Factors Associated with Drug Abuse among Adolescents; A Cross-Sectional Study in Army Day Secondary School Birnin Kebbi, Nigeria.

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ABSTRACT

Background: Drug abuse and use are substantial public health concerns, particularly among adolescents, who are frequently put at risk due to their curiosity, resulting in negative behavioral, physical, social, and economic repercussions. However, there is a lack of comprehensive research on the prevalence and associated determinants of drug abuse and use (tobacco, alcohol, and marijuana) among school-age adolescents in a statewide sample from northern Nigeria. This study looked into the factors that contribute to drug abuse and use, as well as their impact on school-aged adolescents at Army Day Secondary School in Birnin-Kebbi, Nigeria.

Methods: Data for the study were acquired from a self-administered questionnaire administered to senior students in both the boys' and girls' arms of the institution. A Youth Risk Behavior Surveillance System (YRBSS), a conventional survey designed to assess cigarette smoking, alcohol consumption, and marijuana usage was used in generating data on drug abuse among the respondents.

Results: Three variables were significantly associated with drug abuse/use class level (AOR = 2.272, 95% CI: 1.249, 4.133, p = 0.007; AOR = 2.252, 95% CI: 1.229, 4.127, p = 0.009), gender (AOR = 1.840, 95% CI: 1.164, 2.907, p = 0.009), and family types (AOR = 0.581, 95% CI: 0.361, 0.933, p = 0.025) for current cigarette smoking, alcohol, and marijuana. The majority of respondents (47–60%) were aware of drug abuse or use, with females having a 52.4% positive attitude as opposed to males (47%). Other variables, such as age, religion, parent education, and who the respondents reside with, have been found to have no significant relationship with adolescent drug use or usage.

Conclusion: There is a need for comprehensive public health strategies that go beyond school-based psycho-behavioral interventions to address the considerable risk factors for substance use among our secondary school students.

Keywords: Tobacco, Alcohol, Marijuana, drug abuse/use, Adolescents,

INTRODUCTION

Background of the Study

Adolescence is a pivotal phase of life when people make important decisions and adopt lifestyle changes that have a substantial impact on their future health (Birai, 2022; Mallow, 2020). Furthermore, it is characterized by risk-taking and experimenting behaviors, which contribute significantly to the tendency to use psychoactive substances (Adetiloye & Adedapo Abel, 2022). Drug abuse is described as the unsafe use of psychoactive substances, such as alcohol and illegal drugs, in a way that is contrary to accepted medical practice (Ikoh et al., 2019; Pradesh, 2023). Its abuse can occasionally erode moral limitations and promote deviant or illegal behavior, particularly among youths (Bunu et al., 2023). Drug addiction has sparked global academic and policy interest as a major public health concern with rising morbidity and mortality, and its incidence has risen in recent decades

(Mishra, 2023; UNODC, 2018). To address the issue of drug abuse, context-specific information on the underlying factors is required to develop effective interventions (Dykes et al., 2021; Nath et al., 2022).

Data available from the World Health Organization revealed that globally, 1 in every 10 girls and 1 in every 5 boys, aged 13 to 15 years, use tobacco (Connolly et al., 2024). Similarly, WHO also reported that about two (2) billion people consume alcohol, 1.3 billion smoke cigarettes, and 185 million use other substances (Nawi et al., 2021; Sivapuram et al., 2020). Moreover, harmful habits such as smoking, drinking, and illegal drug/substance usually begin during the adolescence life stage; hence, they are strongly linked to increased morbidity and death posing significant public health issues (UNODC, 2018).

Because of its multicultural makeup, Nigeria views drug abuse/use in a different perspective. For example, most societies in the Northern area do not regard the use of various drugs, such as cigarette smoking, that do not cause overt behavioral changes to constitute drug addiction, whereas in the Southern region, alcohol consumption is considered acceptable social norm especially during festivities (Haruna et al., 2018; Jatau et al., 2021). The first large-scale, statewide national drug use study in Nigeria, titled "Drug Use in Nigeria," found that one in every seven people (aged 15 to 64) had used a substance in the previous year (UNODC, 2018). Furthermore, one in every five people who have taken drugs in the last year is suffering from a drug-related disorder. The survey also indicated that drug abuse has been linked to a wide range of criminal acts, including theft, burglary, sex work, and shoplifting (Muhia, 2021; UNODC, 2018).

Obarisiagbon and Ajayi (2019) discovered that drug addiction was a significant predictor of risky sexual behavior among youth in Benin City, Nigeria. In another research conducted in Lagos, Nigeria, Nigerian adolescents have been reported to have inadequate knowledge of the negative effects of substance usage such as tobacco, alcohol, opioids, cannabis, amphetamines, and benzodiazepines (Odukoya et al., 2013). Many of these adolescents subsequently turn to more addictive substances (Degenhardt et al., 2020).

Similarly, a study on the burden of drug abuse in Nigeria found that 20–40% of students and 20.9% of youths abuse drugs (Ogunsola 2020). Senior secondary students are particularly vulnerable to drug use since they live away from their parents. And their conduct is defined by risk-taking and experimenting, which essentially account for their proclivity to utilize psychoactive substances (Madaki, 2023). Unfortunately, adolescents and young people may underestimate the negative consequences of these unhealthy lifestyles (Enamhe, 2021). These unpleasant actions are widespread in Nigeria and across Africa, causing great concern among the authorities and the general population (UNODC, 2018).

Many factors have been recognized as contributing to adolescent drug usage, including experimental curiosity, peer pressure, low socioeconomic conditions at home, and a need for more energy for daily tasks (Muhia 2021). Adolescents, notably students who hawk for their parents, are more susceptible to drug use. While many of them will attempt to quit or continue to use it on occasion without incident, others are likely to progress to more harmful substances, inflicting major harm to themselves and society as a whole (World Drug Report, 2018).

Nationally representative data on substance use among adolescents and youths is sparse, if not nonexistent, in Nigeria. As a result, the goal of this study was to add to the existing literature on drug abuse knowledge levels, their attitude as well as factors that influence their usage among Nigerian adolescents in senior secondary schools.

MATERIAL AND METHODS

Study designs, settings and participants.

A descriptive cross-sectional study was undertaken to look at the factors that influence drug addiction among adolescent students. The study was carried out between January and March 2024 among 380 senior secondary (SS1 to SS3) students at the Army Day Secondary School in Birnin Kebbi. The school was located in an army barrack called Dukku Barrak, which was established in 1987 with the objective of providing education to the children of officers and soldiers. However, pupils of other paramilitary personnel and civilians make up almost 40% of the total population. The school is coeducational, for both male and female students. However, each run as an independent school in conformity with traditional northern Nigerian culture and religious beliefs.

Data collection instruments

The study used a self-administered questionnaires to collect the data. The structured of the questionnaire was derived from earlier research that used the student drug use questionnaire, which has been validated in Nigeria, and was modified/adapted for easier local use (Odukoya et al. 2018). The questionnaire contained three sections:

1. Section A

This section includes the socio-demographic information on the respondents, such as age, gender, and family size, as well as their parents' socioeconomic status, like parents' occupation, level of education, and marital status.

2. Section B

Cigarettes, inhalants, cannabis, and alcohol are some of the most often abused drugs among adolescents. This section used the Youth Risk Behavior Surveillance System (YRBSS), a conventional survey designed to assess cigarette smoking, alcohol consumption, and marijuana usage among adolescents. Using categorical data, participants who replied "yes" to a cigarette smoking question were labeled smokers, whereas those who answered 'no' were designated nonsmokers. Similarly, those who answered "yes" or said they had tried alcohol for a day were regarded as ever-drinkers, while those who said 'no' were never-drinkers. Participants who said yes to ever testing or smoking marijuana were considered constant users, while those who said no were never users.

3. Section C

Finally, part C includes questions about substance abuse/use knowledge/awareness, attitudes toward substance abuse, and the role of schools and communities in drug addiction and prevention activities. There were four knowledge questions, each evaluated on a five-point scale (1-5) (strongly disagree to strongly agree), with a maximum score of 20 points. Similarly, respondents' attitudes were examined using four questions on a comparable scale with a maximum score of 20 points. The school/community preventive measures were assessed using four questions on a similar scale, with a maximum score of 20 points.

Experts from the College of Health Science assessed the questionnaire's content validity, and 15 participants completed and submitted a form designed for face validity during the pilot phase, with 93.3% agreeing that all of the questions were appropriate.

Sample size determination and sampling procedure

The minimum sample size was determined using the Cochran formula ($n=Z^2{\times}p{\times}q/d^2$), with a standard normal deviation z at a 95% confidence interval of 1.96, prevalence p from a pre-study estimate of the proportion of illicit drug use in secondary schools = 50.7% = 0.5070[4], and an error of precision of ± 5% (0.05). q is the estimated proportion of subjects without an attribute, which is equal to 1-p = 0.493. As a result, the computed minimum sample size was 384. The risk of attrition during the study necessitated an additional 10%, bringing the questionnaire size to 422. However, only 380 (90.0%) of students were able to fill out and return the completed questionnaire.

Eligible students were selected from the two arm schools of male and female in the various classes using a stratified, simple random selection process. The school classes were numbered from 1 to N using a class register list of every student who had attended the school in the previous six months prior to the start of the study. Each stratum (class) was assigned a computer-generated random number, with the size based on the student population. Inclusion criteria include being a student with a 70% attendance rate, being willing to participate with written agreement, and being able to read and write in English. While the exclusion criteria do not wish to participate in the study at any time. Questionnaires were administered in class during regular school hours, with informed parental and individual consent. Participants were told about the study's confidentiality and provided free permission. It took roughly 20 minutes to do each questionnaire. Completed coded questions were collected and recoded promptly.

Data processing and analysis

The data was cleaned, coded and analysed using the statistical software for social sciences (SPSS), version 27.0. The Kolmogorov-Smirnova test was used to determine whether the data had a normal distribution. The median and interquartile range (IQR) were used to depict non-normally distributed data, whereas the mean and standard deviation (SD) were employed to display normally distributed data. The categorical data were presented using frequencies and percentages.

Chi square and Fisher exact tests were employed to examine the connection between variables in categorical data. A simple logistic regression was used to determine each factor associated with the amount of substance abuse or use. Those factors with less than $p<0.25$ were further tested with multiple logistic regression to determine the factors associated with the level of drug abuse or use.

T-tests were used to compare the means (SD) of knowledge, attitude and preventive measures in each of the categories of substance abused/used. P values < 0.05 were considered statistically significant. In addition, after controlling for age, class level and gender, we calculated adjusted OR and 95% confidence intervals to establish the association between each of the categories.

Ethical approval and consent to participants

The Ministry of Education and X-University (registration number xxx-2024-185) both provided ethical approval. All participants provided informed written consent. Written agreement for participation was obtained from at least one parent or guardian of students under the age of 18 by administering a shortened and customized version of the study ethics protocol. In addition, formal consent was secured from students over the age of 18. All participants, regardless of age, provided oral agreement after receiving thorough information about the study's objectives, merits, and risks, with the guarantee that the findings would be kept confidential and used exclusively for research purposes. There were no names on the questionnaire, and the data obtained were de-identified, with the principal investigator (PI) being the only one who had access to codes of other personal data identifiers.

RESULTS

Sociodemographic characteristics of students

Table 1 reveals that 380 students participated in the study, with a 90% response rate. Female students made up the majority of the participants (52.4%). Ninety percent of the students who participated were between the ages of 10 and 19. Over 75% of the adolescents' parents had completed at least primary school, and more than three-quarters lived together with their parents. Approximately 58.7% of respondents' parents are currently married in a monogamous context.

Table1 Distribution of Sociodemographic data among participants (N=380)

Variable	Frequency (n)	Percentage (%)
School grouping		
Girl's school	199	52.4
Boys school	181	47.6
Gender		
Male	199	52.4
Female	181	47.6

Age group		
10 – 19	343	90.3
20 and above	37	9.7
Class level		
SS1	115	30.3
SS2	136	35.8
SS3	129	33.9
Religion		
Islam	230	60.5
Christianity	150	39..5
Traditional	0.0	0,0
Highest education of the parent		
Parent educated	279	73.4
Not educated	101	26.6
Whom do you live with at home		
Both parents	282	74.2
Others…………………	98	25.8
Parent marital status		
Currently married	329	86.6
Others	51	13.4
Family types		
Monogamous	223	58.7
Polygamous	157	41.3

*Others included grandparents, uncle, aunty, brothers, guardians

Association between sociodemographic and drug abuse/use among participants in Army Day Secondary School Birnin-Kebbi

Table 2 shows the relationship between sociodemographic factors and drug abuse/used by adolescents using Chi-Square tests. The study found that three variables were significantly associated with drug abuse/use among participants: Age grouping ($\chi2 = 0.173$, $p = 0.038$), Family type grouping ($\chi2 = 4.491$, $p = 0.034$) and class level ($\chi2 = 9.981$, $p=0.007$). All the remaining variables such as religion ($\chi2 = 0.002$, $p=0.961$), highest educational level of the parent ($\chi2 = 0.787$, $p=0.105$), whom the student lived with at home ($\chi2 = 1.771$, $p=0.183$), parental

marital status ($\chi2$ =0.613, p=0.749), and Gender ($\chi2$ =6.872, p=0.678) were all not significantly associated with the adolescent drug abuse/usage.

Table 2: Association between sociodemographic and substance use among participants in Army Day Secondary School Birnin-Kebbi (N=380)

Substance use				
Variable	**NO n (%)**	**Yes n (%)**	**Test value χ^2**	**P=value**
Gender				
Female	152(56.7%)	47 (42.0%)	6.892[a]	0.678
Male	116(43.3%)	65(58.0%)		
Age group				
10 – 19	243 (70.8)	100(29.2%)	0.173[a]	0.038*
20 and above	25 (67.6%)	12(32.4%)		
Class level				
SS1	94 (81.7%)	21 (18.3%)	9.981[a]	0.007*
SS2	89 (65.4%)	47 (34.6%)		
SS3	85 (65.9%)	44 (34.1%)		
Religion				
Islam	162(70.4%)	68 (26.6%)	0.002[a]	0.961
Christianity	106(70.7%)	44 (29.3%)		
Traditional	-	-		
Highest education of the parent				
Parent Educated	195(70.1%)	83 (29.9%)	0.787[a]	0.105
Not educated	73 (71.6%)	29 (28.4%)		
Whom do you live with at home				
Both parents	228(69.3%)	101(30.7%)	1.771[a]	0.183
Others	40 (78.4%)	11 (21.6%)		
Parent marital status				
Currently married	303(92.1%)	26 (7.9%)	0.613[a]	0.749
Others	48 (94.1%)	3 (5.9%)		

Family types				
Monogamous	148(66.4%)	75 (33.6%)	4.491[a]	0.034*
Polygamous	120(76.4%)	37 (23.6%)		

*Others included grandparents, uncle, aunty, brothers, guardians, χ^2 Chi square test and * is p >0.005

Factors associated with the substance abuse among participants using simple logistic regression (N=380)

Table 3 shows the results of a simple logistic regression on all factors linked with the substance abused/used by the participants. Only three variable factors were significantly associated with the drug abused/used. Boys' respondents have odds 1.874 more times higher to abuse/use drugs than the girls' respondents (OR = 1.874, 95% CI: 1.172, 2.997, p = 0.009). Participants in the SS2 were 2.328 times more likely to have abused/ used a drug than those in the SS1 (OR = 2.328, 95% CI: 1.273, 4.258, p = 0.006) and respondents in the SS3 were 2.475 times more likely to have abused/used drugs than those in the SS1 (OR = 2.475, 95% CI: 1.306, 4.689, p = 0.005). Finally, respondents in the polygamous family has odds 0.528 less likely to have abuse/use drugs as compared to those in monogamous families (OR = 0.528, 95% CI: 0.310, 0.900, p = 0.019).

Table 3: Factors associated with the substance abuse among participants using simple logistic regression (N=380)

Variable	Adjusted Coefficient	Standard Error	Adjusted Odds Ratio	95% Cl for Odds Ratio		P-value
				Lower Bound	Upper Bound	
Gender						
Girls	Ref					
Boys (1)	0.628	0.240	1.874	1.172	2.997	0.009*
Age of respondents						
10 – 19 years	Ref					
20 & above	-0.134	0.402	0.874	0.397	1.924	0.739
Class level						
SS 1	Ref					
SS 2	0.845	0.308	2.328	1.273	4.258	0.006*
SS 3	0.906	0.326	2.475	1.306	4.689	0.005*
Religious belief						
Islam	Ref					
Christiani	0.258	0.271	1.295	0.762	2.200	0.340
Highest Edu of the parent						

Primary school & above	Ref					
Not educated	-0.012	0.269	0.988	0.528	1.533	0.698
Whom you live with at home						
Both parent	Ref					
Others	-0.105	0.272	0.900	0.528	1.533	0.698
Parent marital status						
Currently married	Ref					
Others	-0.633	0.375	0.531	0.254	1.108	0.092
Family types						
Monogamous	Ref					
Polygamous	-0.638	0.271	0.528	0.310	0.900	0.019*

*Variables with p <0.05, Confidence Interval (CI), Reference (REF) *Even at primary school level. Others* father, mother, uncle aunty, grandparent etc.

Factors associated with substance abuse/used among participants using multiple logistic regression

Variables with $p<0.25$ included gender (p = 0.009), class level group (p = 0.005), family types (p = 0.019), and parental marital status group (p = 0.092). These variables were subsequently examined using multiple logistic regression. Only three components had a meaningful correlation with drug abuse or use. Boys' respondents have odds 1.840 more times higher to abuse/use drugs than the girls' respondents (AOR = 1.840, 95% CI: 1.164, 2.907, p = 0.009). Participants in the SS2 were 2.272 times more likely to have abused/ used a drug than those in the SS1 (AOR = 2.272, 95% CI: 1.249, 4.133, p = 0.007) and respondents in the SS3 were 2.252 times more likely to have abused/used drugs than those in the SS1 (AOR = 2.252, 95% CI: 1.229, 4.127, p = 0.009). Finally, respondents in the polygamous family have odds 0.581 less likely to have abuse/use drugs as compared to those in monogamous families (AOR = 0.581, 95% CI: 0.361, 0.933, p = 0.025).

Table 4: Factors associated with the substance abuse/used among participants using multiple logistic regression (N=380)

Variable	Adjusted Coefficient	Standard Error	Adjusted Odds Ratio	95% Cl for Odds Ratio		P-value
				Lower Bound	Upper Bound	
Class level						
SS 1	Ref					
SS2	0.821	0.305	2.272	1.249	4.133	0.007*
SS3	0.812	0.309	2.252	1.229	4.127	0.009*

Gender						
Girls	Ref					
Boys	0.610	0.233	1.840	1.164	2.907	0.009*
Family types						
Monogamous	Ref					
Polygamous	-0.543	0.242	0.581	0.361	0.933	0.025*
Intercept	-1.572	0.282				

*Variables with p <0.05, Confidence Interval (CI), Reference (REF), Variable selection method: Forward likelihood ratio; Classification percentage=70.5%, Hosmer and Lemeshow test (p=0.081), cox snell = 5.6%, Nagelkerke pseudo–R Square=7.9%; Onminus test (χ2=14.015, p=0.081).
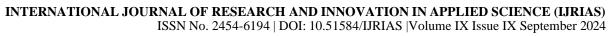
Factors associated with knowledge, attitude and preventive measures on substance abused/used among respondents (N=380)

As shown in Table 5, a greater proportion of adolescents reported having good knowledge about drug abused/used in this study. 47% to 60% of the respondents are aware of the meaning and health effects of substance abuse or its usage and girls form the majority with 52.4%. The study also revealed that 52.4% of girls had a positive attitude towards the effect drug abuse/use compare with their boy's counterpart. Furthermore, more than 50% of the adolescents stated that public enlightenments, easy accessibility, provision of guidance and counselling as well as seizure and destruction were some of the preventive measures to reduce the menace of drug abuse/use among adolescents.

The mean drug abuse/use knowledge score was 17.73 ± 1.74, with good knowledge although not significant among males (17.74 ± 1.56) compared to females with poor knowledge (17.73 ± 1.98), (df=378, t=--0.06, P < 0.950). Similarly, male adolescents had negative attitude (18.03 ± 2.05) than females (18.11 ± 1.68), again this was also not statistically significant (P > 0.66). However, boys had significantly reported better preventive measures (18.10 ± 1.37) as compared to the girls (17.69 ± 10.89), (df=378, t=--2.42, P < 0.016).

Table 5: Factors associated with knowledge, attitude and preventive measures on substance abused/used among respondents (N=380)

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total %
Awareness	**Frequency %**					
Drug abuse/use is dangerous to health and are liable to die young.	10(2.6)	4(1.1)	10(2.6)	119(31.3)	237(62.4)	380(100)
Associating with bad friend can easily influence one into substance abuse/used	10(2.6)	4(1.1)	10(2.6)	118(31.1)	238(62.6)	380(100)
Substance abuse/used is the unsafe use of psychoactive drugs that is	8(2.1)	2(0.5)	12(3.2)	178(46.8)	180(47.4)	380(100)

contrary to accepted medical practice						
Drug abused /used can promote deviant or illegal behavior, particularly among adolescents.	8(2.1)	2(0.5)	12(3.2)	178(46.8)	180(47.4)	380(100)
Attitude	Frequency%					
Majority of adolescent go into substance abuse/use out of curiosity	7(1.8)	2(0.5)	6(1.6)	150(39.5)	215(56.6)	380(100)
Close observation and the type of friend they keep, can help with early dictation of bad habit	7(1.8)	2(0.5)	6(1.6)	150(39.5)	215(56.6)	380(100)
Peer group influence is commonly associated with substance abuse/used among adolescents	9(2.4)	4(1.1)	4(1.1)	91(23.9)	272(71.6)	380(100)
I am permitted to go out with my friends as long as I notify my parents ahead of time.	6(1.6)	13(3.4)	12(3.2)	107(28.2)	242(63.7)	380(100)
Preventive measures	Frequency%					
Enlighten youth on dangers of drug abuse through mass media i.e television, radio magazine etc.is one the method to reduce drug abuse/use	3(0.8)	5(1.3)	5(1.3)	153(40.3)	214(56.3)	380(100)
Adolescent can easily abuse/used drugs if it is easily available or accessible within the school/comm.	6(1.6)	5(1.3)	0(0.0)	123(32.4)	246(64.7)	380(100)
Do provision of guidance and counseling unit in schools and community can help in controlling the menace of drug abuse/use?	3(0.8)	4(1.1)	17(4.5)	138(36.3)	218(57.4)	380(100)
By seizure and destruction of drugs by the government can greatly reduce the rate of drug abuse/use?	11(2.9)	13(3.4)	9(2.4)	150(39.5)	197(51.8)	380(100)

DISCUSSION

The cross-sectional study had a response rate of 90%, demonstrating sufficient power to detect statistically significant changes. The public health impact of substance misuse among Nigerian adolescents is worrying, especially given the recent socioeconomic class shift among majority users, as well as associated crime and the risk of lower productivity (Ogunsola and Fajemisin, 2020).

Tobacco use opens the door to the use and abuse of other substances, with smokers three times more likely than nonsmokers to consume alcohol, marijuana, and other hard drugs (Okafor, 2020). As a result, this study compared the most often abused or used drugs among adolescents, namely tobacco, alcohol, and marijuana (cannabis), with the respondents' socioeconomic status. Tobacco is the most commonly abused substance among adolescents and young people, followed by alcohol and other hard drugs (cannabis) (Adeloye et al., 2019; Ayobami et al., 2024; Myers & Kelly, 2005).

According to Grovers et al. (2020), cigarette and alcohol use regularly coexist, and smoking is particularly common among adolescents due to curiosity. In this study, drug abuse or use, such as cigarette smoking, alcohol consumption, or marijuana use, was compared to respondents' sociodemographic characteristics using simple and multiple logistic regression.

The study discovered that just three variables were significantly associated with drug abuse or use. Participants in the SS2 and SS3 were 2.272 and 2.252 times more likely to abuse or use drugs than those in the SS1, respectively. This is consistent with a study that discovered that as students go through their schooling, they are more likely to have easier access to and use of drugs (Mahmood et al., 2019). In contrast, a study in Markudi, Nigeria, discovered no significant link between age or class and drug usage among adolescents (Ajoye & Idoko, 2022).

The study also found that boys were 1.840 times more likely to abuse or use drugs than females (AOR = 1.840, 95% CI: 1.164, 2.907, p = 0.009). This finding is consistent with many other studies that have revealed that male respondents are more likely to abuse or use drugs than female respondents (Kovilveettil, 2021; Onoh & Dairo, 2023). Another result in this study that determines respondents' socioeconomic characteristics is the type of family they come from. Respondents from polygamous homes were 0.581 times less likely to take drugs than those from monogamous families (AOR = 0.581, 95% CI: 0.361, 0.933, p = 0.025). The results are consistent with research conducted in Lagos, Nigeria, on the effect of counseling and drug abuse among secondary school pupils (Yetunde et al., 2022).

In terms of knowledge, attitude, and preventive actions, the majority of respondents (47–60%) were knowledgeable about drug abuse, which was consistent with the results of a similar study conducted in Eti Osa LGA, Lagos, Nigeria (Onigbogi, 2023). This contradicts research by Mohammed et al. (2021), which revealed that 78% of pupils had limited understanding about drug abuse. However, 75% of the students had a good attitude toward drug usage, which supports the study's findings that girls' adolescents had a 52.4% positive attitude toward drug abuse and use, compared to males' 47.6%.

The age range in this study was adolescents (10–19 years), which is a high-risk period for drug abuse and use, as found in a recent Lagos study (Itanyi et al., 2020); nevertheless, the findings of this study revealed no significant association between age and drug abuse or use by adolescents. This finding contradicts a study in India that discovered a relationship between age, school, a mother's educational status, and adolescent drug consumption and use (Katoch et al., 2023). Other variables, such as age, religion, parent education, and who the respondents live with, have also been found to have no significant association with adolescent drug consumption or use.

Limitations

This study's data came from only one school and one local government area out of 21 in Kebbi State; therefore, it may not be a representative sample of the whole state. Furthermore, the study's shortcomings include the fact that the data was collected solely from consenting students at a mixed-gender, government-owned educational

institution with no residential facilities. The data could have been different if it had been gathered at a privately owned school with boarding facilities or at a school with only single-sex students. Furthermore, the researcher does not apply a systematic technique to verifying the veracity of the substance-use information provided by study participants.

Finally, because this study was conducted during school hours, some children may have provided incorrect information due to fear of the unknown. Despite our efforts to mitigate this by allowing each participant to complete the questionnaires privately and ensuring respondents that the information they shared would be kept private, the questionnaires did not include names, and only the researcher had access to the codes used and other personal data identifiers.

CONCLUSIONS

This study discovered that, despite having adequate awareness and a positive attitude about drug abuse and use, it was nonetheless common among secondary school students. The findings emphasize the potential importance of boosting awareness and knowledge regarding substance use among upper-class students, who have easy access to drugs such as nicotine and alcohol, which are precursors to the use of additional hard drugs. It also emphasizes the importance of peer influence, particularly among boys, who were more likely to engage in substance abuse than girls. Finally, the study underlines the importance of focusing on family types when addressing adolescent substance abuse due to their greater vulnerability at this point in life.

RECOMMENDATIONS

Positive behavioral intervention programs have been used in schools across Europe and America, with results indicating fewer behavioral disorders and improved social behavior. To reduce the prevalence of drug abuse among adolescents, relevant authorities may need to conduct programs that limit supply while simultaneously looking into demand-reduction options. Policy interventions to restrict access to tobacco and alcohol products near schools, comprehensive bans on tobacco advertisements and sales to minors, as well as behavioral and other context-specific and culturally adapted interventions, are required to reverse the trend of rising tobacco smoking, alcohol consumption, and other hard drugs in Sub-Saharan Africa, including Nigeria. This is critical because Nigeria has few substance misuse treatment centers and government de-addiction programs, and the treatments given by psychiatric institutes and non-governmental organizations have been shown to be inadequate. Finally, additional qualitative research is needed to look at the other reasons and facilitators of substance abuse in this demographic.

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