



Prevalence, Perceptions, and Social Determinants of Psychoactive Substance Use among Adolescents in Public and Private Secondary Schools in Uyo, Akwa Ibom State, Nigeria

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Abstract

Background: Adolescence is a critical developmental stage during which health behaviours with long-term consequences are often established. Psychoactive substance (PAS) use commonly begins during this period, necessitating continuous monitoring and understanding of associated risk factors.

Objective: To compare the prevalence, perceptions, and social determinants of PAS use among adolescents in public and private secondary schools in Uyo, Nigeria.

Methods: A comparative cross-sectional mixed-methods study was conducted among 844 adolescents selected through multistage sampling from public and private secondary schools. Data were collected using a pretested, interviewer-administered questionnaire adapted from the WHO Global Assessment Programme. Quantitative data were analysed using SPSS version 25, with descriptive and inferential statistics applied. Statistical significance was set at $p < 0.05$. Qualitative data were thematically analysed. Ethical approval was obtained from the University of Uyo Teaching Hospital Ethics Committee.

Results: A total of 416 private-school and 428 public-school students participated. Mean ages were 13.1 ± 2.0 years (private) and 13.7 ± 2.2 years (public). Lifetime alcohol use was significantly higher in public schools (4.7%) than private schools (2.2%) ($p < 0.05$). Other PAS use was low and occurred only among students with prior alcohol use. Key predictors of PAS use included family substance use and peer influence in both school types.

Conclusion: PAS use was generally low but higher among public-school students. Alcohol appears to act as a gateway substance. Family and peer influences are significant determinants, highlighting the need for targeted school-based and community interventions.

Keywords: Psychoactive substances; Adolescents; Secondary schools; Nigeria.

Introduction

Psychoactive substance (PAS) use is a major global public health concern that often begins during adolescence, a period marked by experimentation and vulnerability to risk-taking behaviours.¹ Early exposure to gateway substances such as alcohol and tobacco increases the risk of progression to more harmful substances.² PASs affect brain function and may lead to dependence and long-term health and social consequences.^{3,4}

Adolescents represent a large proportion of the global population, particularly in low- and middle-income countries.⁵⁻⁷ The burden of PAS use remains high globally, prompting its inclusion in Sustainable Development Goal Target 3.5.8 Alcohol is widely used among adolescents, while cannabis is the most

common illicit substance.⁹

Africa bears a high burden, with increasing misuse of substances such as tramadol and opioids.^{10,11} In Nigeria, PAS use is a growing concern with significant health and social implications for adolescents.¹²⁻¹⁵

Perceptions, cultural norms, and social

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determinants-including family, peer influence, and socioeconomic factors-play key roles in shaping substance use behaviours.¹⁶⁻¹⁹ Understanding these factors is essential for effective prevention strategies. Hence, this study was conducted to compare the prevalence, perceptions, and social determinants of PAS use among adolescents in public and private secondary schools in Uyo, Nigeria.

Materials and methods

Study Design

A comparative cross-sectional mixed-methods study was conducted, comprising quantitative (questionnaire-based) and qualitative (focus group discussion) components.

Study Area and Population

The study was conducted among adolescents in public and private secondary schools in Uyo, Akwa Ibom State, South-South Nigeria. The state has over five million people across 31 Local Government Areas, with Uyo as its rapidly urbanizing administrative and commercial centre.

Sampling Technique and Sample Size Determination

A multistage sampling technique was used to select participants and involved the following stages.

Stage One (Selection of Schools):

A sampling frame of 69 co-educational secondary schools (15 public and 54 private) was obtained from the Akwa Ibom State Ministry of Education. Using probability proportionate to size (PPS), schools were selected to reflect the population distribution, resulting in the selection of public and private schools in an approximate ratio of 2:7.

Stage Two (Selection of Classes):

Classes were stratified into Junior Secondary School (JSS 1–3) and Senior Secondary School (SSS 1–3). One class from each stratum was selected using simple random sampling by balloting.

Stage Three (Selection of Students):

Students were selected using proportionate allocation based on school population. The number of participants per school was determined by dividing the student population of each school by the total population of selected schools and

multiplying by the minimum sample size ($n = 431$). A total of 844 students were recruited from selected public and private secondary schools.

The minimum sample size for the quantitative arm of the study was determined using the formula $n = (Z\alpha + Z\beta)^2 [P1(1-P1) + P2(1-P2)] / d^2$

for comparing two independent proportions. The calculation assumed a 95% confidence level ($Z\alpha = 1.96$), 80% statistical power ($Z\beta = 0.84$), and an expected difference of 10% in the prevalence of psychoactive substance use between public and private secondary school students.

Prevalence estimates were obtained from a previous study conducted in Benin City²¹, Nigeria, which reported a prevalence of 43.3% among private secondary school students and 53.0% among public secondary school students. Using these estimates, the minimum calculated sample size per group was 388 students. This was adjusted upward by 10% to account for possible non-response, resulting in a minimum required sample size of 431 students per group. Thus, a total sample size of 862 students (431 from public and 431 from private secondary schools) was targeted for the study. For the qualitative arm, focus group discussions were conducted until thematic saturation was achieved. A total of eight focus group discussions were held, comprising four groups each from junior and senior classes. Each discussion group consisted of at least six participants, yielding a minimum of 48 participants in total, with equal representation from public and private secondary schools.

Data Collection Instruments and Procedure

Quantitative data were collected using a pretested, interviewer-administered questionnaire adapted from the WHO Global Assessment Programme. Qualitative data were obtained through FGDs using a validated guide; sessions were audio-recorded, transcribed, and coded.

Data Processing and Analysis

Quantitative data were analyzed using SPSS version 25. Categorical variables were summarized as proportions, while continuous variables were expressed as means \pm standard deviations. Associations between categorical variables were

assessed using the Chi-square test, and comparisons of means were performed using the Student's t-test. Multiple logistic regression analysis was used to identify predictors of lifetime psychoactive substance use. Statistical significance was set at $p < 0.05$. Qualitative data were analyzed thematically using both inductive and deductive approaches. Codes were generated and grouped into themes reflecting participants' perceptions of psychoactive substance use.

Ethical Considerations

Ethical approval was obtained from the University of Uyo Teaching Hospital Ethics Committee (UUTH/AD/S/96/VOL XXI/546). Participation was voluntary, with informed consent and confidentiality ensured.

Results

Sociodemographic characteristics

A total of 844 students participated (416 private, 428 public), with response rates of 96.5% and 99.3%, respectively. The mean age was lower among private school students (13.14 ± 1.99 years) than

public school students (13.66 ± 2.15 years; $p < 0.001$), with most aged 10–13 years. Sex distribution was similar ($p = 0.409$). A higher proportion of private school students lived with both parents and came from monogamous families

Table 2: Socio-Economic Status of Respondents

Variables	Private Sec Schools, n=416,(%)	Public Sec Schools, n=428,(%)	Tests/ Statistics
Mother's LOE			
None	12(2.9)	34(7.9)	
Primary	12(2.9)	32(7.5)	
Secondary	190(45.7)	229(53.5)	$p=0.001_4$
Tertiary	202(48.5)	133(31.1)	
Father's LOE			
None	18(4.3)	41(9.6)	
Primary	5(1.2)	28(6.5)	
Secondary	155(37.3)	202(47.2)	$p=0.001_4$
Tertiary	238(57.2)	157(36.7)	
Electrical iron			
Yes	406(97.6)	392(91.6)	
No	10(2.4)	36(8.4)	$p=0.001_4$
Electrical Fan			
Yes	407(97.8)	389(90.9)	
No	9(2.2)	39(9.1)	$p=0.0001_4$
Television			
Yes	413(99.3)	383(89.5)	$p=0.0001^*_4$
No	3(0.7)	45(10.5)	
Refrigerator			
Yes	384(92.3)	284(66.4)	
No	32(7.7)	144(33.6)	$p=0.0001_4$
Generating set			
Yes	337(81.0)	206(48.1)	
No	79(19.0)	222(51.9)	$P=0.001_4$
Cable television			
Yes	331(79.6)	213(49.8)	
No	85(20.4)	215(50.2)	$p=0.0001_4$
Electricity			
Yes	388(93.3)	363(84.8)	
No	28(6.7)	65(15.2)	$p=0.001_4$
Family members have bank account			
Yes	407(97.8)	407(95.1)	
No	9(2.2)	21(4.9)	$p=0.031_4$
Working while schooling			
Yes	19(4.6)	23(5.4)	
No	397(95.4)	405(94.6)	$p=0.590$

LOE: Level of Education. $_4$: Statistically significant. * =Fisher's exact

Table 1: Sociodemographic characteristics of respondents

Variables	Private Schools n=416.(%)	Public Schools n=428.(%)	Tests/Statistics
Age (Years)			
10-13	237(57.0)	206(48.1)	$\chi^2 = 9.801, df=2$
14-16	161(38.7)	186(43.5)	$p = 0.007_4$
17-19	18(4.3)	36(8.4)	
Mean age \pm SD	13.14 \pm 1.99	13.66 \pm 2.15	$p = 0.001$
Sex			
Male	213(51.2)	207(48.4)	
Female	203(48.8)	221(51.6)	$p = 0.409$
Class arm			
Junior arm	191(45.9)	212(49.5)	
Senior arm	225(54.1)	216(50.5)	$P = 0.293$
Tribe			
Ibibio	279(67.0)	291(68.0)	
Annang	42(10.1)	61(14.2)	$P=0.122$
Igbo	27(6.5)	20(4.7)	
Others	68(16.4)	56(13.1)	
Religion			
Islam	7(1.7)	2(0.5)	$p = 0.103^*$
Christian	409(98.3)	426(99.5)	
Adolescent living situation			
Both parent	377(90.6)	363(84.8)	$p=0.001_4^*$
A single parent	27(6.5)	34(7.9)	
Grandparent	12(2.9)	6(1.4)	
Other family members	0(0.0)	25(5.9)	
Marital status			
Married/cohabiting	387(93.0)	377(88.0)	$p=0.064^*$
Single	13(3.1)	18(4.2)	
Separated	13(3.1)	23(5.4)	
Widowed	3(0.8)	10(2.4)	
Family type			
Monogamous	403(96.9)	389(90.9)	
Polygamous	13(3.1)	39(9.1)	$p=0.001_4$

* =Fisher's exact test; $_4$ =Statistically significant.

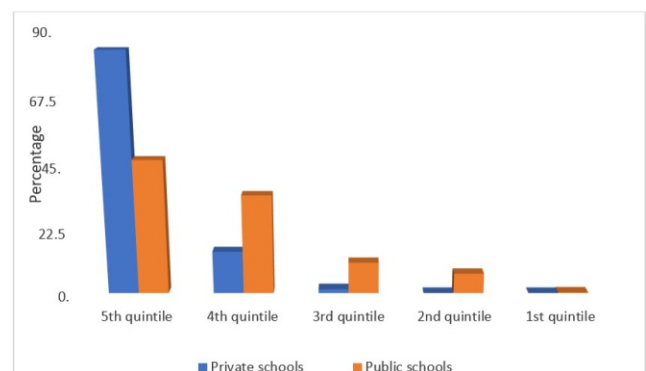


Figure 1: It shows the wealth quintiles

($p < 0.001$) (Table 1).

Socioeconomic Characteristics

Parents of private school students were significantly more educated, with a higher proportion attaining tertiary education, compared with parents of public school students ($p < 0.001$) (Table 2). Most private school students belonged to the highest wealth

quintile (83.7%) (Figure 1).

Business was the predominant occupation among parents of public school students, whereas civil service employment was more common among parents of private school students

Awareness and Prevalence of Psychoactive Substance Use

Awareness of psychoactive substances was high (>90%) in both school types, mainly through teachers, with no significant difference between groups ($p = 0.742$). Awareness of alcohol was highest, while knowledge of less common substances was generally higher among private school students.

Lifetime alcohol use was significantly higher among public school students than private school students (4.7% vs. 2.2%; $p = 0.045$). Coffee use was also higher in public schools (2.6% vs. 0.2%;

Table 3: Lifetime Use of Individual Psychoactive Substances

Variables	Private Sec Schools, n=416, f(%)	Public Sec Schools, n=428, f(%)	Tests/Statistics
Have you taken any of these substances in your lifetime?			
Yes	9(2.2)	20(4.7)	$\chi^2 = 4.004$
No	407(97.8)	408(95.3)	$p = 0.045_{\downarrow}$
Smoked cigarettes			
Yes	5(1.2)	10(2.3)	$p = 0.298^*$
No	411(98.8)	418(97.7)	
Alcohol			
Yes	9(2.2)	20(4.7)	$\chi^2 = 4.004$
No	407(97.8)	408(95.3)	$p = 0.045_{\downarrow}$
Kolanut/Bitter kola			
Yes	3(0.7)	10(2.3)	$p = 0.090^*$
No	413(99.2)	418(97.4)	
Caffeinated substances			
Yes	1(0.2)	11(2.6)	$p = 0.006^*_{\downarrow}$
No	415(99.8)	417(97.4)	
Tobacco as snuff			
Yes	4(1.0)	7(1.6)	$p = 0.547^*$
No	412(99.0)	421(98.4)	
Sleeping pills			
Yes	1(0.2)	1(0.2)	$p = 0.999^*$
No	415(99.8)	427(99.7)	

* Fisher's exact test, \downarrow Statistically significant

Table 4: Current Use of PAS in Private and Public Secondary Schools

Variables	Private Sec Schools, n=416, (%)	Public Sec Schools, n=428, (%)	Tests/Statistics
Have you taken any of these substances in the last 30 days?			
Yes	8(1.9)	20(4.7)	$\chi^2 = 4.973$
No	408(98.1)	408(95.3)	$p = 0.025$
Cigarettes			
Yes	3(0.7)	2(0.5)	$p = 0.682$
No	413(99.3)	426(99.5)	
Alcoholic beverages			
Yes	8(1.9)	20(4.7)	$\chi^2 = 4.973$
No	408(98.1)	408(95.3)	$p = 0.025$
Caffeinated substances			
Yes	2(0.5)	8(1.9)	$p = 0.108$
No	414(99.5)	420(98.1)	
Kolanut			
Yes	2(0.5)	5(1.2)	$p = 0.451$
No	414(99.5)	423(98.8)	
Sleeping pills			
Yes	2(0.5)	3(0.7)	$p = 0.999$
No	414(99.5)	425(99.3)	

PAS Use in the Last 12 Months

Table 5: Comparing Psychoactive Substance Use in Private and Public Secondary Schools in the Last 12 Months

Variables	Private Sec Schools, n=416, (%)	Public Sec Schools, n=428, (%)	Tests/Statistics
Psychoactive Substance use in prior 12 months			
Yes	9(2.2)	20(4.7)	$\chi^2 = 4.004$
No	407(97.8)	408(95.3)	$p = 0.045_{\downarrow}$
Cigarettes			
Yes	5(1.2)	3(0.7)	$p = 0.500^*$
No	411(98.8)	425(99.3)	
Alcoholic beverages			
Yes	9(2.2)	20(4.7)	$\chi^2 = 4.004$
No	407(97.8)	408(95.3)	$p = 0.045_{\downarrow}$
Caffeinated substances			
Yes	5(1.2)	6(1.4)	$p = 0.999^*$
No	411(98.8)	422(98.6)	
Kola nut/bitter kola			
Yes	1(0.2)	8(1.9)	$p = 0.038^*_{\downarrow}$
No	415(99.8)	420(98.1)	
Sleeping pills			
Yes	1(0.2)	2(0.5)	$p = 0.999$
No	415(99.8)	426(99.5)	
Tramadol			
Yes	1(0.2)	6(1.4)	$p = 0.999$
No	415(99.8)	422(98.6)	
Marijuana			
Yes	1(0.2)	6(1.4)	$p = 0.124$
No	415(100.0)	422(98.6)	
Cocaine			
Yes	1(0.2)	0(0.0)	$p = 0.999^*$
No	415(99.8)	428(100.0)	
Cough syrup			
Yes	1(0.2)	4(0.9)	$p = 0.374^*$
No	415(99.8)	424(99.1)	
Hydrocarbon/Inhalants			
Yes	1(0.2)	3(0.0)	$p = 0.624^*$
No	415(99.8)	425(100.0)	
Morphine			
Yes	0(0.0)	1(0.2)	$p = 0.999^*$
No	416(100.0)	427(99.8)	

Fisher's exact*

Table 6: Comparing Substance Use among Family Members of Students in Private and Public Secondary Schools

Variables	Private Sec Schools n=416(%).	Public Sec Schools n=428(%).	Tests/ Statistics
Family member uses PASs			
Yes	43(10.3)	70(16.4)	$\chi^2=6.590$ p=0.010†
No	373(89.7)	358(83.6)	
Father uses PASs			
Yes	25(6.0)	32(7.5)	$\chi^2=0.721$ p=0.396
No	391(94.0)	396(92.5)	
Mother uses PASs			
Yes	1(0.2)	4(0.9)	p=0.374*
No	415(99.8)	424 (99.1)	
Siblings use PASs			
Yes	2(0.5)	3(0.7)	p=0.452*
No	414(99.5)	425(99.3)	
Aunt uses PASs			
Yes	2(0.5)	5(1.2)	p=0.452*
No	414(99.5)	423(98.8)	
Uncle uses PASs			
Yes	19(4.6)	35(8.2)	$\chi^2=4.591$ p=0.032†
No	397(95.4)	393(91.8)	
Peer group uses PASs			
Yes	8(1.9)	37(8.6)	$\chi^2=18.861$ p=0.001†
No	408(98.1)	391(91.4)	
Neighbour uses PASs			
Yes	108(26.0)	98(22.9)	$\chi^2=1.701$ p=0.300
No	308(74.0)	330(77.1)	

†=Statistically significant, *=Fisher's exact

p=0.006), while no significant differences were observed for cigarette, marijuana, or tramadol use (Table 3).

Current alcohol use remained significantly higher in public schools (p = 0.025), and use of kola nut/bitter kola in the preceding 12 months was also higher among public school students (p = 0.038) (Tables 4 and 5).

A significantly higher proportion of public school students reported psychoactive substance use among family members (16.4% vs. 10.3%; p=0.01) and peers (8.6% vs. 1.9%; p < 0.001) (Table 6).

Commonly perceived effects included dizziness and lack of perceived physical benefit, with most users expressing a desire to quit (Table 7).

Factors Associated with Psychoactive Substance Use

Lifetime PAS use was significantly associated with age ≥14 years, senior class level, and family and peer substance use. Logistic regression identified family and peer PAS use as strong predictors in both

Table 7: Comparing the Perceived Effects of Psychoactive Substances on Lifetime Users in Private and Public Secondary Schools

Variables	Private schools, n 9(%)	Public schools, n 20(%)	Tests/ Stats
Headache			
Yes	4(44.4)	5(25.0)	p=0.396*
No	5(55.6)	15(75.0)	
Dizziness			
Yes	5(55.6)	16(80.0)	p=0.209*
No	4(44.4)	4(20.0)	
Increased alertness			
Yes	0(0.0)	0(0.0)	
No	9(100.0)	20(100.0)	
Feeling sleepy			
Yes	1(11.1)	3(15.0)	p=0.999*
No	8(88.9)	17(85.0)	
Tremors/Shaky			
Yes	0(0.0)	0(0.0)	
No	9(100.0)	20(100.0)	
Increased strength			
Yes	3(33.3)	1(0.2)	p=0.076*
No	6(66.7)	19(4.4)	
Weakness			
Yes	0(0.0)	6(30.0)	p=0.137*
No	9(100.0)	14(70.0)	
Blurred vision			
Yes	0(0.0)	0(0.0)	
No	9(100.0)	20(100.0)	

private (OR = 86.67; 77.33; p=0.001) and public schools (OR = 5.46; 4.30; p<0.05) (Table 8).

Qualitative Results

Twenty-two students participated in FGDs. Alcohol and cigarettes were the most recognized substances, with limited awareness of less common drugs. Peer pressure, family influence, stress, and poor parental supervision were key reasons for use, with substances perceived as easily accessible. Reported effects included poor academic performance and behavioural problems, while deterrents included religion, parental guidance, and fear of punishment. Suggested controls included stricter regulation, public education, and parental involvement.

Triangulation of Findings

Findings showed low overall PAS use, higher among public school students. Peer and family influence and accessibility were key drivers, with awareness gaps highlighting the need for combined regulatory, educational, and family-based interventions.

Table 8: Associations between selected Factors and the Lifetime Use of PASs in Both Private and Public Secondary Schools

Variables	Lifetime use of PASs in Private secondary schools		Total	Test/ Statistics	Lifetime Use of PASs in Public secondary school		Total	Test/ Statistics
	Yes, n 9 f(%)	No n 407, f(%)			Yes n 20, f(%)	No n 408, f(%)		
Age group (Year)								
10—13	2(0.7)	284(99.3)	286(100.0)	p=0.005*□	9(4.1)	213(95.5)	222(100.0)	$\chi^2=0.397$
>14	7(5.4)	123(94.6)	130(100.0)		11(5.3)	195(94.7)	206(100.0)	p=0.648
Sex								
Male	7(3.3)	206(96.7)	213(100.0)	p=0.176*	13(6.3)	194(93.7)	207(100.0)	$\chi^3=2.325$
Female	2(1.0)	201(99.0)	203(100.0)		7(3.2)	214(96.8)	221(100.0)	p=0.169
Classes								
JSS Classes	1(0.5)	190(99.5)	191(100.0)	p=0.043*□	7(3.2)	209(96.8)	216(100.0)	$\chi^2=2.158$
SSS Classes	8(3.6)	217(96.4)	225(100.0)		13(6.1)	199(93.9)	212(100.0)	p=0.142
Marital status of the parent								
Married	7(1.8)	380(98.2)	387(100.0)	p=0.125*	18(4.8)	359(95.2)	377(100.0)	p=0.999*
Not married	2(6.9)	27(93.1)	29(100.0)		2(3.9)	49(96.1)	51(100.0)	
Adolescent living situation								
Both parents	7(1.9)	370(98.1)	377(100.0)		18(5.0)	345(95.0)	363(100.0)	
Single parent	1(3.7)	26(96.3)	27(100.0)	p=0.269	1(2.9)	33(97.1)	34(100.0)	p=0.893
Grandparent	1(8.3)	11(91.7)	12(100.0)		0(0.0)	6(100.0)	6(100.0)	
Mothers LOE								
None/primary	1(4.2)	23(95.8)	24(100.0)	p=0.417*	3(4.5)	63(95.5)	66(100.0)	p=0.999*
Secondary/tertiary	8(2.0)	384(98.0)	392(100.0)		17(4.7)	345(95.3)	362(100.0)	
Father LOE								
None/primary	1(4.3)	22(95.7)	23(100.0)	p=0.404	2(2.9)	67(97.1)	69(100.0)	p=0.754*
Secondary/Tertiary	8(2.0)	385(98.0)	393(100.0)		18(5.0)	341(95.0)	359(100.0)	18(5.0)
Working while schooling								
Yes	2(10.5)	17(89.5)	19(100.0)	p=0.059	0(0.0)	23(100.0)	23(100.0)	p=0.615
No	7(1.8)	390(98.2)	397(100.0)		20(4.9)	385(95.1)	405(100.0)	
Family member uses PAS								
Yes	6(14.0)	37(86.0)	43(100.0)	p<:0.001* ₊	12(17.1)	58(82.9)	70(100.0)	$\chi^2=29.214$
No	3(0.8)	370(99.2)	373(100.0)		8(2.2)	350(97.8)	358(100.0)	p<:0.001 ₊
Mother uses PASs								
Yes	0(0.0)	1(100.0)	1(100.0)	p=0.999	2(50.0)	2(50.0)	4(100.0)	
No	9(2.2)	406(97.8)	415(100.0)		18(4.2)	406(95.8)	424(100.0)	p=0.012 ₊
Father uses PASs								
Yes	3(12.0)	22(88.0)	25(100.0)	p=0.013 ₊	8(26.7)	22(73.3)	30(100.0)	$\chi^2=35.033$
No	6(1.5)	385(98.5)	391(100.0)		12(3.0)	386(97.0)	398(100.0)	p<:0.001 ₊
Peer group uses PASs								
Yes	4(50.0)	4(50.0)	8(100.0)	p=0.001*	8(21.6)	29(78.4)	37(100.0)	$\chi^2=26.118$
No	5(1.2)	403(98.8)	408(100.0)		12(3.1)	379(96.9)	391(100.0)	p=0.001 ₊
Neighbour uses PASs								
Yes	3(2.8)	105(97.2)	108(100.0)	p=0.701*	9(9.2)	89(90.8)	98(100.0)	$\chi^2=5.806$
No	6(1.9)	302(98.1)	308(100.0)		11(3.3)	319(96.7)	330(100.0)	p=0.016 ₊
Wealth quintile								
3 rd quintile	0(0.0)	6(100.0)	6(100.0)		0(0.0)	1(100.0)	1(100.0)	
4 th quintile	0(0.0)	62(100.0)	62(100.0)	p=0.445*	0(0.0)	30(100.0)	30(100.0)	p=0.460*
5 th quintile	9(2.6)	339(97.4)	348(100.0)		1(2.1)	46(97.9)	47(100.0)	

*=Fisher's exact; ₊=Statistically significant; LOE=level of Education

Predictors of Lifetime Use of Substances Among Adolescents

Table 9: Logistic Regression Model of Independent Factors and the Lifetime Use of Psychoactive Substances in Both Public and Private Schools

Variable	Public School P value	Public School AOR	Public School CI Lower	Public School CI Upper	Private School P value	Private School AOR	Private School CI Lower	Private School CI Upper
Age ≥14	0.771	1.220	0.315	4.748	0.464	54.988	0.001	251.000
Male	0.333	0.610	0.214	1.733	0.930	0.917	0.134	6.291
SSS Class	0.423	0.554	0.129	2.387	0.897	0.498	0.001	19412.611
Married					0.424	0.341	0.024	4.778
Working while schooling					0.057	16.963	0.918	313.457
Family member uses PAS	0.003	5.460	1.800	16.563	0.001	86.665	7.184	1045.518
Peer uses PAS	0.015	4.299	1.333	13.865	0.001	77.327	5.421	1103.000
Neighbour uses PAS	0.891	1.080	0.358	3.260				

Discussion

This study found comparable mean ages and a near equal male-to-female ratio among public and private school adolescents, consistent with findings from Tanzania²², Rivers State²³, and Gombe State³, while variations reported in other regions,²⁴ may reflect methodological and cultural differences.

The lifetime prevalence of PAS use was low in both types of school, with alcohol, cigarettes, and marijuana as the most commonly used substances, aligning with studies from Nigeria²⁵ and Botswana²⁶. However, higher prevalence rates reported in Ethiopia²⁷ and Benin Republic may be due to differing sociocultural and legal contexts²⁸. Alcohol and cigarettes were identified as gateway substances, with varying prevalence across regions²⁹.

Awareness of PAS was high, mainly driven by teachers, consistent with CDC and other studies⁶. However, knowledge was limited to common substances, with poor awareness of less common drugs. Public school students reported higher PAS use, likely due to greater accessibility and socioeconomic factors, as supported by qualitative findings.

Age and academic level were significant predictors of PAS use, particularly among private school students, consistent with findings from Benin Republic²⁸ and Brazil³⁰. Family history of substance use and peer influence were strong predictors across both school types^{21,7}, while neighbourhood exposure was particularly significant among public school

students³⁰.

Perceptions varied by class level, with younger students emphasizing harm and older students focusing on legality. Reported effects included absenteeism, poor academic performance, and behavioural problems, consistent with global evidence²⁵.

Overall, PAS use is shaped by a complex interplay of individual, familial, peer, and environmental factors. Despite high awareness, sociocultural acceptance of gateway substances and socioeconomic disparities

highlight the need for targeted, context-specific interventions and stronger policy regulation²⁹.

Strengths and Limitations

The mixed-methods design and inclusion of both school types strengthened the study. However, the cross-sectional design and self-reported data limit causal inference and generalizability.

Conclusion

PAS use was low, with alcohol, cigarettes, and marijuana most common, particularly among public school students and older adolescents. Peer, family, and environmental factors were key determinants. Strengthened prevention, parental involvement, and regulated access are essential.

Conflict of Interest

The author declares no conflicts of interest.

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Author's Contributions

Dr. Christine E. Ogbebor conceived and designed the study, supervised data collection, analyzed and interpreted data, and approved the final manuscript.

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