance use in this region, ensuring that interventions are tailored to the local context. By learning from successful models in other parts of Nigeria and adapting them to the unique needs of the Kanwuri Area, it is possible to make significant strides in combating substance abuse among youth and improving their overall well-being.

REFERENCES

- Azuike EC. Substance abuse among secondary school students in an urban and rural local government area of Anambra state, Nigeria. *International journal for medical science*. 2016;2(5):12-30.
- Elemile, M. (2021). Substance abuse among youths in Nigeria: implication for community and national health. *Journal of forensic nursing* vol 1, issue 1.
- Idowu A, Aremu AO, Akanbi IM, Esegbe G, Adewale V, Awubite L, . . . E, O. (2023). Prevalence, pattern and determinants of substance abuse among youths in a rural community of Osun State, Southwest Nigeria. *Afri Health Sci*, 23(4). 563-574. <https://dx.doi.org/10.4314/ahs.v23i4.59>
- Idowu A, Aremu AO, Olumide A, Ogunlaja AO. Substance abuse among students in selected secondary
- Idowu, A., Aremu, A.O., Akanbi, I.M, Esegbe, G., Adewale, V, *et al.* (2023). Prevalence, pattern and determinants of substance abuse among youths in a rural community of Osun state, South west Nigeria. *Afr. Health Sci*. 23(4): 563-574.
- Jatau AI, Sha'aban A, Gulma KA, Shitu Z, Khalid GM, Isa A, *et al.* The Burden of Drug Abuse in Nigeria: A Scoping Review of Epidemiological Studies and Drug Laws. *Public Health Rev*. 2021 Jan 29; 42:1603960. DOI: 10.3389/phrs.2021.1603960

- Jatau AI, Sha'aban A, Gulma KA, Shitu Z, Khalid GM, Isa A, *et al.* The Burden of Drug Abuse in Nigeria: A Scoping Review of Epidemiological Studies and Drug Laws. *Public Health Rev.* 2021 Jan 29; 42:1603960. DOI: 10.3389/phrs.2021.1603960
- Jatau, A. I., Sha'aban, A., Gulma, K. A., Shitu, Z., Khalid, G. M., Isa, A., Wada, A. S., & Mustapha, M. (2021). The burden of drug abuse in Nigeria: A scoping review of epidemiological studies
- Nabofa, O.E. (2021). New trend of drugs abused by secondary schools students in Nigeria. *Afr. Health Sci.* 21(3)1460-1466. Doi:10.4314/ahs.v21i3.57.
- National Bureau of Statistics. (2019). Nigerian Demographic and Health Survey 2018.
- National Drug Law Enforcement Agency (NDLEA). (2018). Drug use in Nigeria 2018. United Nations Office on Drugs and Crime.
- National Drug Law Enforcement Agency. Federal Republic of Nigeria. 2016 Annual Report. 2016;83. [cited 2022 Nov 4]. Available from: <https://ndlea.gov.ng>
- National Drug Law Enforcement Agency. Federal Republic of Nigeria. 2016 Annual Report. 2016;83. [cited 2022 Nov 4]. Available from: <https://ndlea.gov.ng>
- Ogunsola OO, Fatusi AO. Risk and protective factors for adolescent substance use: A comparative study of secondary school students in rural and urban areas of Osun State, Nigeria. *Int J Adolesc Med Health.* 2017;29(3). Doi: 10.1515/ijamh-2015-0096.
- Ojule IN, Te-Erebe. Prevalence and predictors of substance use disorder among urban and rural secondary school students of Khana, River's state, Nigeria. *Eur J Public Heal Stud.* 2022;5(2). DOI: <http://dx.doi.org/10.46827/ejphs.v5i2.128>
- Sarkingobir, Y., & Dikko, M. (2020). Substance abuse among in-school and out-of-school youth in Sokoto, Northwestern Nigeria. *Journal of Applied Sciences and Environmental Management*, 24(9), 1545-1550.
- schools of an urban community of Oyo-state, South West Nigeria: Implication for policy action. *Afr Health Sci.* 2018 Sep 1;18(3):776–85
- United Nations Office for Drugs and Crimes (UNODC). Global Assessment Programme on Drug Abuse.[cited 2023 April 2]. Available from: http://www.unodc.org>gap_gap_module3
- United Nations Office on Drugs and Crime (UNODC). (2021). World drug report 2021. United Nations.
- United Nations Office on Drugs and Crime. (2020). World drug report 2020. United Nations Publication
- UNODC. Drug Use in Nigeria; Executive Summary. 2019. [cited 2022 Nov4]. Available from: <https://www.unodc.org>.