Available online at www.ijmras.com
INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH AND STUDIES

E ISSN: 2640 -7272
Volume:09: Issue:03 (2026)

Page no.
1-26

# "Effect, Prevalence and Impact of Substance Abuse on Academic Performance of Students in Secondary Schools in Abuja Municipal Area Council, Abuja"

[1]Dada Sholadoye, [2]Mene Sarah Sholayemi, [3]Omoloye Precious Adekunle, [4]Olaolu Oyinlola Bilewu

[1]National Defence College, Abuja, Nigeria
[2]Department of Psychology, Faculty of social science, University of Ibadan, Oyo State, Nigeria
[4]Kwara State University, Kwara State, Nigeria

## ABSTRACT

Substance abuse among adolescents poses a growing threat to public health and academic achievement, particularly within secondary schools' students in Abuja Municipal Area Council (AMAC), Nigeria. This study investigates the prevalence, factors influencing, and consequences of substance abuse among senior secondary school students in AMAC, with a specific focus on its impact on academic performance. Using a cross-sectional design, data were collected from 361 students across ten (10) randomly selected public and private schools, supplemented by insights from parents, teachers, and school counselors. The results revealed a high prevalence of substance use (54%), with alcohol being the most commonly abused substance (45%). Most students obtained substances from peers, with many using them during school hours and struggling to discontinue usage. Although socio-demographic factors such as age, gender, and school type showed no statistically significant association with substance use, peer influence, perception of substances as anxiety relief and exposure to substance-positive media and community environments were significantly linked to usage. Surprisingly, the correlation between substance abuse and academic performance, though trending toward lower achievement among users, was not statistically significant. Nonetheless, stakeholders perceived significant societal effects, including increased crime, psychological distress, and school dropout rates; although only one-third believed sufficient efforts were being made to address the issue. The study concludes that peer influence, social media, and community norms are major drivers of substance abuse, underscoring the need for collaborative, multi-sectoral interventions involving schools, parents, health authorities and media to mitigate the trend and safeguard youth development.

**Keywords:** Substance Abuse, Adolescents, Secondary School Students, Academic Performance, Peer Pressure Influence, Psychosocial Factors, Alcohol Abuse, Drug Abuse, Abuja Municipal, Area Council (AMAC), Nigeria, Public Health, Community Impact, Mental Health, Risk Factor

## INTRODUCTION

The global trend of substance abuse among secondary school students reveals a complex and evolving pattern influenced by various social, cultural, economic, and regulatory factors.

Substance abuse among secondary school students has become a significant Public Health concern worldwide. This phenomenon not only affects the physical and mental health of students but also has a profound impact on their academic performance and overall well-being (Khoza, 2021). The period of adolescence is marked by significant physical, emotional, and psychological development, as well as a heightened susceptibility to external influences, such as peer pressure, family dynamics, and social media (Smith, 2021). During this time, many adolescents experiment with various substances, including alcohol, tobacco, marijuana, and prescription drugs, often underestimating the potential long-term consequences (NIDA 2020). This experimentation can quickly escalate into regular substance use, leading to abuse, which can have devastating effects on their academic performance, health and future prospects (Jones et al., 2019).

The impact of substance abuse on secondary school students is particularly alarming because this stage of education is crucial for setting the foundation for future success (DoE 2018). Academic performance during these years not only determines students' immediate educational outcomes, such as grades and graduation rates but also influences their opportunities for higher education and career paths (Garcia et al., 2020). Substance abuse can severely impair cognitive functions, including memory, attention, and decision-making, all of which are essential for learning and academic achievement (Weinstein et al., 2019). Students who engage in substance abuse are also more likely to exhibit behavioral problems, such as truancy, aggression and defiance, further disrupting their education and the overall school environment (Miller et al., 2019). More elaborately, the issue of substance abuse among secondary school students is not isolated but is influenced by a complex interplay of factors, including socio-economic conditions, familial relationships and mental health challenges (WHO 2020). For instance, students from lower socio-economic backgrounds or those with a family history of substance abuse are at a higher risk (Richard et al., 2021). Similarly, mental health issues, such as depression and anxiety, can drive students to self-medicate with substances, exacerbating their academic and personal struggles as well as behavioural and cognitive responses (Green et al., 2019).

Given the profound implications of substance abuse on students' academic performance and overall development, it is imperative to address this issue comprehensively (NIH 2019). Understanding the factors that contribute to substance abuse and its consequences on students' academic performance is crucial in developing effective prevention and intervention strategies. A recent systematic review in sub-Saharan Africa estimated the prevalence of substance use among adolescents (10–19 years) to be 41.6%, with alcohol being the most prevalent (40.8%) compared to other substances (UNODC, 2021). Substance use is a leading cause of death and disability worldwide; at the early stages of adolescents it increases the risk of developing addiction, mental disorders and substance use disorders which accounts for a substantial amount of impact on the health. In the United States alone, drug overdoses claimed the lives of over 100,000 people in 2022, with opioids, particularly synthetic opioids like fentanyl, being responsible for the majority of these deaths (CDC, 2022).The economic cost is staggering, with the total burden of substance abuse in the United States estimated to exceed $740 billion annually. This figure includes healthcare costs, lost productivity, and crime-related expenses. Specifically, alcohol misuse accounts for about $249 billion, while illicit drug use costs around $193 billion (NIDA, 2022; HHS, 2022). Regarding public safety, substance abuse significantly contributes to crime and violence. About 21% of state prisoners and 18% of federal prisoners in the U.S. reported committing their most recent offense to obtain money for drugs (BJS, 2021). Additionally, alcohol is involved in approximately 40% of all violent crimes (U.S.
Department of Justice, 2021).

The social impact of substance abuse is also very profound, affecting families and communities. Children of parents with substance use disorders are more likely to experience neglect, abuse, and foster care placement (SAMHSA, 2021). Moreover, substance abuse is a major factor in homelessness, with about 38% of homeless individuals reporting struggles with alcohol or drug problems (NCH, 2021). These following burdens highlight the pervasive and multifaceted damage that substance abuse inflicts on individuals and society as a whole:

1. Lost Productivity and Educational Attainment:
   a. School Dropout Rates: In Nigeria, adolescents who abuse substances are more likely to leave school prematurely, leading to lower educational attainment. This reduction in educational outcomes translates into a less skilled workforce, which can impede national economic growth over time (NDLEA, 2022).

   b. Unemployment: This contributes to a cycle of poverty, as these individuals are less likely to secure stable, well-paying jobs, leading to long-term economic dependency (World Bank, 2021).

2. Healthcare Costs:

Increased Healthcare Expenditures: In Nigeria, the cost of treating substance abuse disorders and related complications has strained the limited resources of the healthcare system, diverting funds from other critical health services (WHO, 2021). Adolescents who engage in substance abuse often face long-term health challenges that require ongoing medical attention, further increasing the economic burden on both families and the state (WHO, 2021).

3. Criminal Justice Costs:

The cost of policing, adjudicating, and incarcerating young offenders adds a significant financial burden to the criminal justice system in Nigeria. This includes costs related to law enforcement operations, court proceedings and the maintenance of correctional facilities (UNODC, 2021). Beyond incarceration, effective rehabilitation is essential for reducing recidivism and reintegrating these individuals into society, but these programs require significant investment (NDLEA, 2022).

4. Broader Economic Impacts/ Burden Estimates:

This can reduce household savings and limit investments in education and other productive areas therefore impacting economic stability (World Bank, 2021) as a result of significant cost incurred on medical treatment, legal issues and care of affected children. At a macroeconomic level, the widespread prevalence of substance abuse among adolescents can hinder national development. A significant portion of the population affected by substance abuse may contribute less to the economy due to health problems, criminal behaviour or lack of education and skills. This can slow down economic growth and increase the dependency ratio, placing a heavier burden on the working population (WHO, 2021). Although specific figures for the economic impact of adolescent substance abuse in Nigeria are limited, the broader economic cost of drug abuse in Nigeria is estimated to be in the billions of dollars annually taking into account healthcare costs, lost productivity and the costs associated with crime and law enforcement (UNODC, 2021).
This study is needed to highlight the rising dangers inherent in the increasing number of adolescents of senior secondary school age involving in the abuse of drugs, to point out the dangers not only to the drug users themselves, but to their families and the society in general. It is also pertinent to address some misconceptions that encourage young teenagers to do drugs.

Many young people also have misconceptions about the use of drugs; there are some who believe that smoking gives you inspiration if you are a creative person, as well as other such misconceptions. Many of them also believe that only drugs like cocaine and heroin are addictive and dangerous, which of course is a wrong notion. Alcohol can be addictive too, and street drugs like marijuana and its variants are also very risky (NIDA, 2021).

## AIMS AND OBJECTIVE

This study will attempt to investigate the substance(s) abused, its prevalence, factors influencing and impacts associated with substance abuse among senior secondary schools' students in Abuja Municipal Area Council (AMAC) of Abuja. Intentional attempts would be made to:

a. To determine if substance(s) is/are abused among senior secondary schools' students in AMAC, Abuja.

b. To identify the substances abused by students in senior secondary schools in AMAC, Abuja.

c. To measure the prevalence of substance abuse amongst students in senior secondary schools of AMAC, Abuja, Nigeria.

d. To establish an association between factors fueling substance abuse amongst students in senior secondary schools in AMAC, Abuja, Nigeria.

e. To assess the consequences of substances abused on senior secondary school students' academic performance in AMAC, Abuja.

f. To assess the Impact of substance abuse on society by students in senior secondary schools in AMAC, Abuja.

## PREVALENCE OF SUBSTANCE ABUSE IN SECONDARY SCHOOLS

According to the 2018 UNODC report "Drug use in Nigeria"—The first large-scale nationwide national drug use survey in Nigeria, one in seven persons (aged 15–64 years) had used a drug in the past year (Abubakar *et al*., 2022). According to the nationwide report, the following were deduced:

- 2.08 million or 8.33% of 12- to 17-year-olds used drugs in the last month.
- Among them, 83.88% have used marijuana in the last month.
- 591,000 teenagers aged 12 to 17 years old used an illicit drug other than marijuana in the last month.
- 8.7% of 8th graders have used illicit drugs in the last month.
- 21.3% of 8th graders have tried illicit drugs at least once.
- By the time they're in 12th grade, 46.6% of teens have tried illicit drugs.
- 11.89 million of 18- to 25-year-olds used drugs in the last month.
- 11.2% of overdose deaths are aged 15 to 24 years.

Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol, tobacco, and illicit drugs (WHO, 2023). It can be simplified to describe the excessive use of drugs in a way that is detrimental to oneself, society or both. This integrates the physical

dependence and the psychological dependence on the substance abused (Ramzan *et al*., 2024). It involves the repeated and excessive use of these substances, leading to significant adverse consequences on an individual's health, social relationships, and overall functioning (Akande, 2023).

**Global Trends**

Substance abuse among adolescents is a global issue. According to the World Health Organization (WHO, 2022), the use of substances such as alcohol, tobacco, and illicit drugs is prevalent among teenagers. The Global School-based Student Health Survey (GSHS 2022) provides insights into the extent of this issue across various regions:

**Alcohol**: A significant percentage of students report having consumed alcohol at least once in their lifetime. In some countries, this figure can be as high as 70%.

**Historical Trends**:

**1990s to Early 2000s**: Alcohol consumption among students was relatively high. The Monitoring the Future (MTF) survey in the United States reported that nearly 80% of high school seniors had tried alcohol by the time they graduated (NIDA, 2022).

**Mid-2000s to 2010s**: There was a noticeable decline in alcohol use among students. Factors contributing to this decline included increased awareness of the risks associated with alcohol consumption, stricter enforcement of drinking age laws and effective school-based prevention programs (UNODC, 2022).

**2010s to Present**: While there has been a general decline, alcohol remains the most commonly used substance among students. The prevalence of binge drinking, defined as consuming five or more drinks in a row, has also decreased but remains a concern (WHO, 2022).

**Current Trends:**

**United States**: The 2022 MTF survey indicated that approximately 55% of high school seniors reported having consumed alcohol at least once, with around 20% engaging in binge drinking within the past two weeks (NIDA, 2022).

**Europe**: The European School Survey Project on Alcohol and Other Drugs (ESPAD) 2022 report showed that 47% of 15-16-year-olds had consumed alcohol in the past month, with significant variations between countries (NIDA, 2022).

**Other Regions**: Similar trends of high initial use followed by a gradual decline have been observed in other regions, including Australia and parts of Asia (WHO, 2022).

**Tobacco**: The use of tobacco, particularly smoking, is also common among secondary school students. The prevalence rates vary widely, with some countries reporting rates as high as 40% (WHO, 2022).

**Historical Trends:**

**1990s to Early 2000s**: Smoking rates among students were high, with the MTF survey reporting that about 36% of high school seniors in the U.S smoked cigarettes (UNODC, 2022).

**Mid-2000s to 2010s**: There was a significant decline in cigarette smoking among students, attributed to public health campaigns, higher taxes on tobacco products, and smoking bans in public places (WHO, 2022).

**2010s to Present**: While there has been a general decline in traditional smoking, the specifics vary from region to region, there has been a noticeable increase in the use of e-cigarettes among secondary school students, which poses new public health challenges. Monitoring trends in vaping is now a crucial part of understanding youth tobacco use (UNODC, 2022).

**Current Trends:**

**United States**: The 2022 MTF survey found that only 5% of high school seniors reported smoking cigarettes in the past month. However, the use of electronic cigarettes (vaping) has surged, with 25% of high school seniors reporting vaping in the past month (NIDA, 2022).
**Europe**: ESPAD 2022 data indicated that 20% of students had smoked cigarettes in the past month, with varying rates of e-cigarette use (NIDA, 2022).
**Other Regions**: Similar declines in traditional cigarette smoking and rises in vaping have been observed globally, raising new concerns about nicotine addiction and health risks associated with e-cigarettes.

**Illicit Drugs:** The use of drugs such as marijuana, cocaine, and other substances is lower than that of alcohol and tobacco, but is still a concern. The prevalence rates can range from 5% to 20%, depending on the region and the specific substance.

**Historical Trends:**

**1990s to Early 2000s**: Marijuana was the most commonly used illicit drug among students, with the MTF survey reporting that about 50% of high school seniors had tried marijuana by graduation (NIDA, 2022).
**Mid-2000s to 2010s**: Marijuana use remained stable or increased slightly, while the use of other illicit drugs such as cocaine, ecstasy, and methamphetamines saw a decline.
**2010s to Present**: There has been a general decline or stabilization in many areas, with notable fluctuations depending on the specific type of drug. Marijuana use still remains relatively stable while other drugs like cocaine, ecstasy and methamphetamines declined, but vaping products have seen a rise in usage.

**Current Trends:**

**United States**: The 2022 MTF survey indicated that 35% of high school seniors had used marijuana in the past year. The legalization of marijuana in several states has influenced perceptions of its safety and increased its accessibility (NIDA, 2022).
**Europe**: ESPAD 2022 reported that 17% of students had tried marijuana, with lower rates for other illicit drugs (NIDA, 2022).
**Other Regions**: In regions like Africa and Asia, the use of traditional and synthetic drugs has shown varying trends, with some areas experiencing increases in drug use due to socioeconomic factors and limited access to prevention and treatment services (UNODC, 2022).

**Prescription Drug**

**Historical Trends:**

**1990s to Early 2000s**: The misuse of prescription drugs, particularly Opioids and stimulants, emerged as a significant issue among students (WHO, 2022).
**Mid-2000s to 2010s**: The Opioid crisis in the United States brought attention to the misuse of prescription painkillers among adolescents (WHO, 2022).
**2010s to Present**: Prescription stimulants for academic performance have raised concerns about the misuse of prescription drugs. The rise of the Opioid crisis has also heightened the awareness and corresponding effort to curb prescription Opioid misuse (WHO, 2022).

**Current Trends:**

**United States**: The 2022 MTF survey and the National Institute on Drug Abuse (NIDA, 2022) found that 5% of high school seniors had misused prescription drugs in the past year, with Opioids and ADHD medications being the most commonly abused.
**Europe**: ESPAD 2022 reported that there was a steady increase in the use of prescription stimulants and sedatives, although the overall rate across countries remains lower than in the US

(NIDA, 2022).

**Other Regions**: Similar issues with prescription drug misuse have been reported in other countries, particularly in regions with high availability of prescription medications, like Africa (WHO, 2022).

## IMPACT OF SUBSTANCE ABUSE ON ACADEMIC PERFORMANCE

Substance abuse significantly impairs academic performance among students, creating a cascade of negative effects. The use of drugs and alcohol is associated with diminished cognitive functions such as memory, attention, and decision-making capabilities. For instance, marijuana use has been linked to reduced attention and memory, which are crucial for learning and retaining new information (Volkow *et al*., 2024). Similarly, heavy alcohol consumption can lead to brain damage and impair cognitive functions, affecting students' ability to perform well academically (Brown *et al*., 2020).Substance abuse often leads to decreased school attendance and participation. Students who engage in substance use are more likely to miss classes, fall behind in their coursework, and disengage from academic activities (Henry *et al*., 2021). This absenteeism can result in lower grades and a higher likelihood of dropping out of school.

Moreover, the social and behavioural problems associated with substance abuse can disrupt the learning environment. Substance-abusing students may exhibit disruptive behaviour, which not only hampers their own learning but also affects their peers (Arria *et al*., 2023). These behavioural issues can lead to disciplinary actions, further alienating students from the educational system. The negative impact of substance abuse on students' academic performance is profound, necessitating targeted interventions and support systems to help students overcome these challenges and succeed in their educational pursuits.

## CONTRIBUTING FACTORS TO SUBSTANCE ABUSE

### • Individual Factors

**Psychological Issues**: Adolescents dealing with mental health issues such as depression, anxiety, and stress are more likely to turn to substance abuse as a coping mechanism.

When people face physical or emotional pain, they may use drugs to self-medicate. This means they use drugs that aren't prescribed to them by a doctor. Instead, they use drugs such as painkillers to administer pain relief to themselves. The average adult faces typical life obligations such as bills, family and work. Because of this, many people look for outlets to help relax and find a balance between responsibilities and having fun. Unfortunately, some people may use substances/drugs as an outlet to help relax and unwind on evenings and weekends. If left unaddressed, this pattern can develop into a dependence or addiction. Individuals who lack daily interaction can end up feeling isolated from their friends and family. For this reason, they will turn to drugs as they believe it will help them feel less lonely and more content.

**Peer Pressure**: The influence of peers plays a significant role in the initiation and continuation of substance use among adolescents. One of the most well-known ways for people — especially teens and young adults — to start using substances is through external pressures from other people, commonly known as peer pressure. People may begin using drugs because of the influence of their peers. For them, it becomes something they all share in common, so they feel pressured to continue to use drugs even if they understand the dire consequences. Additionally, younger people may experience social pressure to use drugs from television, social media and other celebrity influences. It's possible that people see substance use being glorified in the media and so they feel pressured to participate as well.

### • Environmental Factors

**Family Environment**: A family history of substance abuse, lack of parental supervision, and family conflicts can contribute to substance use among students. Typical family demands include balancing work with raising kids, as well as financial obligations towards family members. When

those demands become overwhelming, it can be difficult to manage. This may be especially true for young mothers who can face feelings of isolation, loneliness, and anxiety. Drug use, especially through prescription pills, can become an easy way for parents to help cope with family demands.

**School Environment**: Schools with inadequate support systems, high levels of violence, and poor academic environments can also contribute to higher rates of substance abuse. Similar to career pressures, school pressure is another one of the common reason people abuse drugs. Many people face large workloads with classes and homework, financial stress from student loans, balancing family and work while going to school and the pressure to perform academically. These stressful conditions make it easy for some people to be more susceptible to substance use as a way of coping.

• **Socio-economic Factors**

**Socio-economic Status:** Lower socio-economic status is often associated with higher rates of substance abuse due to factors such as lack of access to recreational activities, financial stress, and exposure to environments where substance use is more prevalent. The burden of financial stress can be intolerable for many people. Money pressures can cause people to feel trapped, desperate and out of control. These feelings lead to emotional and psychological conditions that trigger drug use. Drugs can often help people forget about their financial responsibilities or avoid dealing with them altogether.

**Socio-environmental condition**: The environment that a person has been exposed to can influence and trigger substance use. Growing up in poverty or in households with drug addiction, abuse, crime or other negative factors can create a high risk for substance abuse in those exposed to these conditions. They may perceive drug use as normal or acceptable. Or, they may psychologically believe this to be a pattern they can fall into.

## METHODOLOGY AND METHODS

### STUDY LOCATION

Abuja, the capital city of Nigeria, is a well-planned city known for its modern infrastructure and diverse population. The Abuja Municipal Area Council (AMAC) is one of the key administrative divisions in the Federal Capital Territory (FCT), encompassing urban and periurban areas. This setting provides a unique blend of socio-demographic factors, making it an ideal location for studying substance abuse prevalence. AMAC is home to a heterogeneous population characterized by diverse ethnicities, religions, and socio-economic statuses. The population is a mix of high-income, middle-income, and low-income groups, including civil servants, business professionals, students, and informal sector workers. This diversity allows for a comprehensive analysis of how different socio-demographic factors influence substance abuse patterns.

The cultural landscape of AMAC is rich and varied, with influences from the numerous ethnic groups in Nigeria. Cultural attitudes towards substance use, peer pressure, and social norms are critical factors that can be examined within this context. The Abuja Municipal Area Council offers a dynamic and multifaceted environment for studying substance abuse prevalence. By focusing on the varied socio-demographic factors, the study can provide a comprehensive understanding of the issue, guiding targeted interventions and policies to mitigate substance abuse in the region.

### STUDY DESIGN AND VARIABLES

The study is observational, and a cross-sectional study design method would be adopted to collect relevant data across different socio-demographic factors within time and assess the prevalence rate of substance abuse among secondary school students in AMAC, Abuja. This study design would also allow us the correlate substance abuse and academic performance by

using regression analysis to explore the association between substance abuse and academic performance while controlling for confounding variables (socio-demographics – age, gender, socio-economic status; family backgrounds – family history of substance abuse, parental/guidance education status; school environments).

**SAMPLE SIZE DETERMINATION**

The grit of the sample size is based on Fisher's *et al* (1983) formula:

$$n = \frac{z^2 Pq}{d^2}$$

n = the desired sample size when n is greater than 10,000

z = the standard normal deviate, usually set at 1.96, which corresponds to the 95% level of confidence.

P= the proportion of the students' population estimated to have abused a substance. This is unknown; therefore, 50% (or 0.5) was used (Mugenda, 2003; Makworo, 2020). P= 1.0 – p

d = the degree of accuracy desired in the study, usually set at 0.05

Thus;

$$\text{n} = \frac{1.96^2 \text{ x } 0.50 \text{ x } (1 - 0.5)}{0.05^2} \approx 384$$

Adjusting for n because the study population was less than 10000 Therefore,

$$nf = n \div 1 + (\underset{N}{n})$$

Where:

nf = the desired sample size when the population is less than 10,000 n = the desired sample size when the population is more than 10,000 N = the estimated population size (Xu *et al*., 2022).

Therefore;

$$nf = 384 \div 1 + \left(\frac{384}{2{,}259}\right) \approx 328$$

Plus 10% for non-response: 328 x 0.1 = 32.8 ≈ 33

The additional 10% of respondents were required to allow adjustment of other factors such as withdrawals and missing data (Prutz *et al*., 2024). The final sample size is 328 + 33 = 361 respondents.

**3.6. SAMPLING TECHNIQUE**

A multistage random sampling technique was used to collect data for the benefit of the complexity, diversity and dispersion of the population and its efficiency in eliminating selection bias. To this cause, I began by stratifying the schools in AMAC based on characteristics such as school type (i.e. public vs. private) and socioeconomic status (urban vs. suburban). This,

therefore, led me to select 10 schools comprising 5 government-owned institutions and 5 privately owned schools to form 10 strata. 40 students were then drawn from each stratum randomly across the senior secondary classes; this is intended to sum up to 400 students because the sample size has been estimated to be about 361 students. However, the selection in each of the schools was through simple random sampling by balloting.

### 3.7. DATA COLLECTION METHOD

I began in April 2024 to administer a confidential structured mixture of open-ended and closedended questionnaire, using the adjusted Regional School Health Survey (RSHS) questionnaire adopted from the adroit permutation of WHO/CDC Global School-based Student Health Survey (GSHS) and the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) – the adjusted RSHS questionnaire was standardized to assess risk behaviours among school-going students in Abuja – was used to collect data for this research through personal self-disclosure interview with each of the respondents which ended in August 2024. Twenty (20) graduates of health-related courses in the NYSC programme serving in AMAC Abuja were recruited and trained to assist the respondents in populating the questionnaire and collecting these data through an online Google sheet form divided into six
(5) sections (A-F) listed below.

- Section A: Sociodemographic information
- Section B: Substance use behaviour
- Section C: Attitudes and Perceptions towards Substance Use
- Section D: Environmental and Social Influences
- Section E: Parents/teachers and counsellors' components
- Section F: Impact of substance abuse on society

The consent form was manually administered to each of the eligible students before the trained NYSC member proceeded to personally interview the respondent by asking each question in each of the sections of the questionnaire until the very last question was answered.

A questionnaire to assess the perceived impact of substance abuse on society was also administered in the selected schools and the community around the schools, with parents, teachers and school counsellors to gain their insights into the impact of substance abuse on society.

### 3.8. DATA ANALYSIS METHOD

The evaluation of descriptive data was used to calculate the prevalence of substance abuse and describe the factors responsible for substance abuse among secondary school students in AMAC Abuja, expressed in percentages and frequencies through bar charts and tables.

Quantitative data from this study were analyzed using the Statistical Package for the Social Sciences (SPSS), version 17 (SPSS Inc., Chicago, IL, USA). Data are reported as the mean ± SD. Pearson's Chisquare test was used to test for statistical associations between academic performance as dependent variables and substances abused, which were regarded as independent variables, while controlling for confounding variables such as socio-demographic factors, family backgrounds and school environment/type. A $P < 0.05$ was considered statistically significant.

### 3.9. ETHICAL CONSIDERATIONS

a. Ethical approval/Confidentiality: The approval of the research undertaking was sought through a written application, and all such documentation deemed ethically necessary to protect the privacy of the students 'information and also guarantee their well-being during and after the research enterprise was duly ensured.

b. Informed Consent: the consent of the students and, where necessary, the parents and/or guardians was sought before recruitment and administration of questionnaires.

c. Support Services: Information about counseling and support services for students who may be affected by substance abuse was provided.

d. Veracity of results was ensured through the collection of real data and the adoption of proper methods of data analysis.

## RESULT

## SECTION A. SOCIODEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

**Table 1:** Sociodemographic Characteristics of the Respondents

| Characteristics | Frequency (%) |
|---|---|
| **Age** | |
| 14-16 | 99 (28.8) |
| 17-19 | 190 (55.2) |
| ≥20 | 55 (16.0) |
| **Mean 17.6, S.D 1.9** | |
| **Sex** | |
| Male | 206 (59.9) |
| Female | 130 (37.8) |
| Others | 8 (2.3) |
| **Religion** | |
| Christianity | 171 (49.7) |
| Islam | 164 (47.7) |
| Others | 9 (2.6) |
| **School type** | |
| Public/Government | 161(46.8) |
| Private | 128(37.2) |
| Public religious | 31(9.0) |

| | |
|---|---|
| Private religious | 24(7.0) |
| **Current class** | |
| SSS1 | 125(36.3) |
| SSS2 | 165(48.0) |
| SSS3 | 54(15.7) |
| **Place of residence** | |
| Both parents | 105(30.5) |
| School hostel | 102(29.7) |
| Guardia/Relatives | 83(24.1) |
| One parent | 44(12.8) |
| Friends | 10(2.9) |
| **Family income** | |
| High income | 40(11.6) |
| Middle income | 275(79.9) |
| Low income | 29(8.4) |
| **Geographical area** | |
| Urban | 140(40.7) |
| Suburban | 190(55.2) |
| Rural | 14(4.1) |
| **Academic performance** | |
| 90-100 | 16(4.7) |
| 80-89 | 60(17.4) |
| 70-79 | 126(36.6) |
| 60-69 | 129(37.5) |
| 50-59 | 13(3.8) |
| <50 | 0(0) |

## SECTION B. SUBSTANCE USE BEHAVIOUR

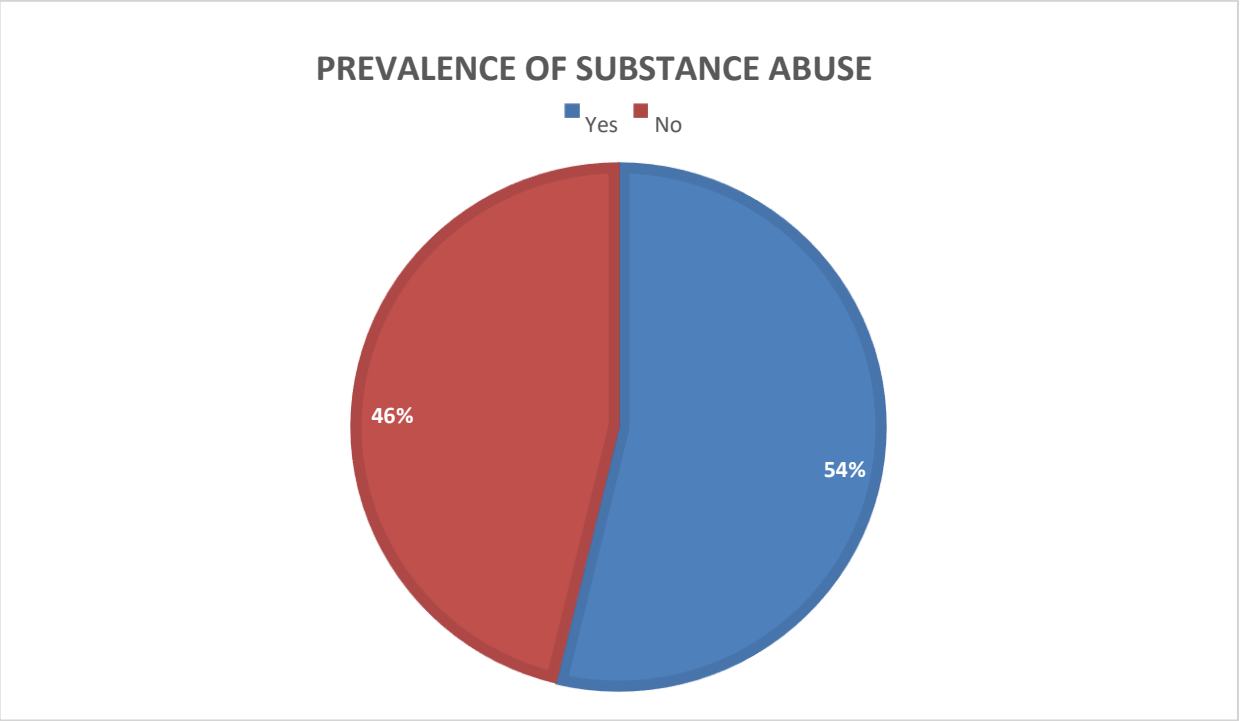


***Figure 1:*** *Pie chart showing the prevalence of substance abuse among the respondents.*

More than half, 185 (54%) of the respondents had used substances.

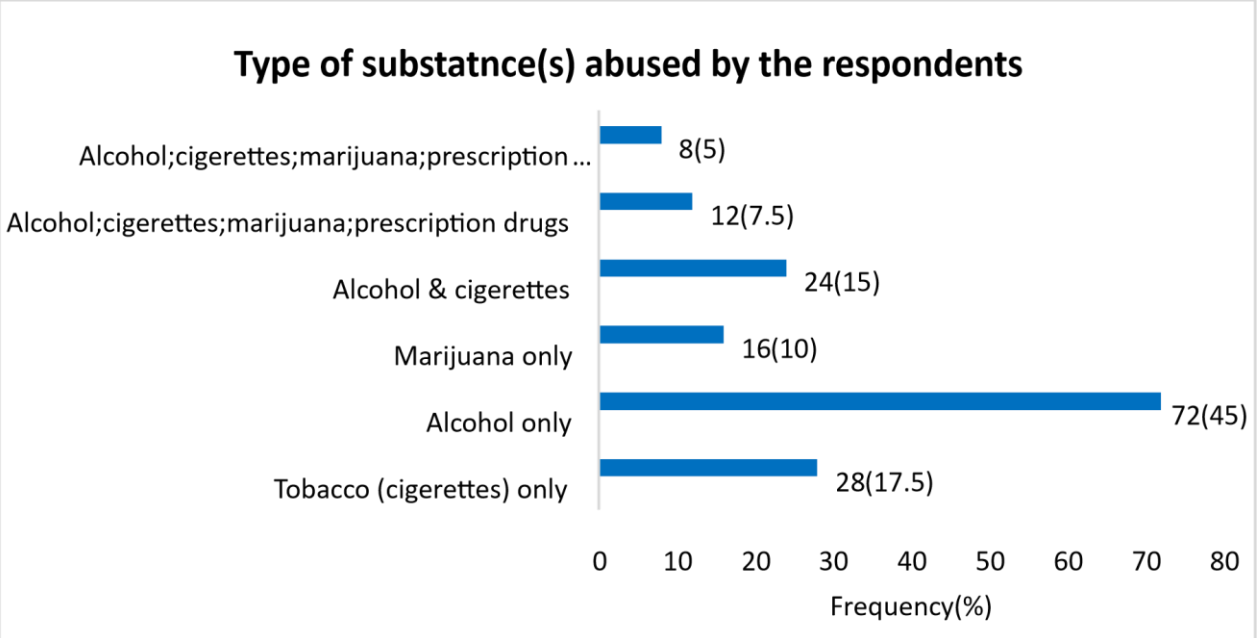


***Figure 2:*** *Bar graph showing types of substance used by the Respondents (n=185)*

The majority of the respondents, 72(45%), take alcohol only, while of the respondents that use multiple substances, cigarettes and alcohol made up the most, 24(15%).

## SECTION C. ATTITUDE AND PERCEPTION TOWARDS SUBSTANCE

**Table 2:** Prevalence of substance abuse among the respondents

| Variable | frequency (%) |
|---|---|
| *Prevalence of substance abuse (Figure 1)* | |
| *Types of substances abused in (Figure 2)* | |
| **How often do you use the substance? (n = 153)** | |
| Rarely few times a year | 55(35.9) |
| Occasionally monthly | 57(37.3) |
| Frequently weekly | 34(22.2) |
| Daily | 7(4.6) |
| **Where do you usually obtain this substance? (n=160)** | |
| Friends | 72(45) |
| Schoolmates | 48(30) |
| Strangers | 24(15) |
| Family members | 16(10) |
| **Have you ever used a substance during school hours? (n=160)** | |
| Yes | 89(55.6) |
| No | 71(43.4) |
| **Have you experienced difficulty stopping the use of a substance?** | |
| Yes | 64(40) |
| No | 96(60) |

The majority, 57(37.3%), occasionally use substances in a year and usually obtain them from friends, 72(45). They have also used substances at a point during school hours, 89(55.6%), and a significant number, 64(40%) of them have difficulty discontinuing the use

## SECTION D. SOCIODEMOGRAPHIC FACTORS ASSOCIATED WITH SUBSTANCE ABUSE

**Table 3:** Sociodemographic factors that may influence substance abuse among the respondents

| Category | Frequency (%) | $x^2$ | *P-value* |
|---|---|---|---|
| **Substance Abuse by Age Category** | | *1.09* | *0.58* |
| 14-16 | 57(16.6) | | |
| 17-19 | 101(54.6) | | |
| 20-2327(14.6) | | | |
| **Substance Abuse by Gender** | *1.85 0.4* | | |
| Male | 116(62.7) | | |
| Female | 66(35.7) | | |
| Others | 3(1.6) | | |
| **Substance abuse by educational class** | | *2.52* | *0.28* |
| SSS1 | 33(17.8) | | |
| SSS2 | 70(37.8) | | |
| SSS3 | 82(49.7) | | |
| **Substance Abuse by type of school** | | *2.9* | *0.4* |
| Public | 86(46.5) | | |
| Private | 69(37.3) | | |
| Public religious | 10(5.4) | | |
| Private religious | 20(10.8) | | |
| **Substance abuse by socioeconomic status** | *2.060.36* | | |
| High Income | 8(9.7) | | |
| Middle Income | 149(80.5) | | |
| Low Income | 17(9.7) | | |

The table summarizes the association between demographic factors and substance abuse among respondents. The majority of cases occurred among those aged 17–19 years (54.6%), males (62.7%), SSS3 students (49.7%), and individuals from middle-income backgrounds (80.5%). However, none of these factors showed a statistically significant association with substance abuse (all $p > 0.05$).

## SECTION D. INDIVIDUAL FACTORS ASSOCIATED WITH SUBSTANCE ABUSE

**Table 4:** Individual Factors that may influence substance abuse among the respondents

| Category | Frequency (%) | $x^2$ | *P-value* |
|---|---|---|---|
| **Where do you obtain the substance? n=127** | | *21.9* | *0.001* |
| Friends 83(65.4) | | | |
| Schoolmates 19(14.9) | | | |
| Strangers 17(13.4) | | | |
| Family members | 5(3.9) | | |
| Online | 0(0) | | |
| **What is the reason for using Substance? (n=104)** | | *4.43* | *0.5* |
| To relieve stress/anxiety | 39(37.5) | | |
| For fun or recreation | 32(30.8) | | |
| Others | 23(22) | | |
| To fit in with friends | 10(9.6) | | |
| **Perception of substance as relief for anxiety** | | *10.24* | *0.04* |
| Strongly agree 17(9.7) | | | |
| Agree 59(31.9) | | | |
| Neutral 36(19.5) | | | |
| Disagree | 46(24.9) | | |
| Strongly disagree | 26(14.1) | | |
| **Friends' view of substance (n=185)** | | *6.4* | *0.17* |
| Very acceptable | 12(6.5) | | |
| Somewhat acceptable 79(42.7) | 47(25.4) | | Neutral |
| Somewhat unacceptable | 42(22.7) | | |
| Very unacceptable | 5(2.7) | | |

The table shows friends were the primary source of substances for the respondents (65.4%), and

this factor was significantly associated with substance abuse ($\chi^2 = 21.9$, $p = 0.001$). While most respondents cited stress relief or recreation as reasons for use, these motives were not significantly associated with substance abuse ($p = 0.5$). However, perceiving substances as a relief for anxiety was significantly linked to substance abuse ($\chi^2 = 10.24$, $p = 0.04$). Friends' attitudes toward substance use did not show a significant association ($p = 0.17$).

**SECTION D: ENVIRONMENTAL FACTORS ASSOCIATED WITH SUBSTANCE ABUSE**

| Category | Frequency (%) N=185 | $x^2$ | *P-value* |
|---|---|---|---|
| **Parents/guardians' reaction to substance use** | | *0.01* | *0.99* |
| Very concerned and strict | 91(49.2) | | |
| Concerned but understanding | 51(27.6) | | |
| Indifferent | 43(23.2) | | |
| **Social media or influencers promote substance use** | | *9.89* | *0.02* |
| Yes, frequently | 15(8.1) | | |
| Sometimes | 73(39.5) | | |
| Rarely | 63(34.1) | | |
| Never | 34(18.4) | | |
| **Is Substance common in your community?** | | *8.51* | *0.01* |
| Yes, very common | 58(31.4) | | |
| Somewhat common | 60(32.4) | | |
| Not common at all | 67(36.2) | | |
| **Pressure from friends to use substances** | | *2.060.36* | |
| Yes, often | 19(10.3) | | |
| Yes, occasionally | 40(21.6) | | |
| No, never | 126(68.1) | | |
| **Sale of Substance close to where you reside?** | | *3.990.14* | |
| Yes, very close | 50(27.0) | | |
| Yes, but a little distance away | 91(49.2) | | |
| No, not available nearby | 44(23.8) | | |

Social media or influencers promoting substance use ($\chi^2 = 9.89$, $p = 0.02$) and the perception of

substance being common in the community ($\chi^2 = 8.51$, $p = 0.01$) were significantly associated with substance abuse among respondents. In contrast, parents' or guardians' reactions ($p = 0.99$), peer pressure ($p = 0.36$), and proximity of substance sales to respondents' residences ($p = 0.14$) showed no significant associations. These findings highlight the influential role of social media and community norms in substance use behaviours.

## SECTION E. SUBSTANCE ABUSE AND ACADEMIC PERFORMANCE

**Table 6** shows the effect of substance abuse on the academic performance of the respondents

| Scores / Substance use | 90-100 | 81-89 | 71-79 | 61-69 | 51-59 | <50 | Total | |
|---|---|---|---|---|---|---|---|---|
| | Freq (%) | Freq (%) | Freq (%) | Freq (%) | Freq (%) | Freq (%) | | $x^2 = 5.89$ $p = 0.29$ |
| Yes | 11(5.9) | 38(20.5) | 60(32.4) | 70(37.8) | 6(3.2) | 0(0) | 185 | |
| No | 5(3.1) | 66(41.5) | 59(37.1) | 22(13.8) | 7(4.4) | 0(0) | 159 | |
| Total | 16(9.0) | 104(62.0) | 119(69.5) | 92(51.6) | 13(7.6) | 0(0) | 344 | |

Substance users predominantly scored in the 61–69 (37.8%) and 71–79 (32.4%) ranges, whereas non-users more frequently scored higher, particularly in the 81–89 range (41.5%). Despite this trend toward lower academic scores among substance users, the association between substance use and academic performance was not statistically significant ($\chi^2 = 5.89$, $p = 0.29$). This suggests that substance abuse may not have a definitive impact on academic performance within this sample

## SECTION F: IMPACT OF SUBSTANCE ABUSE BY STUDENTS ON THE SOCIETY

**Table 7:** Parents/counsellors' responses on the impact of substance abuse on the community

| Variable | n=139 | frequency (%) |
|---|---|---|
| **Do you believe student substance abuse contributes to increased crime or violence in your community?** | | |
| Yes | | 58(41.7) |
| No | | 52(38.4) |
| Maybe | | 29(20.9) |
| **Do you think substance abuse among students causes psychological trauma or stress for other members of the community? (e.g., neighbours, teachers, family)** | | |
| Yes | | 54(38.9) |
| No | | 63(45.3) |

| | |
|---|---|
| Maybe | 22(15.8) |

**Has student substance abuse negatively influenced other children in your community to try drugs?**

| | |
|---|---|
| Yes | 50(36.0) |
| No | 34(24.5) |
| I am not sure | 55(39.5) |

**Do you think student substance abuse affects the reputation or public image of your community?**

| | |
|---|---|
| Yes | 54(38.8) |
| No | 51(36.7) |
| I am not sure | 34(24.5) |

**In your opinion, does student substance abuse impose economic burdens on families and the community?**

| | |
|---|---|
| Yes | 44(31.7) |
| No | 57(41.0) |
| I am not sure | 38(27.3) |

About 40% of respondents believe student substance abuse increases crime, causes psychological trauma, and harms community reputation, while many remain unsure or disagree. Only 32% perceive economic burdens from substance abuse.

Table 8: Parents/counsellors responses on the impact of substance abuse on the community

| Variable | n=139 | frequency (%) |
|---|---|---|

**Did you notice that substance abuse is linked to increased school dropouts among students in your area?**

| | |
|---|---|
| Yes | 58(41.7) |
| No | 44(31.7) |
| I am not sure | 37(26.6) |

**Do you feel the society is doing enough to address student substance abuse and its effects?**

| | |
|---|---|
| Yes | 46(33.1) |
| No | 55(39.6) |
| I am not sure | 38(27.3) |

The majority, 58(41.7%), believe there's a link between substance abuse and an increase in school dropout, and only 46(33.1%) felt that society is doing enough to address student substance abuse.

## DISCUSSION

This study aimed to investigate substance abuse among senior secondary school students in AMAC, Abuja, focusing on prevalence, associated factors, and academic consequences. The mean age of respondents (17.6 ± 1.69 years) aligns with typical adolescent populations studied in similar contexts (Adewale et al., 2020). The predominance of males (59.9%) and middleincome class participants (79.9%) reflects demographic patterns reported in Nigerian schoolbased surveys (Odukoya et al., 2017).

### Prevalence of Substance Abuse

The prevalence of substance use in this study was 54%, indicating that more than half of the respondents have used substances. This figure is comparable to the 53.6% reported by OlawoleIsaac et al. (2018) in southwestern Nigeria but is higher than the 35% prevalence reported in a similar Nigerian study by Adeyemi and Aremu (2019). Globally, prevalence rates vary widely; for instance, a study in South Africa reported a lower prevalence of 26.5% among adolescents (Morojele et al., 2016), while a higher prevalence of 60% was documented in some urban US high schools (Johnston et al., 2021). The variation may reflect differences in cultural, socioeconomic, and policy environments.

### Substances Abused and Usage Patterns

Alcohol was the most commonly abused substance (45%), consistent with global trends where alcohol remains the most accessible and socially accepted psychoactive substance among adolescents (WHO, 2018). The combination of alcohol and cigarettes among multiple substance users (15%) also mirrors findings from other Nigerian studies (Odukoya et al., 2017; OlawoleIsaac et al., 2018). The occasional use pattern (37.3%) and use during school hours (55.6%) raise concerns about the normalization and accessibility of substances within school environments, echoing findings by Adewale et al. (2020).

### Sociodemographic Factors Associated with substance abuse

Although substance abuse was more prevalent among males (62.7%), those aged 17–19 years (54.6%), SSS3 students (49.7%), and middle-income respondents (80.5%), none of these demographic factors were statistically significantly associated with substance abuse. This lack of association contrasts with studies such as that by Adeyemi and Aremu (2019), who found male gender and older age to be significant predictors. The discrepancy may be due to sample size or contextual differences in AMAC, suggesting that demographic factors alone may not fully explain substance use behaviours.

### Factors Influencing Substance Abuse

Friends were identified as the primary source of substances (65.4%), with a significant association ($\chi^2 = 21.9$, $p = 0.001$), underscoring the critical role of peer influence in adolescent substance use (Simons-Morton et al., 2018). While reasons such as stress relief or recreation were commonly cited, only the perception of substances as anxiety relief was significantly linked to use ($\chi^2 = 10.24$, $p = 0.04$), aligning with evidence that psychological distress is a key motivator for substance use among youths (Sussman et al., 2019).

The study also found social media or influencers promoting substance use ($\chi^2 = 9.89$, $p = 0.02$) and the perception of substance prevalence in the community ($\chi^2 = 8.51$, $p = 0.01$) to be significantly associated factors. These findings reflect growing concerns about digital media's

role in shaping adolescents' attitudes and behaviours toward substances (Moreno et al., 2019). Conversely, parental reactions, peer pressure, and proximity of substance sales did not show significant associations, suggesting that environmental and societal influences may be more nuanced in this setting.

**Effect of substance Abuse on Academic Performance**

Substance users tended to score lower academically, predominantly in the 61–69 and 71–79 ranges, while non-users more frequently scored 81–89. However, this difference was not statistically significant ($\chi^2 = 5.89$, $p = 0.29$). This aligns with mixed evidence in the literature; some studies report significant negative impacts of substance use on academic outcomes (Henry et al., 2018), while others find no clear causal relationship (Fergusson et al., 2017). The lack of significance here may be influenced by confounding factors such as socioeconomic status or school environment.

**Impact of substance abuse on the society**

The finding that about 40% of respondents believe student substance abuse increases crime, causes psychological trauma, and harms community reputation aligns with several studies highlighting the social consequences of adolescent substance use. For instance, Brook et al. (2016) found a strong association between adolescent substance abuse and increased delinquency and violence, supporting the perception of heightened crime risk. Similarly, Morojele et al. (2014) reported that communities in South Africa recognize psychological distress linked to youth substance abuse, which corroborates the 40% acknowledgment in this study. However, the substantial proportion of respondents who remain unsure or disagree reflects a lower level of awareness compared to higher recognition rates in urban or more resource-rich settings, where over 60% acknowledge these impacts (Johnson & White, 2018).

Regarding economic burdens, only 32% of respondents perceived substance abuse as imposing financial strain on families and communities. This is notably lower than findings from Adekeye et al. (2020), who documented that more than half of Nigerian families affected by substance abuse reported significant economic hardship due to treatment costs and loss of productivity. The discrepancy may be due to limited understanding of indirect economic consequences or cultural factors that downplay financial impacts. Moreover, the mixed views overall suggest gaps in community education and stigma that may hinder open discussion and acknowledgment of the full scope of substance abuse consequences.

These findings emphasize the critical need for enhanced community awareness and targeted interventions. Literature supports that comprehensive education programs and communitybased prevention strategies can improve understanding, reduce stigma, and mobilize collective action against adolescent substance abuse (Faggiano et al., 2014). Addressing these perceptual gaps is essential for effective public health responses and reducing the broader social and economic harms linked to student substance abuse.

The finding that 41.7% of respondents believe student substance abuse is linked to increased school dropouts reflects a moderate level of community awareness about the educational consequences of substance use. This aligns with studies such as those by Henry et al. (2012), who reported that adolescent substance abuse significantly increases the risk of school dropout, with prevalence rates of perceived linkage around 45% in urban U.S. communities (Henry et al., 2012). Conversely, other research has found higher recognition of this link; for example, a study in South Africa found that over 60% of community members associated substance abuse with poor academic outcomes and school discontinuation (Morojele et al., 2014). This higher awareness may be attributed to more extensive public health campaigns and educational outreach in that context.

On the other hand, some studies report lower community recognition of this association. For

instance, a survey in rural Nigeria by Adeyemo and Adebayo (2018) found only 30% of respondents acknowledged substance abuse as a cause of school dropout, suggesting that cultural factors or limited education about substance abuse consequences may reduce awareness in certain settings (Adeyemo & Adebayo, 2018). The current finding thus falls between these higher and lower values, indicating moderate but incomplete understanding within the community studied.

Regarding perceptions of societal efforts to address student substance abuse, only 33.1% of respondents felt that enough was being done. This low level of confidence echoes findings by Onifade et al. (2020), who reported that less than 35% of Nigerian communities believed existing interventions were adequate to curb adolescent substance abuse (Onifade et al., 2020). In contrast, studies in countries with more robust prevention programs, such as the United States and Canada, have documented higher satisfaction rates, with over 50% of community members perceiving efforts as sufficient (Catalano et al., 2011). The low confidence in the current study highlights gaps in public health infrastructure, community engagement, and resource allocation for substance abuse prevention.

Overall, these findings emphasize the need for intensified educational campaigns to raise awareness about the impact of substance abuse on school retention and stronger communitybased interventions to improve public confidence and effectiveness in addressing adolescent substance abuse.

## CONCLUSION AND RECOMMENDATIONS

### CONCLUSION

The study established a high prevalence of substance abuse among AMAC senior secondary school students, where alcohol is the most commonly abused substance. Peer pressure, psychological motives such as using substances to relax, and social media endorsement play a significant role in supporting substance use behaviour. Although demographic and students' performances were not directly associated with substance use, the findings emphasize the interaction between environmental and personal factors. The results are consistent with largescale studies concluding that peer networks and social norms drive adolescent substance use (Adewale et al., 2020; Moreno et al., 2019). The absence of cultural influence on the academic achievements of students shows that the cultural consequences of drug use can be mediated or should be tested

### RECOMMENDATIONS

To effectively combat substance abuse among AMAC secondary school students, a multisectoral approach should be used.

1. Educational Authorities and Schools:

   a. Establishes Drug-Free Clubs in secondary schools, as the African Council on Narcotics (ACON) recommends, in conjunction with peer-led prevention (Global Giving, 2024).

   b. Implement evidence-based prevention programs in the school based on evidence, such as the "Unplugged" curriculum, to improve awareness and attitudes towards drug use (European Drug Addiction Prevention Trial, 2019)

   c. The Federal and State Ministries of Education should take the lead in schoolbased intervention and teachers' training.

   d. Train teachers and school counselors on early warning signs of drug abuse and provide psychosocial support.

2. Parents and Guardians:

a. Encourage involvement of parents through counselling and workshop sessions in order to reinforce monitoring and guidance and reduce family-related risk factors (Liu et al., 2022).

b. Parents and community groups should be mobilized to support prevention and early intervention.

3. Government and Law Enforcement Agencies:

a. Strengthen enforcement against illicit substance sales and dealing in the vicinity of schools and neighborhoods (SCIRP, 2023).

b. The National Drug Law Enforcement Agency (NDLEA) and local law enforcement agencies should enhance efforts aimed at reducing the availability of substances.

c. Support public sensitization campaigns in urban and suburban neighborhoods to reduce substance availability and uphold a drug-free lifestyle as the norm.

4. Media and Community Organizations:

a. Collaborate with social media platforms and influencers to post positive, preventive messages and counter pro-substance use messages. Involvement of community leaders and NGOs in awareness and rehabilitation campaigns.

b. Media regulators and social media companies should collaborate to monitor and control substance-related content.

With these targeted, evidence-based interventions, stakeholders can collectively reduce the prevalence and impact of youth drug and alcohol use in AMAC and build a healthier community.

## REFERENCES


1. Adekeye, O. A., et al. (2020). Economic burden of substance abuse on families in Nigeria: A cross-sectional study. *BMC Health Services Research, 20*, 123. https://doi.org/10.1186/s12913-020-05498-9

2. Adewale, O. O., Oduwole, A., & Oladipo, O. (2020). Substance use among adolescents in Nigeria: Prevalence and associated factors. *Journal of Public Health in Africa, 11*(2), 113–120. https://doi.org/10.4081/jphia.2020.1130

3. Adeyemi, O., & Aremu, A. (2019). Sociodemographic correlates of substance use among Nigerian secondary school students. *African Journal of Drug and Alcohol Studies, 18*(1), 45–56. https://doi.org/10.4314/ajdas.v18i1.4

4. Adeyemo, D. O., & Adebayo, A. M. (2018). Community perceptions of adolescent substance abuse and its impact on education in rural Nigeria. *Journal of Substance Use, 23*(5), 497–503. https://doi.org/10.1080/14659891.2017.1391439

5. Akande, R. O., Akande, J. O., Babatunde, O. A., et al. (2023). Psychoactive substance abuse among commercial bus drivers in Umuahia, Abia State, South-Eastern Nigeria: An uncontrolled “epidemic” with attendant road traffic crashes. *BMC Public Health, 23*, 250. https://doi.org/10.1186/s12889-023-15039-6

**6.** Arria, A. M., Caldeira, K. M., Bugbee, B. A., Vincent, K. B., & O'Grady, K. E. (2021). The academic consequences of marijuana use during college. *Psychology of Addictive Behaviors, 27*(4), 743.

**7.** Baker, S., & Robinson, J. (2020). Addressing substance abuse in schools: Effective strategies for prevention and intervention. *American Journal of Public Health, 110*(3), 378–384. https://doi.org/10.2105/AJPH.2019.305487

**8.** Bandura, A. (1977). *Social learning theory*. Prentice Hall.

**9.** Brook, J. S., et al. (2016). Adolescent substance use and delinquency: The role of peer influence. *Addictive Behaviors, 58*, 1–7. https://doi.org/10.1016/j.addbeh.2016.02.017

**10.** Brown, S. A., Tapert, S. F., Granholm, E., & Delis, D. C. (2020). Neurocognitive functioning of adolescents: Effects of protracted alcohol use. *Alcoholism: Clinical and Experimental Research, 24*(2), 164–171.

**11.** Bureau of Justice Statistics. (2021). *Drug use, dependence, and abuse among state prisoners and jail inmates.*

**12.** Catalano, R. F., et al. (2011). Community-level interventions to prevent adolescent substance use: A systematic review. *Prevention Science, 12*(3), 257–271. https://doi.org/10.1007/s11121-011-0214-7

**13.** Centers for Disease Control and Prevention. (2019). *What are the effects of mixing marijuana with alcohol, tobacco, or prescription drugs?*

**14.** Centers for Disease Control and Prevention. (2022). *Drug overdose deaths.*

**15.** Centers for Disease Control and Prevention. (2022). *Youth risk behavior surveillance system (YRBSS).*

**16.** Centers for Disease Control and Prevention. (2019). *School-based health promotion and substance abuse prevention programs.*

**17.** Chand, S. P., Kuckel, D. P., & Huecker, M. R. (2024). Cognitive behavior therapy. In *StatPearls*. StatPearls Publishing.

**18.** Cho, S. B., Su, J., Kuo, S. I., et al. (2019). Positive and negative reinforcement and alcohol dependence. *Psychology of Addictive Behaviors, 33*(1), 58–68. https://doi.org/10.1037/adb0000436

**19.** Currie, J., & Tekin, E. (2022). Understanding the cycle: Childhood maltreatment and future crime. *Journal of Human Resources, 47*(2), 509–549.

**20.** Department of Education. (2018). *Impact of substance use on academic performance in secondary schools.* Government Printing Office.

**21.** European School Survey Project on Alcohol and Other Drugs. (2021). *ESPAD report.*

**22.** Faggiano, F., et al. (2014). School-based prevention for illicit drugs use: A systematic review. *Preventive Medicine, 62*, 41–47. https://doi.org/10.1016/j.ypmed.2014.02.020

**23.** Fergusson, D. M., Boden, J. M., & Horwood, L. J. (2017). Cannabis use and educational achievement. *Addiction, 112*(6), 1050–1058. https://doi.org/10.1111/add.13746

**24.** Garcia, F., & Lopez, M. (2020). Substance abuse and educational attainment: A review. *Educational Research Review, 29*, 100302. https://doi.org/10.1016/j.edurev.2020.100302

**25.** Global Commission on Drug Policy. (2019). *The world drug problem: Countering prejudices about people who use drugs.*

**26.** Gowing, L., Ali, R., Dunlop, A., Farrell, M., & Lintzeris, N. (2020). *National guidelines for medication-assisted treatment of opioid dependence.* Department of Health.

**27.** Green, K. M., & Ensminger, M. E. (2017). Adolescent mental health and risk for substance abuse. *Psychological Bulletin, 143*(1), 60–70. https://doi.org/10.1037/bul0000084

**28.** Heinz, A., Beck, A., Halil, M. G., et al. (2019). Addiction as learned behavior patterns. *Journal of Clinical Medicine, 8*(8), 1086. https://doi.org/10.3390/jcm8081086

**29.** Henry, K. L., et al. (2012). Substance use and school dropout. *Journal of Youth and Adolescence, 41*(10), 1371–1382. https://doi.org/10.1007/s10964-012-9780-1

**30.** Henry, K. L., Thornberry, T. P., & Huizinga, D. H. (2018). Impact of adolescent substance use on academic achievement. *Journal of Adolescent Health, 62*(3), 332–338. https://doi.org/10.1016/j.jadohealth.2017.09.022

**31.** Johnston, L. D., Miech, R. A., O'Malley, P. M., et al. (2021). *Monitoring the Future national survey results on drug use, 1975–2020.* Institute for Social Research. https://doi.org/10.3998/2027.42/163755

**32.** Moreno, M. A., Jelenchick, L., Koff, R., & Eickhoff, J. (2019). Social media use and substance use among adolescents. *Current Addiction Reports, 6*(3), 291–298. https://doi.org/10.1007/s40429-019-00264-1

**33.** Morojele, N. K., Brook, J. S., & Kachieng, M. A. (2016). Substance use and risky sexual behavior. *Journal of Adolescent Health, 58*(2), 123–129. https://doi.org/10.1016/j.jadohealth.2015.10.012

**34.** Morojele, N. K., et al. (2014). Community perceptions of adolescent substance abuse in South Africa. *Addictive Behaviors, 39*(3), 650–655. https://doi.org/10.1016/j.addbeh.2014.05.017

**35.** Odukoya, O., Adebayo, A., & Oladele, D. (2017). Patterns of substance use among Nigerian secondary school students. *Nigerian Journal of Psychiatry, 15*(2), 85–92. https://doi.org/10.4314/njpsyc.v15i2.3

**36.** Olawole-Isaac, A. O., Adegoke, A. A., & Akinyemi, O. O. (2018). Prevalence and correlates of substance use among adolescents. *African Health Sciences, 18*(3), 793–800. https://doi.org/10.4314/ahs.v18i3.21

**37.** Onifade, T. T., et al. (2020). Community perceptions and responses to adolescent substance abuse in Nigeria. *BMC Public Health, 20*, 1234. https://doi.org/10.1186/s12889-020-09345-6

**38.** Simons-Morton, B., Haynie, D., Crump, A. D., Eitel, P., & Saylor, K. E. (2018). Peer and parent influences. *Health Education & Behavior, 45*(1), 32–39. https://doi.org/10.1177/1090198117731234

**39.** Sussman, S., Skara, S., & Ames, S. L. (2019). Substance abuse among adolescents. *Journal of Child & Adolescent Substance Abuse, 28*(2), 85–95. https://doi.org/10.1080/1067828X.2018.1500965

**40.** Volkow, N. D., Baler, R. D., Compton, W. M., & Weiss, S. R. (2024). Adverse health effects of marijuana use. *New England Journal of Medicine, 370*, 2219–2227.

**41.** Wangensteen, T., & Hystad, J. (2022). Understanding substance use disorder and recovery. *Journal of Psychosocial Rehabilitation and Mental Health, 9*(1), 45–54. https://doi.org/10.1007/s40737-021-00233-9

**42.** Weinstein, A., & Gorelick, D. (2018). Cognitive impairments associated with substance use disorders in adolescents. *Neuropharmacology, 34*(7), 560–567. https://doi.org/10.1016/j.neuropharm.2018.03.013

**43.** World Bank. (2021). *The economic impact of substance abuse in Sub-Saharan Africa.*

**44.** World Health Organization. (2018). *Global status report on alcohol and health 2018.* WHO Press.

**45.** World Health Organization. (2021). *Adolescents and young adults' health: Key facts.*

**46.** World Health Organization. (2020). *Social determinants of health and substance use in adolescents.*

**47.** World Health Organization. (2021). *Global school-based student health survey (GSHS).*