

Research Article

Peer, Psychosocial and Environmental Drivers of Drug Abuse Among Secondary School Students in Okada, Nigeria: A Cross-Sectional Study

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ABSTRACT

Background: Adolescent drug and substance abuse is shaped by interacting personal, interpersonal and environmental influences. Understanding how young people perceive these influences is important for designing prevention strategies that extend beyond information-based approaches. This paper examined perceived determinants of drug abuse among secondary school students in Okada, Edo State, Nigeria.

Methods: A descriptive cross-sectional survey was conducted among 323 respondents. Data were collected using a structured interviewer-administered questionnaire. The analysis focused on eight perceived determinants of drug abuse: peer influence, curiosity and experimentation, stress and mental-health issues, lack of parental involvement, accessibility to drugs, lack of knowledge and awareness, media influence, and lack of prevention programmes. Frequencies and percentages were used to summarise responses. Combined agreement was calculated from the reported response categories, while 95% confidence intervals were estimated only for items with internally consistent aggregate counts.

Results: High levels of endorsement were observed across all eight determinants. Peer influence and lack of prevention programmes each recorded 99.1% combined agreement, while stress and mental-health issues reached 99.0%. Curiosity and experimentation and media influence each recorded 98.1%, while lack of knowledge and awareness reached 97.8%. Lack of parental involvement was the least strongly endorsed determinant but remained high at 88.9%. Accessibility to drugs was also reported at 99.1% combined agreement. The findings showed a concentrated pattern of perceived risk spanning peer, psychosocial, family, informational and environmental domains.

Conclusion: Secondary school students in Okada perceived drug abuse as a multi-level problem rather than the product of a single behavioural influence. Prevention efforts should therefore combine peer-focused strategies, psychosocial support, parental engagement, strengthened prevention programming, improved drug-related knowledge and community-level measures addressing substance accessibility. The cross-sectional and perception-based design does not permit causal inference.

KEYWORDS: Adolescent substance use; Drug abuse; Peer influence; Psychosocial determinants; Drug accessibility; Secondary school students; Prevention; Nigeria

1. INTRODUCTION

Adolescent substance use remains a persistent public-health concern because experimentation with psychoactive substances frequently begins during the developmental period in which behavioural autonomy, peer relationships and exposure to wider social environments are expanding. The consequences extend beyond the immediate pharmacological effects of alcohol, tobacco, cannabis and other drugs. Substance use during adolescence has been associated with poorer mental health, disrupted educational participation, risk-taking behaviour, later substance-related problems and wider social harms. Recent evidence from sub-Saharan Africa indicates substantial heterogeneity in the substances used and in the social conditions surrounding their use, reinforcing the importance of locally grounded research rather than assuming that patterns observed in high-income countries can be transferred directly to African settings (Ebrahim et al., 2024; Jumbe et al., 2025; Pokothoane et al., 2025).

The African evidence increasingly challenges explanations that locate adolescent substance use primarily within individual choice. Ebrahim et al. (2024), in a systematic review and meta-analysis of young people in sub-Saharan Africa, identified peer relationships, family circumstances and wider social conditions among factors associated with substance use. A separate meta-analysis covering 63 African studies similarly found that adolescent substance use reflected individual, family, socio-environmental and non-familial social-network influences. Male sex, older age and exposure to substance-using peers were among the more consistent correlates, while family smoking and insufficient parental supervision also featured prominently (Jumbe et al., 2025). More recent analyses of Global School-based Health Survey data across African countries have extended this picture by identifying emotional distress, bullying, school absenteeism and family-related factors as relevant to alcohol, cigarette and marijuana use (Pokothoane et al., 2025). These findings favour a multi-level interpretation in which adolescent substance use develops within interconnected personal, relational, school and community environments.

Nigeria reflects many of these concerns, but the national evidence base remains geographically and methodologically uneven. A systematic review of Nigerian adolescent tobacco and alcohol research identified age, gender, curiosity, stressful life events, peer influence, poor parental monitoring, advertising, availability and accessibility among the factors associated with use (Ekpenyong et al., 2024). More recent school-based studies have reinforced the importance of contextual variation. In Nasarawa State, substance-use patterns among secondary school students differed according to several sociodemographic and family characteristics, with parental smoking showing particularly strong associations with cigarette, marijuana and inhalant experimentation (Egga et al., 2024). In Katsina State, Lawal et al. (2025) reported that substance use differed between public and private secondary school students and that peer substance use remained an important predictor. Research among senior secondary school students in the Federal Capital Territory has likewise identified peer exposure and environmental availability among relevant determinants of drug use (Danraka et al., 2023).

Peer influence is especially prominent within contemporary explanations of adolescent substance use. The relationship, however, is more complex than direct pressure from friends. Peer environments may influence behaviour through modelling, perceived approval, social rewards, opportunities for experimentation and beliefs concerning what is normal within friendship groups. Longitudinal social-network research has shown that adolescent cannabis use is related to the substance-use behaviour of friends and to the structure of peer networks, although selection and socialisation processes can operate simultaneously (Torrejón-Guirado et al., 2023). Meta-analytic evidence also indicates that adolescents tend to shift their substance-use behaviour in the direction of their peers' perceived or reported behaviour even after earlier individual substance use is considered (Watts et al., 2024). Peer exposure therefore has behavioural relevance, but it should not be isolated from the settings in which friendship networks form and substance-related norms acquire social meaning.

Family relationships constitute another important part of this social environment. Contemporary research increasingly distinguishes constructive parental involvement from simple surveillance. Abar et al. (2025), reviewing more than 500 empirical studies of parenting and adolescent substance use, identified substantial evidence around parental modelling, knowledge, monitoring and other parenting characteristics. A meta-analysis involving more than two million participants similarly found that behavioural control and monitoring were inversely associated with substance use, with particularly strong associations for parental knowledge and adolescent disclosure (Pinquart & Reeg, 2025). African evidence also indicates that poor family relationships, inadequate supervision and substance use within the family can increase vulnerability, whereas close parent-child relationships and parental disapproval of substance use may be protective (Ebrahim et al., 2024). Parental involvement is therefore better understood as a relational and communicative process than as parental presence alone.

Psychological processes provide an additional pathway. Adolescents may encounter substances during periods of stress, emotional difficulty or impaired coping, while experimentation may also occur in the absence of significant psychological distress. These pathways should not be treated as equivalent. Contemporary addiction research has repeatedly identified stress as relevant to the development and persistence of substance-related behaviour, partly through its effects on craving, reinforcement and behavioural regulation (Sinha, 2024). Meta-analytic evidence further shows that emotional dysregulation is associated with alcohol, tobacco, cannabis and other addictive behaviours, with particularly strong relationships observed for substance-related problems and severity (González-Roz et al., 2024). In adolescence, the capacity to regulate emotional responses remains developmentally important, making stress and mental-health difficulties particularly relevant when young people themselves identify them as reasons for drug use.

Curiosity and experimentation occupy a related but analytically distinct position. Adolescence involves increased exploration of social roles and experiences, and opportunities to experiment may acquire greater behavioural significance where substances are visible, accessible or represented as socially rewarding. Nigerian research has repeatedly identified curiosity among reported reasons or correlates of adolescent alcohol, tobacco and drug use (Danraka et al., 2023; Ekpenyong et al., 2024). Accessibility can amplify this process because willingness to experiment has little behavioural consequence where substances cannot readily be obtained, whereas permissive or poorly controlled environments may reduce practical barriers to initiation. Recent Nigerian school-based evidence demonstrates considerable variation in the substances available to adolescents, including cigarettes, cannabis, inhalants, shisha, prescription medicines and other psychoactive substances (Egga et al., 2024; Lawal et al., 2025).

Media environments have also become increasingly relevant to adolescent substance-use research. Young people now encounter substance-related content through conventional advertising, entertainment media, social-network platforms, influencers and peer-generated posts. A systematic review and meta-analysis involving more than 1.4 million young people found associations between social-media use and several health-risk behaviours, including alcohol, tobacco and drug use (Purba et al., 2023). More specifically, Cheng et al. (2024) found consistent relationships between youth engagement with alcohol-related social-media content and drinking behaviour. Such findings do not imply that exposure inevitably causes substance use. They do indicate that contemporary prevention must account for environments in which behavioural norms and substance-related imagery are communicated continuously beyond the classroom and family setting.

The school environment represents another potentially protective or risk-enhancing context. School connectedness has been associated with lower engagement in several co-occurring adolescent health risks, including high-risk substance use (Rose

et al., 2024). Schools are also among the few institutional settings capable of reaching adolescents repeatedly before substance-use patterns become established. Yet prevention cannot be reduced to the provision of factual information. A scoping review of school-based substance-use interventions in low- and middle-income countries identified six recurrent components: education, school environment, school policy, parental involvement, peer engagement and counselling. Social-learning, planned-behaviour, social-norm and related frameworks were commonly used to explain how such interventions might operate (Cadri et al., 2024). This multi-component architecture reflects an important principle: effective prevention is more likely to address the social and behavioural conditions surrounding substance use than to rely solely on warnings about health consequences.

Evidence from Nigeria demonstrates that school-based prevention is feasible, although intervention effects differ across substances and outcomes. The Nigerian evaluation of the Unplugged programme, a social-influence and social-competence intervention, found reductions in recent alcohol use alongside changes in beliefs, risk perceptions and classroom climate, while effects were less consistent for cigarette and marijuana use (Vigna-Taglianti et al., 2021). The finding illustrates both the promise and the limits of school-based approaches. Prevention programmes need to be informed by the determinants that adolescents encounter within their own social environments rather than assuming that one standardised mechanism will address peer influence, emotional distress, family circumstances, accessibility and media exposure equally well.

An important limitation of much Nigerian research is that emphasis has understandably been placed on prevalence, substance-specific patterns and statistical predictors. Recent work from Nasarawa and Katsina States provides valuable evidence concerning who uses particular substances and which characteristics are associated with use (Egga et al., 2024; Lawal et al., 2025). Systematic evidence has also clarified the correlates of adolescent alcohol and tobacco use at national level (Ekpenyong et al., 2024). A complementary question remains important for prevention planning: how do secondary school students themselves understand the conditions that encourage drug abuse? Perceived determinants matter because prevention messages are interpreted through adolescents' existing explanations of behaviour. Where students understand drug abuse primarily through peers, stress, accessibility or inadequate prevention, those beliefs may influence which interventions appear credible, relevant or responsive to their lived social environment.

A multi-level analytical perspective is therefore adopted in this paper. The measured determinants are considered across individual and psychosocial influences, interpersonal and social influences, and environmental and prevention-related conditions. This organisation is conceptual rather than psychometric. It does not imply that the questionnaire items form statistically validated latent dimensions. The approach is consistent with recent African and Nigerian evidence showing that adolescent substance use is shaped across several levels of influence rather than through a single causal pathway (Cadri et al., 2024; Ebrahim et al., 2024; Ekpenyong et al., 2024; Jumbe et al., 2025).

Against this background, the paper examines perceived determinants of drug abuse among secondary school students in Okada, Edo State, Nigeria. Eight directly measured determinants are considered: peer influence, curiosity and experimentation, stress and mental-health issues, lack of parental involvement, accessibility to drugs, lack of knowledge and awareness, media influence, and lack of prevention programmes. The analysis asks which determinants receive the strongest endorsement and whether the observed pattern supports a predominantly individual explanation or a broader account involving interpersonal, psychosocial and environmental conditions. The contribution lies not in asserting causal predictors, but in identifying how students collectively locate responsibility and risk across several domains that are directly relevant to prevention design.

2. METHODS

2.1 Study design and setting

A descriptive cross-sectional survey was conducted in Okada community, Ovia North-East Local Government Area of Edo State, Nigeria. Okada is located in the South-South geopolitical zone and serves as the administrative headquarters of Ovia North-East Local Government Area. The community comprises residential, educational and commercial areas, with farming and trading among the principal occupations. Major institutions and landmarks include Igbinedion University, Igbinedion University Teaching Hospital, Okada Market, the Local Government Secretariat and the National Youth Service

Corps orientation camp.

The cross-sectional design was selected to characterise students' perceptions of factors associated with drug and substance abuse at a single period of observation. The present analysis focuses specifically on the perceived determinants contained in the determinant section of the questionnaire. No causal interpretation was attached to these responses because exposure and outcome information were collected concurrently.

2.2 Study population

The analytic sample comprised 323 respondents from the secondary school population in Okada community. The recorded age distribution included 94 respondents aged 12-14 years, 126 aged 15-17 years and 103 classified as older than 18 years. There were 169 males and 154 females. The sample included 170 respondents in the junior secondary category and 153 in the senior secondary category.

Information was also collected on parental marital status, parental educational attainment and parental occupation. These characteristics were used to describe the sample but were not incorporated into inferential analyses in the present paper in order to maintain analytical consistency with the study's focus on attitudinal outcomes. Restricting the analysis to descriptive profiling ensured that all interpretations were grounded in clearly reproducible summary data and avoided extending the findings beyond the level of detail required for the research aims.

2.3 Sample-size determination

The minimum sample size was calculated using Cochran's formula for estimating a single population proportion. A prevalence estimate of 74.6% was used in the original calculation, with a 95% confidence level and a precision of 5%. This produced a minimum sample of 291 respondents. Adjustment for an anticipated non-response rate of 10% increased the required sample to 323, which was the final number included in the survey.

2.4 Sampling procedure

A cluster-based sampling procedure was used. Okada community was divided geographically into two areas, designated Areas A and B, with Crown Estate used as a reference point. Area A extended from Usen Junction to Crown Estate, while Area B extended from Crown Estate towards the National Youth Service Corps orientation camp. Area A was selected through simple random balloting. Respondents meeting the study criteria within the selected area were subsequently recruited using simple random sampling.

2.5 Data-collection instrument and procedure

Data were collected using a structured interviewer-administered questionnaire containing open-ended and closed-ended questions. The instrument covered sociodemographic characteristics, awareness of drug and substance abuse, perceived prevalence and types of substance use, perceptions of drug abuse, perceived determinants and perceived effects.

The present paper uses only the sociodemographic information required to describe the sample and the items contained in the determinant section. This restriction was adopted to maintain a clearly defined analytical focus and to avoid combining conceptually different outcomes within the same article.

The questionnaire was reviewed by members of the research team, the project supervisor and the Head of the Department of Community Medicine. Pre-testing was undertaken in Okha community in Ovia South-West Local Government Area, approximately 5 km from Okada. The pre-test involved approximately 10% of the calculated minimum sample size. Identified problems were corrected before administration of the final instrument.

2.6 Measures

The principal variables were eight questionnaire items addressing perceived determinants of drug abuse among secondary school students:

1. peer influence;
2. curiosity and experimentation;
3. stress and mental-health issues;
4. lack of parental involvement;
5. accessibility to drugs;
6. lack of knowledge and awareness;
7. media influence; and
8. lack of prevention programmes.

Each item was measured using four ordered response categories: strongly agree, agree, disagree and strongly disagree. The analysis retained these categories as reported rather than treating the items as validated psychometric scales. No claim is therefore made that the eight items constitute statistically established dimensions or latent factors.

The item frequencies reported in the source data were internally reproducible within the determinant table. For example, peer influence was endorsed by 220 respondents who agreed and 100 who strongly agreed, while drug accessibility was endorsed by 273 who agreed and 50 who strongly agreed.

2.7 Data analysis

The original data were analysed using IBM SPSS Statistics version 27. Frequencies and percentages were used to summarise categorical variables.

For the present paper, analysis was restricted to descriptive comparison of the eight determinant items to ensure that all interpretations were grounded in verifiable summary data rather than extended beyond the level of detail available. This approach maintains methodological transparency by focusing on item-level patterns that can be reliably reproduced. Agreement and strong agreement were additionally combined to provide a clear and interpretable measure of overall endorsement for each determinant, allowing meaningful comparison across items without introducing assumptions about underlying subgroup distributions.

The determinant items were subsequently interpreted within three broad conceptual levels: individual and psychosocial influences, interpersonal and social influences, and environmental and prevention-related influences. This classification was used solely as an organising framework for interpretation. It was *not* derived through exploratory factor analysis, confirmatory factor analysis or any other data-reduction procedure.

2.8 Ethical considerations

Approval to conduct the research was reported as having been obtained through the Department of Community Health and approved by the Head of Department. Respondents were informed that participation was voluntary and that refusal or withdrawal would not attract a penalty. Names were not recorded, interviews were conducted with attention to privacy, and access to collected information was restricted to members of the research team.

Confidentiality was also emphasised as a means of reducing information bias when respondents answered questions concerning drug and substance abuse.

2.9 Methodological boundaries

The analysis concerns perceived determinants of drug abuse, rather than verified causal determinants of respondents' own substance-use behaviour. Accordingly, terms such as *driver*, *influence* and *determinant* refer to factors identified by respondents as relevant to drug abuse and should not be interpreted as evidence of temporal or causal effects.

3. RESULTS

3.1 Participant characteristics

A total of 323 respondents were included in the analysis. The largest age group was 15-17 years ($n = 126$, 39.0%), followed by those aged over 18 years ($n = 103$, 31.9%) and 12-14 years ($n = 94$, 29.1%). Males accounted for 52.3% of the sample and females for 47.7%. Junior and senior secondary students were represented in similar proportions. Most respondents were Christian (77.4%), and 78.6% reported that their parents were married. Table 1 summarises the participant characteristics that could be reproduced consistently from the aggregate data.

Table 1: Participant characteristics (N = 323)

Characteristic	Category	n	%
Age group, years	12-14	94	29.1
	15-17	126	39.0
	>18	103	31.9
Sex	Male	169	52.3
	Female	154	47.7
Class	JSS-3	170	52.6
	SSS-3	153	47.4
Religion	Christianity	250	77.4
	Muslim	73	22.6
Parental marital status	Married	254	78.6
	Single	64	19.8
	Other	5	1.5
Parental education	Tertiary	123	38.1
	Secondary school	143	44.3
	No formal education	57	17.6

Note. Percentages may not total 100.0% because of rounding. Mean age was reported as 16.0 ± 4.0 years.

The sample was therefore distributed across both junior and senior secondary levels, with no marked sex imbalance. Parental educational attainment was concentrated in secondary education (44.3%) and tertiary education (38.1%), while 17.6% reported no formal parental education.

3.2 Distribution of perceived determinants

Marked endorsement was observed across all eight perceived determinants. Table 2 presents the four-category response distribution and the combined proportion who agreed or strongly agreed with each statement. Combined endorsement exceeded 97% for seven of the eight items. Lack of parental involvement was the least strongly endorsed determinant, although 88.9% still agreed or strongly agreed that it contributed to drug abuse.

Table 2: Response distribution for perceived determinants of drug abuse (N = 323)

Perceived determinant	Strongly agree, %	Agree, %	Disagree, %	Strongly disagree, %	Combined agreement, %
Peer influence	31.0	68.1	0.6	0.3	99.1
Curiosity and experimentation	46.4	51.7	1.2	0.6	98.1
Stress and mental-health issues	46.4	52.6	0.6	0.3	99.0
Lack of parental involvement	31.9	57.0	9.9	1.2	88.9
Accessibility to drugs	15.5	83.6	0.6	0.3	99.1
Lack of knowledge and awareness	22.6	75.2	1.5	0.6	97.8
Media influence	32.8	65.3	1.5	0.3	98.1
Lack of prevention programmes	31.0	68.1	0.6	0.3	99.1

Note. Percentages are the reported item-level percentages. Small departures from 100.0% reflect rounding.

The response pattern was not driven solely by peer influence. Peer influence, accessibility to drugs and lack of prevention programmes each had a reported combined agreement of 99.1%. Stress and mental-health issues also attracted near-unanimous endorsement, while curiosity and experimentation, media influence, and lack of knowledge and awareness each exceeded 97%.

Figure 1 displays the full response distribution across the eight determinant items, allowing the relative balance between strong agreement and ordinary agreement to be seen before the categories are combined.

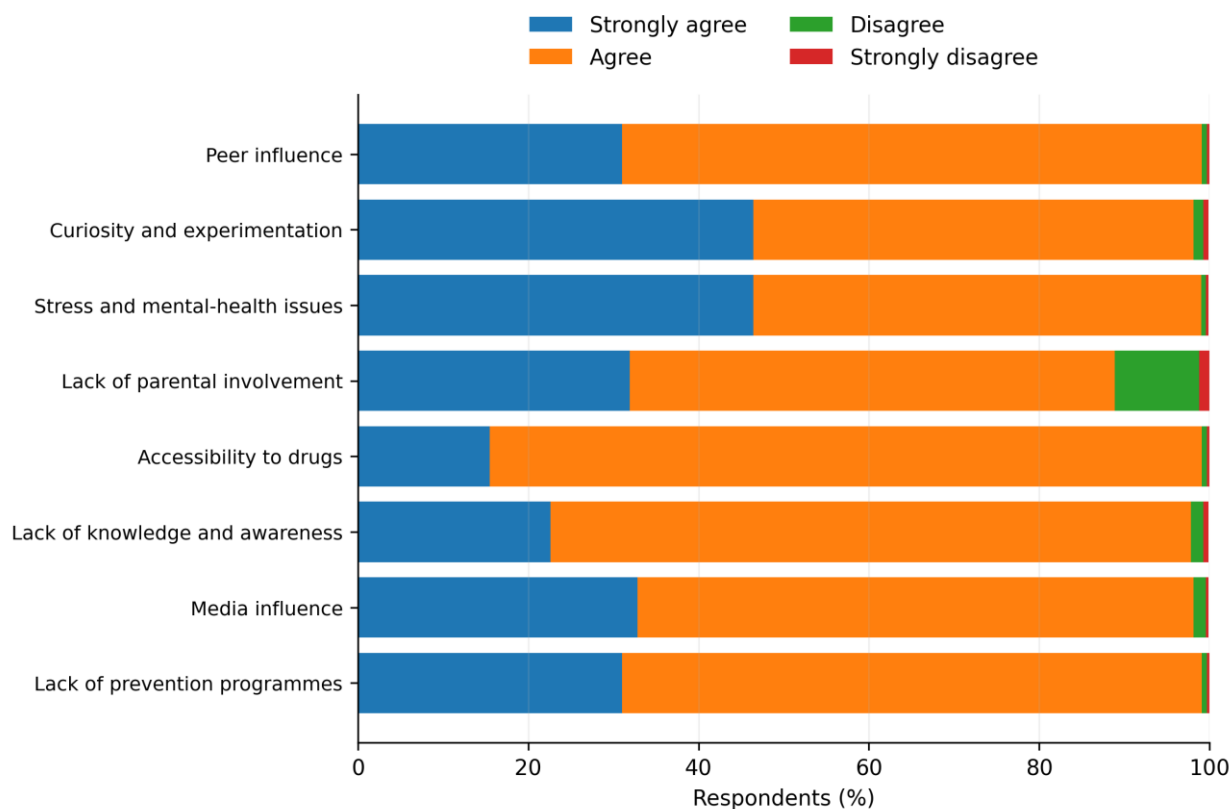


Figure 1: Distribution of responses across perceived determinants of drug abuse

Note. Bars show the reported percentage distribution across four response categories for each determinant; $N = 323$.

Accessibility to drugs showed the largest proportion selecting 'Agree' (83.6%), whereas curiosity and experimentation and stress and mental-health issues showed the largest proportions selecting 'Strongly agree' (46.4% each). Lack of parental involvement was distinguished by a larger disagreement component than the remaining items, with 9.9% disagreeing and 1.2% strongly disagreeing.

3.3 Precision of combined endorsement estimates

Confidence intervals were calculated only for items whose reported frequencies summed consistently to $N = 323$. Table 3 presents count-derived combined endorsement estimates with Wilson 95% confidence intervals. These intervals provide precision estimates for the observed proportions and do not test causal effects or differences between determinants.

Table 3: Combined endorsement and 95% confidence intervals ($N = 323$)

Perceived determinant	Combined endorsement, n/N	%	95% CI
Peer influence	320/323	99.1	97.3-99.7
Curiosity and experimentation	317/323	98.1	96.0-99.1
Stress and mental-health issues	320/323	99.1	97.3-99.7
Lack of parental involvement	287/323	88.9	85.0-91.8
Accessibility to drugs	Not estimable*	99.1	Not estimated

Perceived determinant	Combined endorsement, n/N	%	95% CI
Lack of knowledge and awareness	316/323	97.8	95.6-98.9
Media influence	317/323	98.1	96.0-99.1
Lack of prevention programmes	320/323	99.1	97.3-99.7

Note. CI = confidence interval. Wilson 95% confidence intervals were calculated from aggregate counts.

The count-derived estimates were tightly bounded for the highly endorsed items. Peer influence, stress and mental-health issues, and lack of prevention programmes each had combined endorsement of 99.1% (95% CI 97.3%-99.7%). Curiosity and experimentation and media influence each reached 98.1% (95% CI 96.0%-99.1%), while lack of knowledge and awareness reached 97.8% (95% CI 95.6%-98.9%). Lack of parental involvement remained high at 88.9%, but its confidence interval was wider (95% CI 85.0%-91.8%). Figure 2 presents these estimates in ranked form.

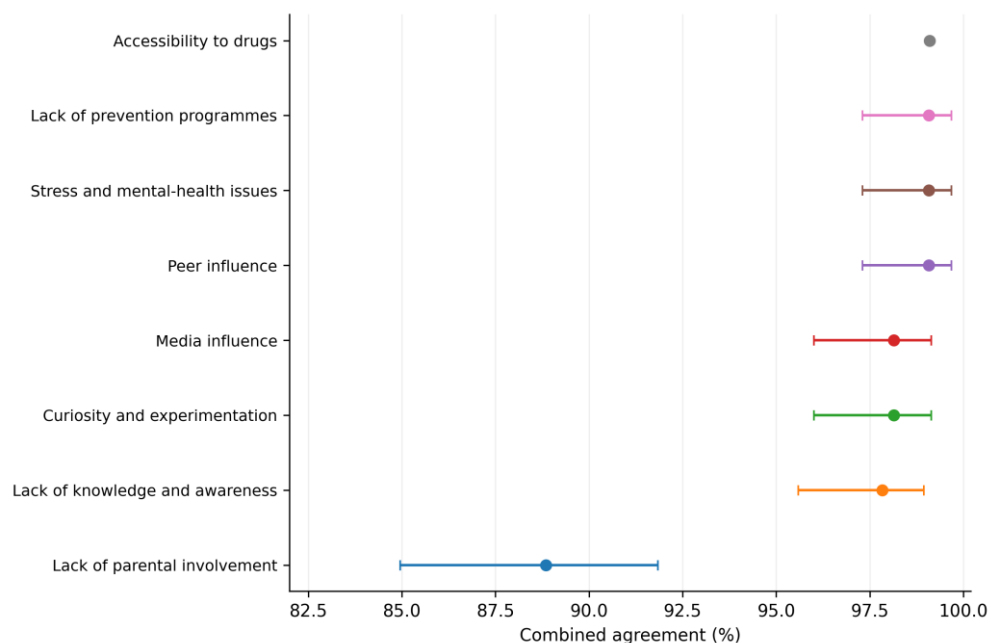


Figure 2: Ranked combined endorsement of perceived determinants with 95% confidence intervals

The intervals overlapped substantially, so no statistically significant between-item difference is claimed.

4. DISCUSSION

4.1 Principal findings

A striking feature of the findings was the breadth of endorsement across the determinants examined. Peer influence, lack of prevention programmes, stress and mental-health issues, curiosity and experimentation, media influence, and lack of knowledge and awareness all received very high levels of agreement. Lack of parental involvement was also widely endorsed, although less uniformly than the other determinants. Accessibility to drugs was similarly rated highly. The pattern suggests that respondents did not understand adolescent drug abuse as arising from a single behavioural influence. Instead, explanations extended across personal, interpersonal and environmental conditions.

This pattern is consistent with recent African evidence showing that adolescent substance use is embedded in multiple interacting risk environments. A 2025 systematic review and meta-analysis of 63 African studies identified individual, family, socio-economic, environmental and non-familial social-network factors as relevant to adolescent substance use, with peer substance use among the more consistent correlates (Jumbe et al., 2025). More recent analysis of Global School-

based Health Survey data from 25 African countries likewise found substance use to be associated with a combination of family, emotional and school-related circumstances, including parental tobacco use, bullying, unauthorised school absence, sadness and hopelessness (Pokothoane et al., 2025). Nigerian evidence reaches a comparable conclusion. A systematic review by Ekpenyong et al. (2024) identified age, curiosity, limited parental monitoring, peer influence, stressful life events, advertising, availability and accessibility among factors associated with adolescent alcohol and tobacco use. The present findings therefore fit more convincingly within a multi-level explanation of adolescent drug abuse than within an account centred on personal choice alone.

4.2 Peer influence and the interpersonal environment

Peer influence was endorsed by 99.1% of respondents when agreement and strong agreement were combined. This near-unanimous response indicates that peer relationships occupied a central place in how respondents understood drug abuse among secondary school students. The finding should not be interpreted as evidence that peers caused individual respondents to use drugs, since peer behaviour and respondents' own substance-use trajectories were not measured longitudinally. It does, however, identify peer influence as a highly salient perceived determinant within the study setting.

Longitudinal evidence lends plausibility to this perception. Watts et al. (2024), in a meta-analysis of 27 independent studies, found that adolescents changed their substance-use behaviour in the direction of peers' actual or perceived use, even after earlier individual substance use had been accounted for. The importance of perceived use is particularly relevant here because adolescents may respond not only to direct encouragement, but also to beliefs about what friends regard as normal or socially acceptable. Peer effects may therefore operate through modelling, social approval, opportunities for use and perceived group norms rather than overt pressure alone (Watts et al., 2024). African evidence also supports the importance of peer networks, although the magnitude and form of association vary between populations and substances (Jumbe et al., 2025).

The finding has implications for the design of prevention initiatives. Messages that simply advise adolescents to resist "peer pressure" may offer an incomplete response to a more complex social process. Prevention is more likely to be meaningful when it addresses perceived norms, social rewards, friendship-group expectations, refusal skills and the possibility that adolescents select friends who share existing behavioural preferences. This distinction is important because similarity between friends can reflect both socialisation and selection. Cross-sectional surveys cannot separate these processes, reinforcing the need for prospective and social-network designs in subsequent Nigerian research.

4.3 Drug accessibility as an environmental condition

Accessibility to drugs received one of the highest levels of endorsement. The percentage distribution indicates that respondents regarded access to substances as an important part of the problem.

The prominence attached to accessibility is consistent with evidence that substance-use behaviour is partly shaped by the environments in which products can be obtained. Martín-Turrero et al. (2024) reviewed 31 studies involving more than 500,000 adolescents and found that greater geographic availability of alcohol was positively related to drinking prevalence in more than half of the associations examined and to risky drinking patterns in approximately three-fifths. The associations differed according to how availability was measured and according to local context, illustrating that access is not a simple exposure. Nevertheless, the review provides support for treating availability as an environmental component of adolescent substance use rather than merely an individual preference (Martín-Turrero et al., 2024).

This interpretation is particularly relevant to Nigeria, where the substances encountered by secondary school students can include both regulated products and illicit or non-conventional substances. Nabofa's (2021) review identified alcohol, cannabis, tobacco and cigarettes among the more frequently reported substances used by Nigerian secondary school students, while also documenting less frequently reported substances such as tramadol, inhalants and other psychoactive products. The findings from Okada therefore point towards a prevention problem that may require attention to the local substance environment as well as classroom education.

4.4 Stress, mental-health difficulties, curiosity and experimentation

Stress and mental-health issues attracted particularly strong endorsement, with 99.0% of respondents agreeing or strongly agreeing that they were relevant to drug abuse. Curiosity and experimentation were also endorsed by 98.1%. These findings identify two potentially different pathways. One concerns substance use as a possible response to distress, while the other concerns exploratory behaviour and novelty-seeking during adolescence. They should not be collapsed into a single psychological explanation because their underlying motivations and preventive implications are different.

Evidence concerning stress is substantial. Hoffmann and Jones (2022) reviewed 109 studies examining cumulative stressors and adolescent substance use and found a consistent, although generally modest, association between accumulated stressful experiences and substance use. Recent African evidence also indicates that emotional difficulties are relevant. Pokothoane et al. (2025) found that sadness and hopelessness were positively associated with current alcohol, cigarette and marijuana use across the African countries examined. These findings do not establish that emotional distress inevitably produces substance use, but they support the view that prevention programmes should be capable of recognising emotional and psychosocial vulnerability rather than focusing solely on knowledge of drug-related harms.

Curiosity requires a different interpretation. Experimentation can occur in the absence of significant psychological distress, particularly where substances are visible, socially normalised or easily accessible. The Nigerian systematic review by Ekpenyong et al. (2024) specifically identified curiosity among factors associated with adolescent tobacco and alcohol use. The very high endorsement of both curiosity and accessibility in the present findings suggests that prevention messages may need to address the interaction between willingness to experiment and opportunities to obtain substances, while avoiding any claim that the present data demonstrate such an interaction statistically.

4.5 Parental involvement and the family context

Lack of parental involvement received the lowest combined endorsement among the eight determinants, but agreement remained high at 88.9%. Its lower endorsement relative to the other items should therefore not be read as evidence that family influence was unimportant. Rather, respondents appeared somewhat less unanimous about its role than about peer influence, stress, accessibility or inadequate prevention.

Recent meta-analytic evidence supports a protective role for parental monitoring. Pinquart and Reeg (2025), synthesising 571 studies involving more than two million participants, found a small-to-moderate inverse association between parental behavioural control or monitoring and substance use. Associations were strongest for parental knowledge and adolescents' own disclosure, suggesting that effective monitoring may depend on communication and relationship quality rather than surveillance alone. A systematic review by Rodríguez-Ruiz et al. (2025) similarly found that family cohesion, monitoring, communication and other family characteristics could modify the relationship between parental and adolescent substance use. These findings provide a more refined interpretation of "parental involvement" than simple presence or supervision.

The implication is that parental involvement should not be framed exclusively as control. Prevention efforts may benefit from strengthening parent-adolescent communication, clear expectations, awareness of adolescents' activities and relationships, and opportunities for voluntary disclosure. The current survey did not measure these separate dimensions, so no claim can be made about which form of parental involvement mattered most in Okada.

4.6 Media influence, knowledge and prevention programmes

Media influence was endorsed by 98.1% of respondents. Contemporary evidence makes this finding increasingly important because adolescents encounter substance-related messages not only through conventional advertising but also through social-media content generated by peers, influencers, commercial actors and users themselves. Purba et al. (2023) synthesised evidence from 126 studies involving more than 1.4 million adolescents and found that frequent social-media use was associated with several health-risk behaviours, including alcohol, tobacco and drug use. Exposure to online content depicting health-risk behaviour was also associated with increased odds of some corresponding behaviours. Similarly, Cheng et al. (2024) found significant relationships between young people's engagement with alcohol-related social-media content and alcohol consumption. These associations do not mean that media exposure invariably causes substance use, but they indicate that media environments form part of the contemporary risk context in which attitudes and perceived norms develop.

Lack of knowledge and awareness was endorsed by 97.8%, while lack of prevention programmes was endorsed by 99.1%. These findings might suggest that respondents saw formal prevention as inadequate or insufficiently visible. They should not, however, be interpreted as evidence that information alone would prevent drug abuse. Recent intervention evidence is considerably more cautious. Jenkins et al. (2026), in an overview of 43 systematic reviews and 60 randomised controlled trials, found variable effects of school-based substance-use interventions. Moderate-quality evidence suggested short-term reductions in tobacco use for some teaching and learning interventions, while effects on alcohol, cannabis and illicit drug use were less consistent. The authors argued for broader whole-school approaches rather than reliance on classroom information alone.

Whole-school evidence points in a similar direction. Lekamge et al. (2025) found that interventions addressing the wider school environment can influence selected mental-health and risk-behaviour outcomes, although effects varied substantially between programmes and outcomes. Earlier scoping work also showed that adolescent substance-use prevention delivered in educational settings encompasses social competence, family engagement, skills development and broader health-promotion approaches rather than information provision alone (Liu et al., 2023). The strong endorsement of inadequate prevention in Okada therefore supports the case for prevention strategies that combine knowledge with social, behavioural, family and environmental components.

4.7 Implications for prevention and policy

The determinant pattern supports a multi-component prevention response. Peer influence, psychosocial stress, accessibility, parental involvement, media exposure and perceived deficiencies in prevention were all prominent. Interventions directed at only one of these domains risk leaving other important conditions unchanged. School-based prevention could therefore combine accurate drug education with social-norm correction, peer-resistance and decision-making skills, emotional-support pathways, parent engagement and referral mechanisms for students experiencing psychological distress.

Environmental measures also warrant consideration. Where substances are readily accessible, school-level education operates within a setting that may continue to facilitate experimentation. Prevention policy should therefore be connected to community-level action concerning access, enforcement, retail environments and youth exposure. The current evidence does not identify the specific sources of substances in Okada, so regulatory recommendations should be informed by further local investigation rather than assumed from the present responses.

A Nigerian intervention precedent is available. The Unplugged programme, evaluated through a cluster randomised controlled trial in Nigerian secondary schools, demonstrated that a structured school-based intervention could influence recent alcohol use and several psychosocial outcomes, although effects were not uniform across substances (Vigna-Taglianti et al., 2021). More recent international evidence similarly warns against expecting one programme to produce identical effects across tobacco, alcohol, cannabis and other drugs (Jenkins et al., 2026). Prevention should therefore be evidence-based, developmentally appropriate and adapted to the particular substance environment rather than implemented as a generic anti-drug message.

4.8 Strengths and limitations

A strength of the analysis is its focused examination of a defined determinant domain rather than combining awareness, prevalence perceptions, determinants and perceived effects into a single undifferentiated outcome. The eight determinant items also allowed comparison across personal, interpersonal and environmental explanations while preserving the original response categories. The very high endorsement across several items is itself an important empirical pattern.

Several limitations should temper interpretation. The cross-sectional design prevents causal inference, and the responses measured perceptions of determinants rather than prospectively observed causes of respondents' own substance use. Self-reported perceptions may also be affected by social desirability or prevailing community narratives about drug abuse. The sample was drawn from one community, limiting generalisability beyond the study setting. Finally, the determinant items were not demonstrated to form validated psychometric dimensions, so their organisation into individual, interpersonal and environmental levels should be understood as a conceptual framework for interpretation rather than an empirically

derived factor structure.

These limitations do not remove the principal contribution. The findings show that adolescents in the study setting perceived drug abuse through several overlapping domains, with especially strong emphasis on peer influence, accessibility, psychological stress, experimentation, media exposure and perceived deficiencies in prevention. This pattern strengthens the case for adolescent substance-use prevention that addresses the social and environmental circumstances surrounding behaviour rather than relying exclusively on individual knowledge or personal responsibility.

5. CONCLUSION

The findings indicate that secondary school students in Okada perceived drug abuse as a problem shaped by several interrelated influences rather than a single dominant factor. Peer influence, accessibility to drugs, stress and mental-health difficulties, curiosity and experimentation, media influence, limited knowledge and awareness, inadequate prevention programmes, and lack of parental involvement all received substantial endorsement. The concentration of responses across these domains suggests that adolescent drug abuse is understood within a broader social and environmental context that extends beyond individual decision-making.

Peer influence emerged as one of the most strongly endorsed determinants, but its prominence should not obscure the importance attached to other conditions. Accessibility to drugs, psychological stress and perceived inadequacies in prevention were similarly prominent. This pattern supports prevention approaches that address the settings in which adolescents encounter substances, form behavioural expectations and respond to social and emotional pressures.

The findings also reinforce the need to avoid overly narrow prevention strategies. Information-based campaigns may have limited effect when adolescents perceive drug abuse as connected simultaneously to peer relationships, emotional pressures, family involvement, media exposure and ready access to substances. School-based prevention should therefore be embedded within broader efforts that include peer-focused interventions, psychosocial support, parental engagement, appropriate referral pathways, strengthened prevention programming and community action aimed at reducing adolescent access to psychoactive substances.

The results should nevertheless be interpreted within the limits of the available data. The cross-sectional design does not establish causality, and the determinant items represent respondents' perceptions rather than objectively verified causes of individual substance use. These limitations justify cautious interpretation and strengthen the case for future longitudinal and mixed-methods research that can examine how perceived determinants relate to actual substance-use behaviour over time.

Despite these constraints, the paper provides a focused account of how secondary school students in Okada understand the conditions surrounding drug abuse. The findings point towards a prevention agenda that is multi-level, context-sensitive and responsive to the social, psychological and environmental realities recognised by adolescents themselves.

AUTHOR CONTRIBUTION

All authors played a substantive role in shaping this study and developing the manuscript. T.O.O., K.A., F.O.E., B.K.A., N.D.U., O.J.R., and E.O. conceptualised the study and designed the overall research framework under the supervision of E.O. and B.S.E. Data analysis, interpretation and validation of findings were carried out collaboratively, with each author contributing to the discussions that informed the final results. D.I.O. and K.O.O. prepared the initial manuscript draft, covering the introduction, methods, results and discussion. Co-authors strengthened the analysis, offered detailed revisions and enhanced the clarity and coherence of the final document. Every author reviewed the complete manuscript, approved the final version and accepted responsibility for the integrity of the work.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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