

Prevalence and Perception of Psychoactive Substance Use among Secondary School Students in Obio-Akpor L.G.A, Rivers State, Nigeria

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Abstract: *Psychoactive substance use (PSU), which is the intake of substances that affect mental processes through their action on the central nervous system, remains a significant public health challenge globally and in Sub-Saharan Africa. This study aims to explore the prevalence and perceptions of PSU among secondary school students of Obio-Akpor L.G.A in Rivers State, Nigeria. The study adopted a mixed-method descriptive cross-sectional design. A sample of 561 secondary school students were randomly selected to complete a structured questionnaire. The findings reveal a 75.8% prevalence. Male students reported higher involvement in PSU than females, while perceptions of PSU were nearly evenly divided, with females more likely to hold negative views. In addition, a large proportion of the students reported initiating PSU at or before the age of ten. PSU positively correlated with perceived positive effects while correlation with negative effects was weak and non-significant. These results suggest that there is an urgent need for targeted, gender-sensitive preventive interventions and early education programs to address PSU among secondary school students. The findings can guide policymakers, educators, healthcare professionals, and community stakeholders to develop evidence-based interventions and gender-sensitive awareness programmes that address males' higher usage and challenge positive perceptions of drug use.*

Keywords: psychoactive substance use, secondary school students, perception, prevalence, Rivers State, Nigeria

1. Introduction

Globally and in Sub-Saharan Africa, the escalating prevalence of psychoactive substance use among adolescents, particularly within secondary school populations, represents a significant public health concern because early exposure undermines physical and mental health, educational attainment, and long-term social functioning (Ebrahim et al., 2024). Adolescence is a critical developmental phase characterised by accelerated biological maturation, evolving cognitive capacities, and shifting social relationships, which heighten susceptibility to experimentation and risk-taking behaviours including the use of psychoactive substances such as alcohol, tobacco, cannabis, prescription medications used non-medically (e.g., tramadol), inhalants, and other illicit drugs. According to Nabofa (2021), psychoactive substance use is increasingly becoming a secondary school student subculture in Nigeria, posing serious threats with far-reaching consequences for the wider society. School-based and community studies reveal substantial variations in the prevalence of psychoactive substance use by substance type, gender, and locality, yet collectively highlight persistent exposure and early experimentation among adolescents (Obadeji et al., 2020; Idowu et al., 2023; Danraka et al., 2023).

Perceptions, attitudes and beliefs about psychoactive substance use, whether considered harmful or beneficial, play an important role in its initiation and continued use. Adolescents who believe that psychoactive substances provide social, emotional, or performance benefits are more likely to experiment with and continue using them. Conversely, stronger negative perceptions, such as high-perceived risk, moral concerns, or health-related fears, are associated with lower engagement in psychoactive substance use (Ibighami et al., 2023). Across literature, gender differences in both prevalence and perception are commonly reported with males reporting higher rates of use, while females more frequently express negative perceptions toward psychoactive substance use (Obadeji et al., 2020; Ebrahim et al., 2024).

Recent urban studies in Nigeria have revealed notable shifts in the patterns of psychoactive substance use among secondary school adolescents. One emerging trend is the rising misuse of prescription opioids, particularly tramadol, which, though originally developed for pain management, is increasingly being consumed non-medically for its mood-elevating and stimulating effects (Emmanuel et al., 2024; Kolawole et al., 2025). The proliferation of informal drug markets and the absence of strict regulation make these substances easily accessible, promoting early experimentation among young people. Alongside this, there is a growing concern over the use of non-conventional substances such as glue, correction fluid, gasoline, aerosols, paint thinners, and concoctions made from fizzy drinks mixed with analgesics or caffeine-based beverages (Ogunwale et al., 2022; Nawi et al., 2021; Olanrewaju, Afolaranmi, and Oladipo, 2022). Some adolescents have also been reported to inhale sewer gas or use locally available plants for their psychoactive effects (Ogunwale et al., 2022; Nawi et al., 2021; Olanrewaju, Afolaranmi, and Oladipo, 2022). The appeal of these unconventional substances often lies in their availability, affordability, and perceived safety, as they can be obtained from household items, roadside vendors, or school environments without suspicion. Such accessibility not only lowers the threshold for experimentation but also contributes to the normalization of substance use within adolescent peer groups.

Although national-level reviews have shed light on adolescent psychoactive substance use in Nigeria, patterns of use remain highly context-dependent, varying significantly across regions and communities. In many urban Local Government Areas (LGAs) of the Niger Delta, including Obio-Akpor in Rivers State, there is still a paucity of current, context-specific empirical data. Obio-Akpor, with its blend of urban and peri-urban communities, presents a complex social landscape where economic disparity, youth unemployment, peer culture, and exposure to urban lifestyles intersect. These socio-economic and cultural realities not only shape adolescents' attitudes but also influence the accessibility and normalization of psychoactive substance use (Onukwufor and Chukwu, 2017; Olanrewaju et al., 2022). The proliferation of unregulated drug markets, increasing social media influence, and the growing culture of "recreational highs" among these young people have further compounded the problem, linking substance use to broader social issues such as truancy, school dropout, cultism, and juvenile delinquency. Within this context, psychoactive substance use among adolescents is a reflection of deeper social and economic instability affecting the region.

Theoretically, this study draws on Bandura's social cognitive (social learning) theory, which posits that human behaviour is largely acquired through the observation and imitation of others within social contexts (Bandura, 1986). Central to this framework is the concept of observational learning, which involves four key processes (attention, retention, reproduction, and motivation). Among secondary school students, these processes play a critical role in the initiation and maintenance of psychoactive substance use. Adolescents often observe peers, older youths, or media figures using substances such as alcohol, cannabis, marijuana, tramadol, or codeine-based syrups among many others and pay attention to the perceived positive outcomes, such as social acceptance, confidence, performance enhancement or stress reduction. When such behaviours appear rewarding, students are likely to retain and mentally rehearse them, eventually reproducing the same actions when opportunities arise. The motivation to persist in such use is further reinforced by social approval, peer validation, or emotional relief derived from the behaviour.

In contemporary society, these dynamics are magnified by digital and media influences, which have become dominant agents of socialisation. Social media platforms such as TikTok, Instagram, and YouTube expose adolescents to influencers and musicians who glamorise substance use, portraying it as fashionable or status-enhancing. Through these channels, students experience vicarious reinforcement which normalises substance use and diminishes perceived risks. Complementing this is the expectancy theory, which emphasizes that individuals are driven by the anticipation of certain outcomes; thus, adolescents who perceive psychoactive substance use as a means to gain confidence, social belonging, or emotional relief are more likely to initiate and sustain use (Ibighami et al., 2023; Idowu et al., 2023).

The ecological perspective further situates these learned behaviours within the broader social systems that influence adolescent development. It recognises that individual choices are deeply embedded within overlapping environmental contexts which are family, school, peer group, community, and the wider socio-economic structure. From an ecological standpoint, adolescent substance use emerges as a multi-layered social phenomenon, a reflection of broader systemic conditions that nurture vulnerability while constraining protective factors and not solely the product of personal choice or imitation. Within this framework, weak parental supervision diminishes the internalisation of behavioural boundaries, allowing adolescents greater exposure to deviant peer networks and risky experimentation. Peer influence, often expressed through subtle social pressure or the desire for belonging, reinforces substance use as a means of acceptance and identity formation within adolescent groups.

Similarly, socio-economic hardship, marked by unemployment, poverty, and lack of recreational outlets, creates psychological stressors that make substance use appear as a coping or escapist mechanism. Furthermore, the easy availability of psychoactive substances in many communities lowers both physical and moral barriers to use. Research in Nigerian and African contexts corroborates these interlocking influences, showing that adolescents' exposure to drug-using environments, combined with limited family and institutional monitoring, significantly heightens susceptibility to substance initiation and dependence (Olanrewaju et al., 2022; Azi and Maduka, 2021; Dumbili et al., 2020).

In adolescent substance use research, perceptions about psychoactive substances play a critical role in shaping actual behaviour. For instance, perceived positive functions such as mood enhancement and social belonging were shown to be significantly associated with more frequent use among adolescents (Sloboda et al., 1994; Allen et al., 2025). Conversely, adolescents who perceive greater harm or risk in substance use tend to have lower prevalence rates; for example, studies show that as perceived risk decreases with age, initiation becomes more likely (Sloboda et al., 1994; Allen et al., 2025). A recent qualitative study based on in-depth interviews with adolescents aged 14–18 by Avcı (2025) also found that perceived emotional and social benefits continue to play a significant role in substance use initiation and maintenance.

According to social cognitive and behavioural theories, what students believe about substances, rather than what is objectively true, often determines their behaviour. Enriquez-Guerrero, Barreto-Zorza, Lozano-Vélez, and Ocampo-Gómez (2021) opined that perception is an active mental process through which individuals construct an understanding of reality. This process involves interpreting information from three main sources which are the environment (habitat), the actions occurring within that environment, and the individual's internal state (thoughts and emotions). Emotions significantly influence perception, meaning that how adolescents feel can shape how they interpret and respond to their surroundings (Enriquez-Guerrero et al., 2021). However,

perception is also socially conditioned; adolescents' views are influenced by the social groups they belong to, their interactions with their environment, and their exposure to substances. Peer relationships, cultural values, and lived experiences therefore play major roles in shaping how young people view psychoactive substances (Enriquez-Guerrero et al., 2021).

Díaz-Geda, Alonso-Fernández, and Becona (2018) demonstrated that sociocultural and environmental factors such as permissive social norms and biological factors like gender and genetics significantly influence adolescents' experimentation with and use of psychoactive substances in Spain. Family background, school environment, and peer influence were identified as critical variables that either encourage or deter such behaviours. Similarly, in Nigeria, cultural-context studies reveal mixed perceptions of psychoactive substance use. A community-based study among Southern Nigerians indicated that roughly half of respondents believed that psychoactive substances were necessary for social gatherings or as a marker of social status, while over half denied that users were criminals (Izuka, 2023). Another Nigerian study found that although awareness of the harmful effects of substance use was high, usage rates remained elevated, suggesting that knowledge of risk alone may not deter behaviour (Adibe, Anene-Okeke, Igboeli and Anosike; 2022).

Qualitative research provides further insight into this relationship between perception and use by showing how adolescents describe the causes, consequences, and contexts of psychoactive substance use. Enriquez-Guerrero et al. (2021) reported that adolescents often perceived access to substances within schools as "easy" and identified factors such as domestic abuse, bullying, and emotional distress as key triggers. These perceived causes and consequences actively shape their attitudes: adolescents who view psychoactive substance use as a coping mechanism or a means of social belonging are more likely to develop permissive perceptions, thereby increasing the likelihood of use. Furthermore, a review cited in Enriquez-Guerrero et al. (2021) on secondary school students' perceptions of drug use revealed that substance use among family members increased social tolerance and normalized such behaviour among secondary school students.

The role of gender in psychoactive substance use among adolescents is multifaceted, reflecting not only differences in prevalence but also variations in patterns, motivations, and risk factors. Historically and across regions, males have exhibited higher rates of substance use, including illicit drugs and tobacco, with gendered socialization, cultural expectations, risk-taking behaviour, and peer dynamics contributing to this disparity (Shuaibu, Haliza, Samah, and Zulkefli, 2020; Bhatia, Mikulich, Natvig, and Sakai, 2023). Males also tend to initiate use at an earlier age and experiment with a wider range of substances such as cannabis, tramadol, alcohol, and codeine (Bhatia et al., 2023; Shuaibu et al., 2020). Recent evidence indicates a gradual narrowing of the gender gap in adolescent substance use. A WHO/Europe report (2024) revealed that by age 15, girls in several European countries had reached or even surpassed boys in levels of alcohol, e-cigarette, and smoking use. In South Africa, Mavundla et al. (2024) similarly reported that female high-school learners demonstrated a higher frequency of alcohol use (27.7%) than males (24.5%), suggesting emerging shifts in gender-specific risk.

In Nigeria, however, male adolescents continue to show higher prevalence overall (Egbeonu, Egbeonu, and Samuel; 2017; Awoniyi, 2023). Egbeonu et al. (2017) found that males were more prone to abuse most substances than females (68% vs 32%) among secondary-school students in Niger State. This disparity may be partly explained by greater social freedom and mobility granted to boys, which increases their exposure to environments where substance use is normalized or even encouraged (Egbeonu et al., 2017; Awoniyi, 2023). Peer pressure also plays a particularly influential role, as male adolescents often seek validation and social status through behaviours that demonstrate toughness or defiance (Awoniyi, 2023). In contrast, female adolescents generally report lower rates of substance use, though recent studies show a gradual rise in engagement, particularly in the misuse of prescription drugs and sedatives (Okoye et al., 2021; Awoniyi, 2023; Adegoke, 2025). Their motivations are frequently rooted in emotional distress, academic pressure, and interpersonal challenges. Females are more likely to use substances covertly, reflecting prevailing gender norms surrounding femininity, morality, and obedience moreover, the stigma associated with female substance use often leads to concealment and underreporting, which complicates assessment and intervention efforts (Aguocha, Duru, Ndukuba, and Nwefoh, 2021).

Perceptual and attitudinal differences further distinguish the genders. The perception of risk, social consequences, and moral judgement often shapes how each gender approaches substance use, with males typically minimizing potential harms and females internalizing greater fear of social repercussions (Fonseca, 2021). Similarly, males tend to display more permissive attitudes toward substance use, perceiving it as normative or even desirable, whereas females frequently express ambivalence or moral disapproval, though this does not always translate into abstinence (Shuaibu et al., 2020). Recent cross-regional evidence reinforces these gendered distinctions. A systematic review of adolescent substance use in sub-Saharan Africa by Ebrahim, Adams, and Demant (2024) confirmed that gender remains a significant determinant of substance-use patterns, with males typically displaying higher prevalence rates and distinct motivational drivers compared to females. Likewise, a cross-national study across 45 countries reported that although boys were generally more likely to use alcohol and tobacco, the gender gap narrowed considerably in more gender-equal societies, indicating that sociocultural dynamics and gender norms strongly influence both access to and motivations for substance use (Inchley et al., 2022).

Secondary school students' initiation of psychoactive substance use (PSU) represents a critical entry point into later substance involvement, often marking the transition from experimentation to habitual use. Evidence indicates that initiation typically occurs between the ages of 12 and 15, coinciding with early to mid-adolescence when curiosity, identity exploration, and peer attachment intensify (Richmond-Rakerd et al., 2017; Atherton et al., 2015). Adolescents who initiate use during this stage are at greater risk of progressing to heavier and more persistent use, particularly when early exposure occurs in permissive social or community settings (Ebrahim, Adams, and Demant, 2024). Studies in Nigeria and other African countries similarly report mean ages of first use clustering around the junior-secondary level, underscoring the school environment as a central context for early exposure (Shuaibu et al., 2020).

Initiation often occurs in spaces easily accessible to adolescents such as school premises, school gates, peer gatherings, community events, and nearby retail outlets where substances are readily sold (Obadeji et al., 2020; Ogunwale et al., 2022). Many first-time users are introduced to alcohol, cigarettes, or prescription medications by friends or older peers, though in some cases parents or siblings serve as sources of supply (Shuaibu et al., 2020). Qualitative studies show that initiation may be opportunistic, that is arising from spontaneous offers at social events, or deliberate, as adolescents seek relief from stress, curiosity, or social belonging (Enriquez-Guerrero et al., 2021). In contexts where enforcement is weak, students report purchasing substances directly from vendors or pharmacies without restriction, demonstrating how structural accessibility amplifies individual and social risk (Ogunwale et al., 2022).

Beyond alcohol and tobacco, a growing body of evidence points to increasing initiation of non-conventional psychoactive substances among secondary-school students. These include every day or industrial products such as correction fluid, glue, gasoline, aerosols, paint thinners, and cough syrups containing codeine, as well as concoctions mixing fizzy drinks with analgesics or energy beverages (Obadeji et al., 2020; Nawi et al., 2021). In certain communities, adolescents also experiment with locally available plants that produce mind-altering effects and even inhale sewer gas or exhaust fumes to achieve euphoria. These substances are inexpensive, legal, and widely available, making them some of the first psychoactive agents adolescents are likely to encounter (Ogunwale et al., 2022). Their accessibility lowers the threshold for experimentation as many can be obtained from school stores, neighbourhood kiosks, or household supplies without adult suspicion. Olanrewaju, Afolaranmi, and Oladipo (2022) note that availability, rather than deliberate pursuit of intoxication, frequently drives early experimentation, especially in contexts where regulation of over-the-counter medications and inhalants is poor. Easy access, combined with curiosity and peer encouragement, normalises non-conventional substance use and can serve as a gateway to stronger or illicit drugs (Ebrahim et al., 2024).

The determinants of initiation remain multidimensional, reflecting the interplay of personal, relational, and environmental factors. At the individual level, curiosity, sensation-seeking, poor emotional regulation, and low perception of risk consistently predict early experimentation (Atherton et al., 2015; Nawi et al., 2021). Some adolescents use substances as coping mechanisms for emotional distress, academic pressure, or family conflict, aligning with self-medication theories that link affective vulnerability to early use (Fonseca, 2021). Peer influence is one of the strongest proximal factors, as affiliation with users reinforces social acceptance and portrays use as a marker of maturity or confidence (Shuaibu et al., 2020; Nawi et al., 2021). Family dynamics such as parental use, weak supervision, and poor communication further increase exposure, while supportive parenting buffers against peer and environmental risk (Shuaibu et al., 2020; Nawi et al., 2021).

School and community contexts also shape initiation. Weak school attachment, poor academic performance, and limited structured engagement increase risk (Ogunwale et al., 2022). Community-level factors such as substance availability, poverty, and permissive social norms reinforce exposure, particularly in urban areas where pharmaceutical and chemical products are easily accessible (Ebrahim et al., 2024). Adolescents in disadvantaged neighbourhoods with few recreational outlets often turn to substances for excitement or emotional escape. Cultural permissiveness also matters: in many Nigerian communities, mild stimulant or alcohol use among males is socially tolerated, lowering perceived risk and accelerating initiation (Awoniyi, 2023).

Underreporting complicates accurate estimation of initiation patterns, especially among female students, who may conceal use because of stigma surrounding female substance use and societal expectations of obedience and restraint (Aguocha, Duru, Ndukuba, and Nwefoh, 2021). Consequently, male rates of initiation appear consistently higher, though recent evidence suggests increasing experimentation among girls, particularly with prescription drugs and sedatives (Awoniyi, 2023; Adegoke, 2025). This shift underscores changing gender norms and the need for nuanced prevention strategies.

1.1 Research Objectives

This study was designed to address local evidence gaps in Obio-Akpor LGA and to inform contextually relevant prevention strategies.

The objectives were to:

1. determine the prevalence of psychoactive substance use among secondary school students in Obio-Akpor LGA.
2. examine gender differences in psychoactive substance-use prevalence and patterns.
3. describe students' positive and negative perceptions of psychoactive substance use.
4. assess the association between gender and perception of psychoactive substance use.
5. identify typical ages of first psychoactive substance use among students.
6. evaluate the relationship between prevalence of psychoactive substance use and students' perceptions.
7. examine relationships between psychoactive substance use and perceived positive and negative effects.

1.2 Research Questions

This study was guided by the following research questions:

1. What is the prevalence of psychoactive substance use among secondary school students in Rivers State, Nigeria?
2. Is there a significant difference in psychoactive substance use among secondary school students in Rivers State based on gender?
3. What is the overall distribution of perceptions of psychoactive substance use among secondary school students in Rivers State?
4. Is there a significant association between gender and perception of psychoactive substance use among secondary school students?
5. At what age do most secondary school students in Rivers State first engage in psychoactive substance use?
6. Is there a significant association between the prevalence of psychoactive substance use and students' perceptions of psychoactive substance use?
7. What is the relationship between psychoactive substance use and the perceived effects of such use among secondary school students in Rivers State?

2. Methods

2.1 Participants

The study population comprised secondary school students in Obio-Akpor Local Government Area (LGA), Rivers State, Nigeria. A total of 561 students participated in the study, selected through a multi-stage sampling technique that involved stratification of schools by type and random selection of classes within each school. Only students who provided assent and whose parents or guardians granted informed consent were included in the study. The mean age of participants was 15.7 years (SD = 2.13), with ages ranging from 12 to 19 years. Among them, 52.8% were male and 44.9% were female, while 2.3% did not indicate their gender. In terms of class distribution, 19.1% were in Junior Secondary (JSS) and 79.0% were in Senior Secondary (SSS) levels. The majority of students (72.1%) resided in urban areas of the LGA, while 27.9% lived in peri-urban communities.

2.2 Instruments

Demographic Information

Section A of the questionnaire elicited demographic details of respondents, including age (below 13 years, 14–17 years, 18 years and above), gender, parental marital status (married, divorced, widowed, or separated), and parental education (illiterate, primary, secondary, or tertiary). These variables were included to examine possible socio-demographic correlates of psychoactive substance use among secondary school students in Rivers State.

Psychoactive Substance Use

Section B of the instrument was adapted from the Drug Use Disorders Identification Test – Extended (DUDIT-E) DUDIT-E English version to assess the prevalence and patterns of psychoactive substance use. Items captured both frequency of use and age at first use across a range of substances (e.g., alcohol, tobacco, cannabis, amphetamines, cocaine, hallucinogens, inhalants, sedatives, opioids such as tramadol/codeine, and caffeine). Respondents rated frequency of use on a 5-point Likert-type scale (Never, Once or Twice, Sometimes, Often, Daily/Almost Daily). Age of initiation was categorized into Never Used, ≤10 years, 11–14 years, 15–18 years, and 19 years or more. This section provided data on both prevalence and initiation patterns of psychoactive substance use.

Perceived Positive Effects of Psychoactive Substances

A subscale of 11 items was developed based on the DUDIT-E framework DUDIT-E English version and adapted to the Nigerian adolescent context Prevalence and Perception questionnaire. Items measured perceived benefits of substance use, such as relaxation, increased self-confidence, creativity, and social belonging. Sample items include: “Alcohol and drugs make one sleep better” and “Alcohol and drugs make one develop more self-confidence.” Responses were rated on a 5-point Likert scale: 1 = Strongly Disagree to 5 = Strongly Agree. Higher scores indicated stronger endorsement of positive perceptions. The Cronbach’s α for this subscale in the pilot test was 0.82, indicating good reliability.

Perceived Negative Effects of Psychoactive Substances

The second subscale (10 items) assessed perceived harmful effects of substance use, adapted from DUDIT-E negative consequences items DUDIT-E English version. Items included medical, social, academic, and psychological consequences such as “Alcohol and drugs can make one have problems in school or at home” and “Alcohol and drugs can cause suicide thoughts.” Responses followed the same 5-point Likert scale (Strongly Disagree to Strongly Agree). Higher scores reflected greater recognition of the dangers of substance use. The reliability coefficient (Cronbach’s α) was 0.85, confirming internal consistency.

2.2.1 Validation and Adaptation Process

Before the main data collection, the instrument used for this study underwent a careful process of validation and adaptation to ensure it was both reliable and contextually appropriate for secondary school students in Rivers State. The validation process involved consultation with experts in counselling psychology as well as in tests and measurement, who reviewed the instrument for clarity, cultural relevance, and content adequacy. Their feedback guided necessary modifications, particularly in simplifying the language to ensure that the items were easily understood by adolescents without losing their original meaning or psychometric strength. Following the expert review, a pilot study was conducted with a group of 20 students who were not part of the main sample but shared similar characteristics with the target population. The purpose of this pilot phase was to identify any ambiguities, assess the time required for completion, and evaluate the internal consistency of the instrument. Results from the pilot test indicated satisfactory reliability across all subscales, with Cronbach’s alpha coefficients ranging between 0.81 and 0.85. These values reflected a high level of internal consistency, confirming that the instrument was suitable, reliable, and valid for measuring psychoactive substance use and related perceptions among secondary school students in the study area.

2.3 Method of Data Analysis

Data were analyzed using SPSS (Version 20) to answer the research questions and study’s hypothesis. Both descriptive and inferential statistics were applied, with frequencies and percentages summarizing respondents’ demographic characteristics such as age, gender, class level, and parents’ educational background. Inferential analyses, including T-test, Chi-square, ANOVA, Cluster analysis, and Pearson Product Moment Correlation (PPMC), were conducted to determine group differences, associations, and relationships among variables related to psychoactive substance use and perception.

3. Results

This section presents the results of the study on the prevalence and perception of psychoactive substance use (PSU) among secondary school students in Rivers State, Nigeria. Analyses were conducted using descriptive statistics, t-test, chi-square, ANOVA, cluster analysis, and Pearson product-moment correlation (PPMC). Figures and tables are placed at appropriate points to aid interpretation.

3.1 Demographic Characteristics of Respondents

Table 1: Demographic Characteristics of Respondents (N = 561)

Variable		Frequency	Percentage (%)
Age	10 - 12 years	23	4.1
	13 – 14 years	231	41.2
	15 – 16 years	240	42.8
	17 – 18 years	46	8.2
	19 years and above	10	1.8
	Missing values	11	2.0
	Total	561	100%
Gender	Male	296	52.8

	Female	252	44.9
	Missing values	13	2.3
	Total	561	100%
Class	Junior Secondary School	107	19.1
	Senior Secondary School	443	79.0
	Missing values	11	2.0
	Total	561	100%
Parent Marital Status	Married	435	77.5
	Divorced	20	3.6
	Widowed	31	5.5
	Separated	34	6.1
	Missing values	41	7.3
	Total	561	100%
Father's Highest Education Qualification	No Formal Education	24	4.3
	Primary Education	56	10
	Secondary Education	177	31.6
	Tertiary Education	279	49.7
	Missing values	25	4.5
	Total	561	100%
Mother's Highest Education Qualification	No Formal Education	25	4.5
	Primary Education	60	10.7
	Secondary Education	204	36.4
	Tertiary Education	243	43.3
	Missing values	13	2.3
	Total	561	100%

Source: Field survey, 2024

Note. Percentages are based on the total sample size (N = 561). Missing values represent participants who did not provide responses for a particular variable.

3.2 Research Question 1: What is the prevalence of psychoactive substance use among secondary school students in Rivers State, Nigeria?

Table 2: Prevalence of Psychoactive Substance Use among Secondary School Students

		Frequency	Percent
Psychoactive Substance	Never Use	136	24.2
	Used at least once	425	75.8

	Total	561	100.0
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Figure 1: Prevalence of Psychoactive Substance Use (N=561)

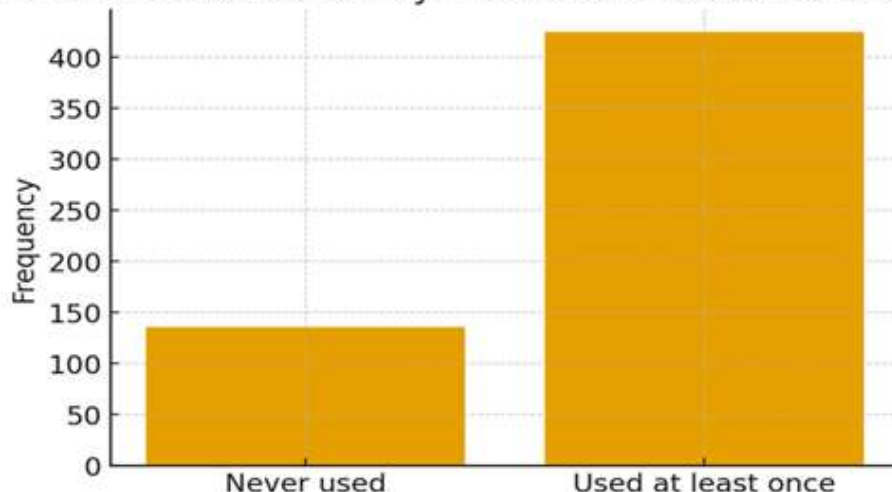


Table 2 showed the prevalence of psychoactive substance use among secondary school students. The results indicated that psychoactive substance usage is relatively prevalent among the surveyed group, with 75.8% (n = 425) of respondents reporting that they have used it at least once. In contrast, only 24.2% (n = 136) have never used psychoactive substance. These findings suggest that psychoactive substance use is common within the sample population implying that majority of secondary school students have used psychoactive substance at least once. Figure 1 below further illustrates Table 2.

3.3 Research Question 2: Is there difference in psychoactive substance use among secondary school students in Rivers State based on gender?

Table 3: Summary of T-test for independent measures showing comparison of PSU among secondary school students based on gender

SD –	Gender		N	Mean ($\bar{x}$)	SD	Df	T	Sig
	Psychoactive Substance Use	Male	296	3.078	3.397	546	2.684	.007
		Female	252	2.37	2.703			

Standard Deviation; df – Degree of Freedom

Table 3 showed the summary of t-test for independent measures comparing the psychoactive substance use among secondary school students based on gender. The result indicated that male students (N = 296) reported higher levels of psychoactive substance use (M = 3.08, SD = 3.40) compared to female students (N = 252), who had a lower mean score (M = 2.37, SD = 2.70). The mean difference between the two groups was 0.713. This implies that there is statistically significant difference in psychoactive substance use between males and females ($t(546) = 2.684$, $p = .007$). In other words, the result revealed that gender plays a significant role in psychoactive substance use among secondary school students, with males reporting significantly higher usage levels than females.

3.4 Research Question 3: What is the overall distribution in the perceptions of psychoactive substance use (PSU) among secondary school students in Rivers State?

Table 4: Frequency distribution of the Perception of PSU among secondary school students in Rivers State

PSU Perception Category	Frequency (n)	Percent (%)	Valid Percent (%)	Cumulative Percent (%)
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Negative	296	52.8	53.0	53.0
Positive	262	46.7	47.0	100.0
Total (Valid)	558	99.5	100.0	-

Note. PSU = Proactive Substance Use. Three cases (0.5%) were missing and excluded from valid percent calculations.

Frequency distribution of the Perception of PSU among secondary school students in Rivers State

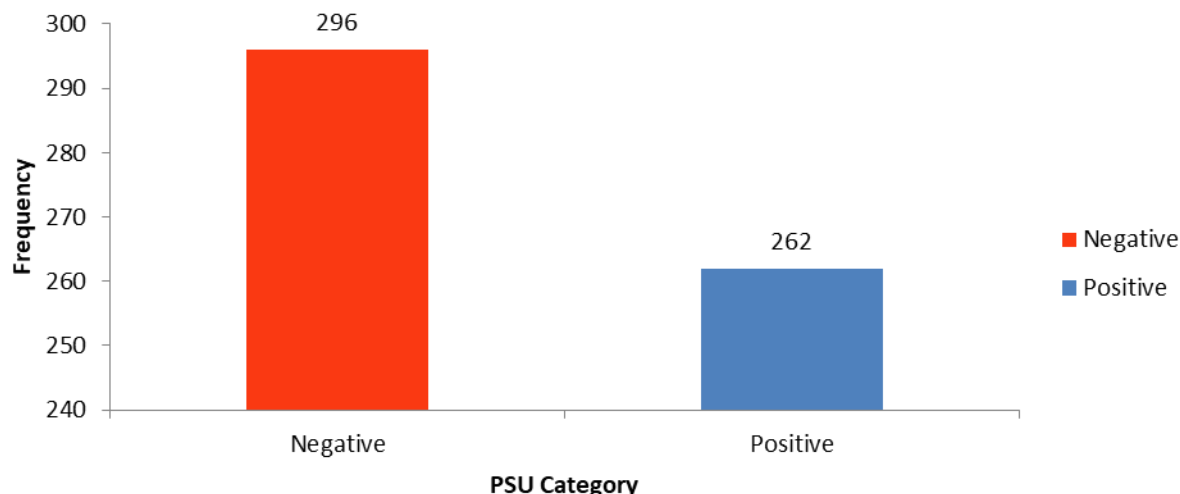


Figure 2:

Graphical representation of the Perception of Psychoactive Substance Use (PSU) among secondary school students in Rivers State

Table 4 showed the frequency distribution of the perceived effects of psychoactive substance use among secondary school students. The descriptive analysis revealed that 53% (n = 296) of students expressed a negative perception toward proactive substance use (PSU), while 47% (n = 262) reported a positive perception. This result indicated a slight predominance of negative perceptions within the sample. However, the nearly balanced distribution suggests that adolescents are divided in their attitudes toward PSU, which may reflect varying social and individual factors influencing their views.

3.5 Research Question 4: Is there a significant association between gender and perception of proactive substance use (PSU)?

Table 5: A Chi-square analysis showing the association between Gender and Perception of PSU among secondary school students in Rivers State

Gender	Negative n (%)	Positive n (%)	Row Total n (%)	Expected Counts (Neg./Pos.)
Male (n=294)	137 (46.6)	157 (53.4)	294 (100)	155.9 / 138.1
Female (n=251)	152 (60.6)	99 (39.4)	251 (100)	133.1 / 117.9
Total	289 (53.0)	256 (47.0)	545 (100)	-

Chi-Square: Pearson $\chi^2(1, N = 545) = 10.592, p = .001$

Table 4.2.4 showed a chi-square analysis of the association between gender and perception of PSU. The result revealed that there is a statistically significant association between gender and PSU perception, $\chi^2(1, N = 545) = 10.592, p = .001$. Females were more likely to report negative perceptions (60.6%) than males (46.6%). Males showed a higher proportion of positive perceptions (53.4%)

compared to females (39.4%). This implied that male tend to use proactive substances more than female because they perceived more benefits in PSU.

3.6 Research Question 5: At what age do most secondary school students in Rivers State first engage in psychoactive substance use?

Table 6a: ANOVA Table Showing Differences across Clusters of Psychoactive Substance Use

Psychoactive Substance	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	Df		
1. Alcoholic beverage (beer, wine, spirit)	96.446	4	.303	518	318.185	.000
2. Tobacco (cigarettes, cigars, pipe tobacco, snuff)	24.019	4	.234	518	102.619	.000
3. Cannabis (igbo, weed, hashish, ghanja, pot)	26.596	4	.316	518	84.143	.000
4. Amphetamines (uppers, crystal meth, mkpuru-mmiri, fire and glass, etc)	28.695	4	.104	518	276.911	.000
5. Cocaine	.101	4	.066	518	1.544	.188
6. Hallucinogens (LSD, mescaline, PCP, psilocybin, peyote)	3.102	4	.158	518	19.593	.000
7. Inhalants (glue, aerosol sprays or other gases)	3.446	4	.153	518	22.471	.000
8. Sedatives or sleeping pills (without prescription)	2.814	4	.190	518	14.829	.000
9. Heroin, tramadol, codeine, morphine or other pain-relievers (without prescription)	21.608	4	.207	518	104.411	.000
10. Caffeine (Nescafe or other types of coffee to stay awake/alert)	43.969	4	.432	518	101.892	.000

Table 6b: Distribution of psychoactive substance use among secondary school students based on age at first use

Number of Cases in each Cluster		
Cluster	1 (Never used it)	20
	2 (10 years or Less)	313
	3 (11 – 14 years)	23
	4 (15 – 18 years)	124
	5 (19 years or more)	43
	Missing values	38
	Total	561

The ANOVA results (Table 6a) indicated that there are significant differences across clusters of psychoactive substance use. The F-values and corresponding significance levels show that 1, 2, 3, 4, 6, 7, 8, 9, and 10 exhibited statistically significant variations across the groups ($p < .001$ for all). This suggested that usage of different forms of psychoactive substances significantly vary based on the age of first use, except for 5 (cocaine), which does not show meaningful differences.

Furthermore, Table 6b showed that the largest proportion of respondents reported initiating psychoactive substance use at age 10 years or younger (Cluster 2, 313 cases), while the smallest group comprises those who have never used psychoactive substances

(Cluster 1, 20 cases). The result highlighted the importance of early intervention efforts, as a significant number of secondary school students engage in psychoactive substance use at a young age.

3.7 Research Question 6: Is there a significant association between the prevalence of psychoactive substance use (PSU) and secondary school students' perceptions of PSU?

Table 7: A Chi-square analysis showing the association between Prevalence and secondary school students in Rivers State

Perception of PSU among

Prevalence of PSU	Negative n (%)	Positive n (%)	Row Total n (%)	Expected Counts (Neg./Pos.)
Never Use (n=136)	83 (61.0)	53 (39.0)	136 (100)	72.1 / 63.9
Used ≥ 1 time (n=422)	213 (50.5)	209 (49.5)	422 (100)	223.9 / 198.1
Total	296 (53.0)	262 (47.0)	558 (100)	-

Chi-Square: Pearson $\chi^2(1, N = 558) = 4.601, p = .032$

Table 7 showed a chi-square analysis of the association between prevalence and perception of PSU among secondary school students. The result revealed a statistically significant association, $\chi^2(1, N = 558) = 4.601, p = .032$. Secondary school students who had never used substances were more likely to have negative perceptions of PSU (61.0%) compared to those who had used substances at least once (50.5%). Conversely, those with prior use showed a more balanced perception, with nearly equal proportions holding negative (50.5%) and positive (49.5%) attitudes. This finding implied that substance use experience may influence attitudes toward PSU, potentially normalizing it among those who have engaged in it.

3.8 Research Question 7: What is the relationship that exists between psychoactive substance use and perceived used effects among secondary school students in Rivers State?

Table 8: Correlation matrix showing the relationship between Psychoactive Substance Use and Perceived used Effects among secondary school students

	Mean ($\bar{X}$)	S.D	1	2	3
1 Psychoactive Substance Use	2.75	3.123	1		
2 Perceived Positive Effects of PSU	24.91	10.621	.229**	1	
3 Perceived Negative Effects of PSU	41.47	9.008	-.081	.008	1

S.D – Standard Deviation; **. Correlation is significant at the 0.01 level (2-tailed)

Table 8 showed the relationship between psychoactive substance use and perceived used effects among secondary school students. The results revealed a significant positive correlation between PSU and perceived positive effects ($r = .229, p = .000$). This suggested that secondary school students who engage in substance use are more likely to perceive it as beneficial.

Conversely, there is a weak negative correlation between psychoactive substance use and the perceived negative effects of PSU ($r = -.081, p = .055$), but this relationship is not statistically significant. This implied that students' perception of the harmful effects of PSU does not strongly discourage their substance use. Additionally, the correlation between perceived positive and negative effects of PSU is very weak and non-significant ($r = .008, p = .855$), indicating that perceiving positive effects does not necessarily reduce awareness of potential harm. Therefore, the result showed that while perceived benefits may encourage psychoactive substance use, awareness of negative effects alone may not be an effective deterrent among secondary school students.

4. Discussion of Findings

The present study examined the prevalence and perception of psychoactive substance use (PSU) among secondary school students in Obio-Akpor Local Government Area (LGA), Rivers State, Nigeria. Specifically, it explored students' initiation age, gender differences, perceived positive and negative effects, and awareness levels.

4.1 Prevalence of Psychoactive Substance Use

The findings revealed a high prevalence of PSU among secondary school students in Obio-Akpor LGA, with many students reporting initiation at a very early age. This suggests that exposure to substances begins during formative years, raising serious concerns about the vulnerability of adolescents to health risks, addiction, and poor academic outcomes. Similar findings have been reported in other parts of Nigeria, where adolescents initiated substance use as early as in junior secondary school (Adeniyi et al., 2021; Nwagu et al., 2023). Early initiation increases the likelihood of dependence and long-term adverse health outcomes, consistent with international evidence (Johnston et al., 2022).

4.2 Gender Differences in Psychoactive Substance Use

The study showed significant gender differences in psychoactive substance use. Male students were more likely to report substance use compared to females, a finding consistent with existing research in Nigeria (Egbeonu et al., 2017; Awoniyi; 2023). Culturally, boys are often exposed to peer influence and social settings where substance use is normalized, while girls may experience stricter parental monitoring. However, emerging evidence suggests that the gender gap in substance use is narrowing due to changing social dynamics and peer influence (Okoye et al., 2021).

4.3 Perceptions of Psychoactive Substance Use

The findings revealed that students expressed mixed perceptions toward psychoactive substance use. While some held negative views about its harmful effects, others perceived it as a means of relaxation, boosting confidence, or enhancing social acceptance. A striking finding of this study was that students' perceived positive effects such as increased confidence, relaxation, or enhanced social belonging strongly influenced their substance use, while awareness of negative effects such as health risks or academic decline had little deterrent effect. This aligns with the theory of planned behaviour, which emphasizes that perceived benefits often outweigh risks in shaping adolescent decision-making (Ajzen, 1991). Similar studies in Nigeria and Sub-Saharan Africa have also reported that adolescents often prioritize short-term perceived gains over long-term risks (Osei-Bonsu et al., 2022; Eke et al., 2024).

4.4 Association between Gender and Perception of Psychoactive Substance Use

The findings indicated a significant relationship between gender and perception of substance use. Male students were more likely to exhibit permissive attitudes and view substance use as a normal or socially acceptable behaviour, whereas females were inclined to express negative perceptions and moral disapproval. This finding is consistent with earlier works suggesting that adolescent males tend to minimize potential harms while females internalize stronger social and moral boundaries regarding substance use (Fonseca, 2021; Shuaibu et al., 2020). The observed pattern reflects how socialization and cultural expectations shape gendered perceptions of drug use, as reported in related African studies (Ebrahim, Adams, and Demant, 2024).

4.5 Age of Initiation Psychoactive Substance Use

The findings showed that initiation of psychoactive substance use often occurs at a very early age, with the largest proportion of respondents reporting initiation at age ten years or younger. This early exposure indicates that adolescents are encountering substances during formative developmental stages, thereby heightening their susceptibility to adverse health, behavioural, and academic outcomes. The result aligns with previous Nigerian studies that have reported similar patterns of early experimentation among secondary school students (Shuaibu et al., 2020; Adeniyi et al., 2021). International research likewise affirms that early initiation is a critical predictor of subsequent substance dependence, cognitive impairment, and poor academic adjustment (Richmond-Rakerd, Slutsky, and Wood, 2017).

4.6 Association between Prevalence and Perception of Psychoactive Substance Use

The findings revealed a significant association between the prevalence and perception of psychoactive substance use among secondary school students. Those who had never used substances were more likely to hold negative perceptions of psychoactive substance use, whereas students who had used substances at least once demonstrated more balanced or permissive attitudes. This pattern suggests that direct experience with substance use may influence perceptions, leading to normalization or reduced sensitivity to the associated risks. The result supports the proposition of social learning theory, which explains that repeated exposure and

participation in a behaviour can shape individuals' beliefs and attitudes toward it (Bandura, 1977). Similar observations have been made in other Nigerian and Sub-Saharan African studies, where adolescents who engage in psychoactive substance use tend to rationalize or minimize its risks, often viewing it as a common or acceptable social practice (Osei-Bonsu et al., 2022; Eke et al., 2024).

4.7 Relationship between Psychoactive Substance Use and Perceived Effects

The findings of this study revealed a strong association between psychoactive substance use and perceived positive effects such as improved mood, relaxation, and sociability. Students who reported positive perceptions of psychoactive substances were more likely to engage in their use, suggesting that these perceived benefits serve as motivating factors. This finding aligns with previous research emphasizing that adolescents' beliefs about the benefits of substance use significantly predict their engagement levels (Fonseca, 2021; Atherton et al., 2015). Conversely, awareness of negative effects appeared to exert limited influence on behaviour, indicating that knowledge alone may not effectively prevent use among adolescents (Osei-Bonsu et al., 2022; Eke et al., 2024).

5. Conclusion

The findings of this study revealed a high prevalence of psychoactive substance use (PSU) among secondary school students in Obio-Akpor LGA, Rivers State, Nigeria. Alarming, a significant proportion of students reported initiating substance use at a very early age. Such early onset is strongly associated with heightened risks of dependence, poor academic performance, and adverse mental health outcomes. In terms of gender, the study established clear differences: male students were more likely to engage in substance use, while female students generally reported more negative perceptions toward it. This aligns with broader literature that suggests cultural expectations, peer influence, and parental monitoring patterns contribute to gender variations in substance use behaviour. The study also demonstrated that perceived positive effects (such as confidence, relaxation, or improved social belonging) were strongly correlated with substance use, whereas awareness of negative consequences had minimal influence in deterring use. This finding underscores the importance of expectancy theory, which highlights that perceived benefits often outweigh risks in shaping adolescent behaviours.

Although the study contributes to the understanding of adolescent PSU in Nigeria, several limitations are noteworthy. First, its cross-sectional design limits the ability to infer causality. Second, reliance on self-report measures may have introduced recall bias and social desirability bias, as students may underreport or exaggerate their behaviours. Third, the study was restricted to Obio-Akpor LGA, which limits the generalizability of the findings to other regions of Nigeria. Lastly, reports of very early initiation warrant cautious interpretation, as such claims may require verification through longitudinal or qualitative studies. In conclusion, the results highlight a troubling pattern of early and prevalent substance use among secondary school students, influenced more by perceived benefits than awareness of harms. These findings call for urgent interventions at family, school, and community levels to curb early exposure, reshape adolescent perceptions, and reduce the risks associated with psychoactive substance use.

5.1 Implications of the Findings

The findings have several implications. First, the high prevalence of PSU suggests that substance use is no longer an isolated problem but a systemic issue within the adolescent population. Second, the early initiation of use raises concerns about the long-term health, social, and academic wellbeing of these students. Third, the weak influence of awareness of negative effects highlights the need for innovative, context-driven preventive interventions rather than generic anti-drug campaigns. Finally, gender-sensitive and community-based interventions are critical to addressing the unique risk profiles of different groups of students.

5.2 Recommendation

Given the high prevalence and early onset of psychoactive substance use among students, it is recommended that schools implement comprehensive prevention programmes that integrate life-skills education, peer-resistance strategies, and interventions that challenge adolescents' positive expectancies about substance use. Gender-responsive approaches should be adopted to address the differing risk profiles of male and female students. Parental involvement must be strengthened through targeted sensitisation initiatives that enhance communication, supervision, and early identification of at-risk behaviours. At the community level, coordinated interventions are needed to create supportive environments, expand youth-centred activities, and enforce regulations limiting adolescents' access to substances. Continuous capacity building for school counsellors and teachers is essential for the early detection and management of substance-related concerns. Schools should also develop clear and enforceable policies that balance disciplinary measures with rehabilitative support. Finally, government agencies should reinforce policy frameworks to ensure sustained and collaborative prevention efforts across educational and community settings.

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