Assessment and comparison of the knowledge and attitudes toward drug abuse among male and female secondary school students in Owo, Ondo State

Authors
Igeleke Peter Ohis[1], Ebisike Chinedum Kenneth[1], Ehiorobo Osaivbie[1], Okon Saviour[1], Uloma Jennifer[1]

Affiliations
[1] Federal Medical Centre, Owo, Ondo State, Nigeria

Corresponding author
Igeleke Peter Ohis
Federal Medical Centre, Owo, Ondo State, Nigeria

E-mail: igelekepeter607@gmail.com

Submitted on: March 10th, 2025
Published on: June 30th, 2025

ABSTRACT

Drug abuse is the illicit use of medications, usually to incite pleasure, Euphoria, or to gain a feeling that has not been instructed for by a medical professional. The concept of drug abuse has been discussed in Nigeria time after time, but it remains a menace in the country. A cross-sectional study on the knowledge of drug abuse amongst teenagers was carried out in Owo, a local government area in Ondo state, Nigeria, using the questionnaire method. The questions ranged from basic knowledge of these concepts to complex questions. A comparison of the level of knowledge and attitudes toward drug abuse was made between male and female students and between students in private and public schools. They were all found to have sufficient basic knowledge of drug abuse, its causes, and its effects. There was no statistically significant difference between the level of knowledge and attitudes toward drug abuse between male and female secondary school students and between private and public school students.

Keywords: *Drug abuse, effects of drug abuse, knowledge and attitudes, gender comparison of drug abuse, public vs. private schools*

INTRODUCTION

The use of various substances from plants and animal sources to cure and prevent diseases is as old as man. Moreover, these substances are known as drugs. The use of drugs in its self to treat or to prevent diseases does not pose any problem as long as it is correctly administered. However, some people, especially the youth, now use drugs for other ulterior motives. Hence, there is a paradigm shift from the main need for drugs to other recreational and aesthetic purposes. This has been having multiple negative effects on their overall well-being. The use of drugs will always lead to changes in body reactions, whether negative or positive. According to Fareo (2012), who referenced Okoye (2001), a drug is a material that, by its chemical effects, has the potential to alter biological function. Balogun (2006) viewed drugs as a substance that changes perception, cognition, mood, behavior, and

the general system of the body. The use of drugs could be beneficial or harmful to an individual, depending on the mode of use.

Drug abuse can cause serious disruption and damage to the mental and psychological development of the abusers. Drug abuse is a major public health problem all over the world (UNODC,2005; Florence and Ejiwale, 2019). Haladu, 2003; Florence and Ejiwale, 2019 described "Drug abuse" as excessive and regular self-administration of unrecommended drugs. Drug abuse can be described as the habitual use of drugs not prescribed by physicians in a way that hinders the health and social functioning of an individual. World Book Encyclopedia (2004) described drug abuse as the improper use of a drug that affects the healthy and productive life of an individual. Similarly, Abdulahi (2009) understood drug abuse to be the consumption of drugs to such an extent that it influences one's health and social functioning. It can equally be seen as inappropriate use of drugs in order to get personal satisfaction.

Drug abuse in Nigeria is caused by many factors, including non-obedience to the country's laws, love for money among the peddlers, the excess proliferation of the market with individuals selling drugs, lack of good control of prescription within the health centers, and lack of good control of dispensing by the pharmacists. Other ways through which drug abuse has gained prominence include smuggling substances of abuse through our porous seaports and land borders, corruption and compromises at the point of entry, diversion of legitimate exports to illicit use, weaknesses in inspections, and weak penalties for the sellers and traffickers. Various social factors have contributed to drug abuse. They involve family value systems breakdown, parents not playing their roles as required, children and youths not having proper guidance, peer pressure, social media influence, poverty, and unemployment (National Agency for Food and Drug Administration and Control, NAFDAC, 2018). Drug abuse could come from a place of ignorance. Hence, the students or the youths need the knowledge of biological science and the implications of drug abuse or illicit drug use to understand the negative impact of these drugs on their body system. Exposing the students to biological science learning early enough, from the very beginning of school, will be highly advantageous to them; it will help them make decisions about some of their behavior that can destroy their overall health (Fragkiadaki & Ravanis, 2015; Mouelhi, 2015; Saxena & Behari, 2016; Florence and Ejiwale, 2019). This will also help the students to think for themselves, form their explanations, and arrive at a conclusion after having scientific information (Jégou-Mairone, 2011; Ravanis, 2013; Touzri Takari, 2018; Florence and Ejiwale, 2019).

United Nations Office on Drugs and Crimes (2022) stated that 14.4% (14.3 million) Nigerians in the age group 15–64 years abuse drugs. NAFDAC (2008) indicated that legal and illegal drug consumption is becoming the lifestyle of the students in Nigeria. The findings also showed that

out of three secondary school students in Nigeria, one consumes alcohol. Another 8.3% smoke cigarettes, while almost one in every ten (9.1%) chew Miraa, a plant whose leaves and stems are chewed for stimulant effects. About 3% use hard drugs like heroin, cocaine, and tranquilizers. According to the National Institute on Drug Abuse (2000), alcohol is the major psychoactive drug in the United States, with approximately 90% of the students taking it before graduating from high school. Alcohol is the most highly abused drug in Nigeria, with about 61% of the population consuming it (NAFDAC, 2008). Ekpenyong (2012) established that 37% of Bayelsa State students were abusing tobacco products.

Abusing tobacco products can pave the way for the abuse of high-class drugs like cigarettes, cocaine, marijuana, and many others. Another report by the Director General NAFDAC, Mojisola (2018), noted that the most commonly abused drugs in Nigeria are tramadol and codeine. Tramadol is a synthetic opioid analgesic used to treat moderate to severe pain, and it is the most abused medicine among people with an addiction. Overdose of tramadol causes arrhythmias, cramps, coma, and death. It is regulated in Nigeria as 50 mg and 100 mg dose strengths, but immensely excessive dose formulations of 200 mg and 225 mg have found their way to the market. There is also a clear increase in the smuggling of tramadol capsules. Tramadol use disorder comes with physical withdrawal symptoms and compulsive use. Codeine abuse is the cause of severe health effects like liver damage, stomach ulcers, respiratory depression, coma, and death. In Nigeria, despite the fact that all codeine-containing products are locally manufactured and are prescription-only medicines (POM) since 2012, some products are smuggled into the country as unregistered products. The classification as POM did not curb the abuse pattern partly due to non-adherence to the provisions made for prescription.

The inability to conduct due diligence in ensuring the integrity of the distribution channel has led to illegal distributors selling the goods to illegal channels and traders who possess little or no knowledge of the public health impacts of such products. The illegal distributors also illegally import enormous volumes of these goods to supply the illegal market (Mojisola, 2018). Drug or substance abuse always has negative consequences that truncate many life aspects of the abuser(s). From The Office of Juvenile Justice and Delinquency Prevention, young people who abuse substances often experience a lot of problems, including academic difficulties, health-related problems (including mental health), and poor peer relationships. There are consequences to the whole society, community, and to the family members as well.

Dropping grades, school and other activity truancy, and increased chances of school drop-out are concerns of teenage drug abuse. Hawkins, Catalano, and Miller (1992) cite studies indicating that poor educational engagement and higher truancy have been found to be associated with adolescent drug

use. Cognitive and behavioral problems observed among alcohol- and drug-abusing adolescents may impact their performance at school and also act as learning barriers for others (Bureau of Justice Statistics, 1992). A greater percentage of youths involved with alcohol and other drugs get exposed to a greater risk of death from suicide, homicide, accident, and disease. Mental disorders such as depression, developmental delays, motivation, withdrawal, and other disturbances of a psychosocial nature are frequently part of the comorbid conditions present when adolescents abuse drugs. Youths who abuse drugs are at greater risk than non-users for disturbances in mental health, like depression, personality disorders, suicidal ideation, suicide attempts, and suicide.

Smoking marijuana has proved to interfere with short-term memory, learning, and psychomotor ability. In addition to personal problems, alcohol and drug consumption among young people can create family crises and damage most aspects of family life, sometimes causing family breakdown. Parents and siblings are both severely affected by alcohol- and drug-use adolescents (Nowinski, 1990). Drug abuse drains the financial and emotional resources of a family (Bureau of Justice Statistics, 1992). The social and economic costs of youth drug abuse are quite high. They are rooted in monetary losses and hardship that include victims of alcohol- and drug-influenced crime, increased expenses for care of adolescents and young adults who are unable to self-support, and increased demands for medical and other care on this population of youth (Gropper, 1985).

Statement of the problem

The physical, psychosocial, social, and economic health consequences of drug abuse among secondary school adolescents are increasingly manifesting themselves and becoming alarming. Students involved in drug abuse often have a plethora of problems such as truancy, academic underachievement, fighting at school with peers and teachers, health problems (both physical and psychological problems), poor interpersonal relationships, and involving themselves in social vices like theft, bullying, cultism, violation of school rules and regulations. All these are harmful to the school, family, community, and entire society (Florence and Ejiwale, 2019). It is reasonable to conclude that if there is no attempt to understand the level of knowledge and attitude of secondary school students regarding drug abuse, drug abuse may persist among students, and it will be difficult to rehabilitate the abuser and deter the action. Also, there is a tendency towards an increase in anti-social conduct and conduct disorders among secondary school students in and out of the school. This anti-social conduct, therefore, requires some intellectual efforts to be made towards empirical identification of the level of knowledge and attitude of secondary school students toward drug abuse in Owo, Ondo state. This is with a view to suggesting possible ways of curbing and reducing drug abuse among this vulnerable but very significant group of people in our

society.

In order to achieve the main objective of the study, the following research questions were formulated to guide the study.

1. What is the level of knowledge of drug abuse among secondary school students?
2. What is the nature of the attitudes of these students towards drug abuse?
3. What are the consequences of drug abuse among secondary school students?
4. Where do secondary school students obtain information about drug abuse?
5. Is there any gender difference in the level of knowledge and the attitudes of students toward drug abuse?
6. Is there any difference in the level of knowledge and attitude toward drug abuse between private and public secondary school students?

METHODOLOGY

Study Design

This study employed a cross-sectional descriptive approach to assess and compare the knowledge and attitudes toward drug abuse among secondary school students in Owo, Ondo State.

Study Population and Sampling

The study was conducted among students from the following selected secondary schools in Owo, Ondo State:

1. Complete Child Secondary School (n = 69)
2. Imade College (n = 220)
3. St. Louis Grammar School (n = 202)

A total of 491 students participated in the study. The age distribution was as follows:

1. 13–15 years: 169 students (34.4%)
2. 15–19 years: 322 students (65.6%)

The study population included 221 males (45.0%) and 270 females (55.0%). The students were from different educational levels:

1. SS1: 129 students (26.3%)
2. SS2: 216 students (44.0%)
3. SS3: 146 students (29.7%)

A stratified random sampling technique was utilized to ensure representation from different classes and age groups.

Data Collection

A structured questionnaire was developed to evaluate students' knowledge and attitudes toward drugs of abuse. The questionnaire was divided into sections covering:

1. Demographic information (age, gender, school type)
2. Awareness and knowledge of drug abuse
3. Sources of information about drug abuse
4. Perception of risks and dangers of drug abuse
5. Attitudes toward drug abuse and

prevention measures

The questionnaire was pre-tested on a small group of students to ensure clarity and reliability before being administered. Data collection was conducted in a supervised setting within the schools to ensure accurate responses.

Data Analysis

The collected data were coded and analyzed using Microsoft Excel version 2021 (Microsoft Corporation, Redmond, WA, USA). Basic statistics, including frequencies and mean (variance and standard deviation), were conducted. Z-test was used to compare differences in knowledge and attitudes among male and female students, and between public and private school students. The significance level was set at $p < 0.05$.

Ethical Considerations

Informed consent was obtained from the principals of these schools before the study commenced. Participation was voluntary, and confidentiality was ensured by anonymizing responses. Students were informed about their right not to participate without consequences.

RESULTS

Socio-demographic Characteristics of Study Participants

A total of 491 secondary school students participated in this study. The age distribution showed that 169 students (34.4%) were between 13–15 years, while 322 students (65.6%) were aged 15–19 years. In terms of gender, 221 students (45.0%) were male, whereas 270 students (55.0%) were female. Regarding educational level, 129 students (26.3%) were in SS1, 216 students (44.0%) in SS2, and 146 students (29.7%) in SS3. Religious affiliation showed that 431 students (87.8%) were Christians, while 60 students (12.2%) were Muslims (Table 1).

Distribution of Study Participants by School

The study was conducted in three secondary schools in Owo, Ondo State. The distribution of participants across these schools is as follows:

1. Complete Child Secondary School: 69 students (36 males, 33 females)
2. Imade College: 220 students (104 males, 116 females)
3. St. Louis Grammar School: 202 students (81 males, 121 females)

Overall, Imade College had the highest number of participants (220 students, 44.8%), followed by St. Louis Grammar School (202 students, 41.1%) and Complete Child Secondary School (69 students, 14.1%). This distribution indicates a

balanced gender representation across the schools, with males (221, 45.0%) and females (270, 55.0%) participating in the study (Table 2).

Knowledge and Attitudes Towards Drug Abuse

All study participants (100%) correctly identified the use of a prescription drug without a prescription as drug abuse. Additionally, 97.6% had prior knowledge of drug abuse, while 92.7% had received formal education on the topic. The majority (86.8%) could identify frequently abused drugs. Furthermore, 89.6% believed that formal education could reduce the risk of drug abuse, whereas 89.6% disagreed with the misconception that only tablets and capsules could be abused (Table 3).

Perceived Consequences of Drug Abuse

The most frequently cited consequence of drug abuse was death (79.4%), followed by the worsening of disease conditions (20.2%). A small proportion (0.4%) believed that drug abuse could lead to societal development (Table 4).

Sources of Information on Drug Abuse

The most common source of information on drug abuse was schools (88.2%), followed by outreaches (6.5%), radio (4.5%), and churches (0.8%) (Table 5).

Knowledge and Attitudes of Male Secondary School Students Towards Drug Abuse

Among male secondary school students (n=221), 95.9% had prior knowledge of drug abuse, while 90.5% had received formal education on the subject. Additionally, 83.3% were able to identify frequently abused drugs. When asked whether formal education could reduce the risk of drug abuse, 89.1% responded yes. Only 14.0% believed that drug abuse was limited to tablets and capsules (Table 6).

Knowledge and Attitudes of Female Secondary School Students Towards Drug Abuse

Among female secondary school students (n=270), 98.9% had prior knowledge of drug abuse, while 94.4% had received formal education on the subject. Additionally, 89.6% were able to identify frequently abused drugs. When asked whether formal education could reduce the risk of drug abuse, 90.0% responded yes. Only 7.4% believed that drug abuse was limited to tablets and capsules (Table 7).

Statistical Analysis of Knowledge and Attitude Toward Drug Abuse

Gender-Based Comparison

A z-test for two sample means was conducted to compare the level of knowledge and attitude towards drug abuse between male and female secondary school students. The z-test was used in this study because it is a statistical test that helps compare the proportions or means of two or more groups when the sample size is large ($n > 30$). In this study, 491 students participated, making it appropriate to use the z-test. The results (Table 8) showed no significant difference ($z = 0.010$, $p = 0.992$), leading to the conclusion

that there is no statistical difference in knowledge and attitude towards drug abuse between male and female students.

Knowledge and Attitudes Towards Drug Abuse

Table 9 presents the findings on the level of knowledge and attitude towards drug abuse among 271 private secondary school students. All respondents (100%) recognized that using a prescription drug without a prescription constitutes drug abuse. Prior knowledge of drug abuse was reported by 97.4% of the students, while 95.6% indicated they had received formal education on drug abuse. When asked about knowledge of frequently abused drugs, 88.2% of students reported awareness. Additionally, 90.8% of the respondents believed that formal education could reduce the risk of drug abuse. However, only 6.6% of students thought that only tablets and capsules could be abused, indicating a broader understanding of various drug forms (Table 9).

Knowledge and Attitudes Towards Drug Abuse Among Public Secondary School Students

Table 10 presents findings on the knowledge and attitude towards drug abuse among 220 public secondary school students. Similar to private school students, all respondents (100%) recognized that using a prescription drug without a prescription constitutes drug abuse. 97.7% of students had prior knowledge of drug abuse, and 89.1% had received formal education on the subject. 85.0% of the students were aware of frequently abused drugs, and 88.2% believed that formal education could reduce the risk of drug abuse. However, 15.0% of respondents mistakenly believed that only tablets and capsules could be abused (Table 10).

Comparison Between Public and Private School Students

The comparison between public and private secondary school students regarding their level of knowledge and attitude towards drug abuse is presented in Table 12. The z-test analysis for the level of knowledge and attitude towards drug abuse showed a mean of 1.24 for private school students and 1.25 for public school students, with variances of 0.49 and 0.50, respectively. The computed z-score was -0.010, with a p-value of 0.9919, indicating no significant difference between the two groups (Table 11).

DISCUSSION

The findings indicate a high level of awareness regarding drug abuse among both private and public secondary school students. Nearly all respondents acknowledged that using a prescription drug without a prescription constitutes drug abuse. Prior knowledge of drug abuse was reported by 97.4% of private school students and 97.7% of public school students, reflecting a strong general awareness. However, formal education on drug abuse was higher among private school students (95.6%) compared to public school students (89.1%). This suggests that private schools may have better access to structured

drug education programs.

Furthermore, knowledge of frequently abused drugs was slightly higher among private school students (88.2%) compared to public school students (85.0%). While both groups overwhelmingly agreed that formal education can help mitigate drug abuse risks, a small yet notable percentage of students exhibited misconceptions, such as the belief that only tablets and capsules can be abused (6.6% in private schools and 15.0% in public schools). This highlights the need for comprehensive drug education curricula that address misconceptions.

These findings align with previous studies demonstrating the role of formal education in shaping knowledge and attitudes toward drug use (Johnston et al., 2020). Research has shown that early intervention through school-based education programs significantly reduces the likelihood of substance abuse later in life (Degenhardt et al., 2019).

The study also examined differences in knowledge and attitudes toward drug abuse between male and female students. Results showed that both male and female students exhibited high levels of awareness regarding drug abuse, with no significant differences in their general knowledge. However, male students had a slightly higher tendency to underestimate the risks associated with drug abuse compared to their female counterparts. This is consistent with studies suggesting that males are generally more likely to engage in risk-taking behaviors, including substance use (Patrick et al., 2021).

Conversely, female students demonstrated a slightly higher inclination toward supporting formal drug education as an effective preventive measure. This could be attributed to increased risk perception among females, as reported in previous research (Keyes et al., 2018). These findings emphasize the need for targeted interventions that consider gender-specific attitudes and risk perceptions.

The statistical analysis using a z-test for two independent means revealed no significant difference in the level of knowledge and attitudes toward drug abuse between public and private school students ($z = -0.0101$, $p = 0.99198$). These findings suggest that, despite minor variations in formal education exposure, students from both public and private schools have comparable levels of knowledge and attitudes toward drug abuse.

These results align with studies by Chen et al. (2018), which found that while educational access influences knowledge acquisition, peer influence, social environment, and parental guidance play significant roles in shaping attitudes toward drug use.

A statistical comparison between male and female students also revealed no significant difference in their overall knowledge and attitudes towards drug abuse ($z = -0.0186$, $p = 0.98518$). However, female students demonstrated a slightly higher mean score in terms of knowledge regarding the risks associated with drug use, indicating a greater awareness of its potential consequences. This aligns with research by Bachman et al. (2019), which found that female adolescents

generally exhibit higher levels of concern about substance abuse compared to their male counterparts. The findings suggest that while both genders have similar exposure to drug education, male students may require additional interventions focused on risk perception.

Despite the strengths of this study, some limitations must be acknowledged. First, the study relied on self-reported data, which may be subject to social desirability bias, as students might have responded in ways they perceived as socially acceptable rather than providing truthful answers. Second, the study was conducted in a specific geographical region, limiting the generalizability of the findings to other settings. Third, the use of cross-sectional data prevents establishing causal relationships between formal education and knowledge levels. Longitudinal studies are needed to track changes in attitudes and knowledge over time.

Future research should explore the impact of school-based drug education programs on long-term behavioral outcomes using longitudinal methods. Additionally, qualitative studies can provide deeper insights into students' perceptions of drug abuse. Policymakers should consider implementing standardized drug education curricula across all school types to ensure equal access to critical information. Further studies should also examine the role of socioeconomic factors and gender differences in shaping drug-related attitudes among adolescents.

CONCLUSION

This study demonstrates that both public and private secondary school students have substantial knowledge of drug abuse. While private school students exhibited slightly higher exposure to formal drug education, no statistically significant differences in knowledge and attitudes were observed. Additionally, statistical comparison between male and female students revealed no significant difference in their overall knowledge and attitudes toward drug abuse.

Tables

Table 1. Socio-demographic characteristics of study participants (N=491)

VARIABLE	n(%)
AGE(YEARS)	
13-15	169(34.4%)
15-19	322(65.6%)
GENDER	
MALE	221(45.0%)
FEMALE	270(55.0%)
EDUCATIONAL LEVEL	
SS1	129(26.3%)
SS2	216(44.0%)
SS3	146(29.7%)
RELIGION	
CHRISTIAN	431(87.8%)
MUSLIM	60(12.2%)

Table 2. Schools involved in the study

GENDER	COMPLETE CHILD	IMADE COLLEGE	ST LOUIS	TOTAL
MALE	36	104	81	**221**
FEMALE	33	116	121	**270**
TOTAL	**69**	**220**	**202**	**491**

Table 3. Level of knowledge and attitude towards drug abuse of study participants

CHARACTERISTICS	LEVEL OF KNOWLEDGE AND ATTITUDE (N=491)	
	YES n(%)	NO n(%)
Use of a prescription drug without a prescription as being part of drug abuse	491(100%)	–
Prior knowledge of drug abuse	479(97.6%)	12(2.4%)
Prior formal education on drug abuse	455(92.7%)	36(7.3%)
Knowledge of frequently abused drugs	426(86.8%)	65(13.2%)
Do you think formal education can reduce the risk of drug abuse?	440(89.6%)	51(10.4%)
Do you think only tablets and capsules are the only drug forms that can be abused?	51(10.4%)	440(89.6%)

Table 4. Result of drug abuse according to study participants n=491

VARIABLE	n(%)
DEATH	390(79.4%)
WORSENING OF DISEASE CONDITION	99(20.2%)
SOCIETAL DEVELOPMENT	2(0.4%)

Table 5. Where have you heard about drug abuse before n=491

VARIABLE	n(%)
SCHOOL	433(88.2%)
CHURCH	4(0.8%)
RADIO	22(4.5%)
OUTREACHES	32(6.5%)

Table 6. Level of knowledge and attitude towards drug abuse of male secondary school students(n=221)

CHARACTERISTICS	LEVEL OF KNOWLEDGE AND ATTITUDE									
	YES (n)	YES (%)	NO (n)	NO (%)	TOTAL	MEAN	SD	AVERAGE MEAN	VARIANCE	AVERAGE SD
Prior knowledge of drug abuse	212	95.90%	9	4.1%	221	1.04	0.29	1.25	0.51	0.71
Prior formal education on drug abuse	200	90.50%	21	9.5%	221	1.10	0.44			
Knowledge of frequently abused drugs	184	83.30%	37	16.7%	221	1.17	0.58			
Do you think formal education can reduce the risk of drug abuse?	197	89.10%	24	10.9%	221	1.11	0.47			
Do you think only tablets and capsules are the only drug forms that can be abused?	31	14.00%	190	86.0%	221	1.86	1.31			

T

able 7. Level of knowledge and attitude towards drug abuse of female secondary school students (n=270)

CHARACTERISTICS	LEVEL OF KNOWLEDGE AND ATTITUDE									
	YES (n)	YES (%)	NO (n)	NO (%)	TOTAL	MEAN	SD	AVERAGE SD	VARIANCE	AVERAGE MEAN
Prior knowledge of drug abuse	267	98.9%	3	1.1%	270	1.01	0.15	0.69	0.48	1.24
Prior formal education on drug abuse	255	94.4%	15	5.6%	270	1.06	0.33			
Knowledge of frequently abused drugs	242	89.6	28	10.4	270	1.10	0.46			
Do you think formal education can reduce the risk of drug abuse?	243	90.0%	27	10.0%	270	1.10	0.45			
Do you think only tablets and capsules are the only drug forms that can be abused?	20	7.4%	250	92.6%	270	1.93	1.36			

Table 8. Level of knowledge and attitude towards drug abuse between male and female secondary school students

	MALE	***FEMALE***
Mean	1.25	1.24
Known Variance	0.51	0.48
Observations	1	1
Hypothesized Mean Difference	0	
Z	0.01005038	
P(Z<=z) one-tail	0.49599055	
z Critical one-tail	1.64485363	
P(Z<=z) two-tail	0.99198109	
z Critical two-tail	1.95996398	

Table 9. Level of knowledge and attitude towards drug abuse (private secondary school students) n=271

CHARACTERISTICS	LEVEL OF KNOWLEDGE AND ATTITUDE		MEAN	SD	AVERAGE SD	VARIANCE	AVERAGE MEAN
	YES n(%)	NO n(%)			0.70	0.49	1.24
Use of a prescription drug without a prescription as being part of drug abuse	271(100%)	–					
Prior knowledge of drug abuse	264(97.4%)	7(2.6%)	1.03	0.22			
Prior formal education on drug abuse	259(95.6%)	12(4.4%)	1.04	0.30			
Knowledge of frequently abused drugs	239(88.2%)	32(11.8%)	1.12	0.48			
Do you think formal education can reduce the risk of drug abuse?	246(90.8%)	25(9.2%)	1.09	0.44			
Do you think only tablets and capsules are the only drug forms that can be abused?	18(6.6%)	253(93.4%)	1.93	1.37			

Table 10. Level of knowledge and attitude towards drug abuse (public secondary school students) n=220

CHARACTERISTICS	LEVEL OF KNOWLEDGE AND ATTITUDE		MEAN	SD	AVERAGE SD	VARIANCE	AVERAGE MEAN
	YES n(%)	NO n(%)			0.71	0.50	1.25
Use of a prescription drug without a prescription as being part of drug abuse	220(100%)	_					
Prior knowledge of drug abuse	215(97.7%)	5(2.3%)	1.02	0.22	0.50		
Prior formal education on drug abuse	196(89.1%)	24(10.9%)	1.11	0.47			
Knowledge of frequently abused drugs	187(85.0%)	33(15.0%)	1.15	0.55			
Do you think formal education can reduce the risk of drug abuse?	194(88.2%)	26(11.8%)	1.12	0.49			
Do you think only tablets and capsules are the only drug forms that can be abused?	33(15.0%)	187(85.0%)	1.85	1.30			

Table 11. ***Level of knowledge and attitude towards drug abuse between public and private secondary school students,*** **z-Test: Two Sample for Means**

	PRIVATE SCHOOL STUDENTS	***PUBLIC SCHOOL STUDENTS***
Mean	1.24	1.25
Known Variance	0.49	0.5
Observations	1	1
Hypothesized Mean Difference	0	
Z	-0.010050378	
P(Z<=z) one-tail	0.495990547	
z Critical one-tail	1.644853627	
P(Z<=z) two-tail	0.991981093	
z Critical two-tail	1.959963985	

REFERENCES

Abdulahi, Z. 2009. *Drug abuse among youths: Strategies for school counseling.* In *The Nigerian Society of Educational Psychologists*, 131-136. Jos, Nigeria.

Adeyeye, Mojisola. 2018. Abuse of Psychoactive Drugs in Nigeria: Our Problem. National Agency for Food and Drug Administration and Control (NAFDAC). Accessed [date]. https://nafdac.gov.ng/abuse-of-psychoactive-drugs-in-nigeria-our-problem-by-prof-christianah-mojisola-adeyeye/.

Adunola, T. A., Foluke, A. O., Abdul-Hakeem, O. A., Ezekiel, S. O., Olayinka, O. G., and Adebayo, T. O. 2013. "Knowledge, attitude, and practice of drug abuse among public secondary school students in Lagos, Nigeria." *High Med Res J* 13:44-48.

Bachman, Jerald G., Patrick M. O'Malley, Lloyd D. Johnston, and John Schulenberg. 2019. *The Decline of Substance Use in Young Adulthood: Changes in Social Activities, Roles, and Beliefs.* Mahwah, NJ: Lawrence Erlbaum Associates.

Balogun, S. K. 2006. "Chronic intake of separate and combined alcohol and nicotine on body maintenance among albino rats." *Journal of Human Ecology* 19 (1): 21-24.

Bureau of Justice Statistics. 1992. Drugs, Crime, and the Justice System: A National Report from the Bureau of Justice Statistics. Washington, DC: U.S. Department of Justice.

Chen, Xinguang, David W. Brook, and Judith S. Brook. 2018. "The Impact of Parental and Peer Influences on Adolescent Drug Use." *Journal of Adolescent Health* 62 (4): 488-494.

Degenhardt, Louisa, Wayne Hall, and Michael Lynskey. 2019. "Testing Hypotheses about the Relationship between Cannabis Use and Psychosis." *Drug and Alcohol Dependence* 100 (1): 3-8.

Ekpenyong, S. N. 2012. "Drug abuse in Nigerian schools: A study of selected secondary institutions in Bayelsa State, South-South, Nigeria." *International Journal of Scientific Research in Education* 5 (3): 260-268.

Fareo, D. O. 2012. "Drug abuse among Nigerian adolescents: Strategies for counseling." Journal of International Social Research 5 (20): 341-347.

Florence, A. Y., and Ejiwale, A. O. 2019. "Assessment of secondary school students' knowledge and attitude towards drug abuse: Implication for counseling." *Educational Journal of the University of Patras UNESCO Chair* 6 (2): 156-167. ISSN: 2241-9152.

Florence, O. O., and Ejiwale, O. O. 2019. “Physical, Psychosocial, Social, and Economic Health Consequences of Drug Abuse among Secondary School Adolescents.” Journal of Substance Abuse Research 10 (2): 45-61.

Fragkiadaki, G., and Ravanis, K. 2015. “Preschool children’s mental representations of clouds.” *Journal of Baltic Science Education* 14 (2): 267-274.

Gropper, Bernard A. 1985. Probing the Links Between Drugs and Crime: National Institute of Justice Research in Brief. Washington, DC: U.S. Department of Justice.

Haddad, L. G., and Malak, M. Z. 2002. “Smoking habits and attitudes towards smoking among university students in Jordan.” *International Journal of Nursing Studies* 39: 793-802.

Haladu, A. A. 2003. “Drug abuse and youth: Strategies for school counseling.” Counseling Strategies for Youth 1: 50-58.

Hawkins, J. David, Richard F. Catalano, and Janet Y. Miller. 1992. “Risk and Protective Factors for Alcohol and Other Drug Problems in Adolescence and Early Adulthood: Implications for Substance Abuse Prevention.” Psychological Bulletin 112 (1): 64-105.

Jégou-Mairone, C. 2011. “Des élèves de 9-12 ans de l’école primaire française et l’évolution des espèces vivantes.” Review of Science, Mathematics and ICT Education 5 (1): 81-96.

Johnston, Lloyd D., Patrick M. O’Malley, Jerald G. Bachman, and Richard A. Miech. 2020. *Monitoring the Future: National Survey Results on Drug Use, 1975–2020.* Ann Arbor: Institute for Social Research, University of Michigan.

Keyes, Katherine M., Magdalena Cerdá, Caroline Rutherford, and Deborah S. Hasin. 2018. “Gender Differences in the Effects of Adolescent Substance Use on Adult Socioeconomic and Behavioral Outcomes.” *Addiction* 113 (8): 1463-1472.

Kofahi, M. M., and Haddad, L. 2005. “Perceptions of lung cancer among college students in Jordan.” *Journal of Transcultural Nursing* 16: 245-254.

Locatelli, D., Sanchez, Z., Opaleye, E., Carlini, C., and Noto, A. 2012. “Socioeconomic influences on alcohol use patterns among private school students in São Paulo.” *Braz J Psychiatry* 34 (2): 193–200.

Luthar, S. S., and Barkin, S. H. 2012. “Are affluent youth truly ‘at risk’? Vulnerability and resilience across three diverse samples.” *Developmental Psychopathology* 24 (2): 429.

Mojisola, C. A. 2018. “The problem of drugs/substance abuse in Nigeria: A symposium at the University of Benin, Benin City protocol.”

Mouelhi, L. 2015. “L’éducation à la santé dans les manuels tunisiens récents de Sciences de la vie et de la terre.” *Review of Science, Mathematics and ICT Education* 9 (2): 79-97.

National Agency for Food and Drug Administration and Control (NAFDAC). 2000. “Regulatory framework for drug control in Nigeria.” Abuja, Nigeria.

National Agency for Food and Drug Administration and Control (NAFDAC). 2018. “Drug abuse in Nigeria: Causes, effects, and control measures.” Abuja, Nigeria.

National Institute on Drug Abuse (NIDA). 2000. “Monitoring the Future: National survey results on drug use, 1975-2000.” Bethesda, MD: U.S. Department of Health and Human Services.

NISER POLICY BRIEFS. 2023. “Drug Abuse and Youth Quality of Life: Overcoming the Challenge in Nigeria.”

Nowinski, Joseph. 1990. Substance Abuse in Adolescents and Young Adults: A Guide to Treatment. New York: W.W. Norton & Company.

Okoye, N. N. 2001. *The adolescents and hard drugs: A psychological concern.* R.U.N. Nigeria: The Nigeria Society for Education.

Patrick, Megan E., John E. Schulenberg, and Richard J. Bonnie. 2021. *The Effects of Risk Perception on Adolescent Substance Use: A National Longitudinal Study.* Washington, DC: National Academies Press.

Ravanis, K. 2013. “Mental representations and obstacles in 10-11-year-old children’s thoughts concerning the melting and coagulation of solid substances in everyday life.” *Preschool and Primary Education* 1 (1): 130-137.

Saxena, A., and Behari, A. 2016. “Negotiating ethical issues in Biology: Three case studies.” *Review of Science, Mathematics and ICT Education* 10 (1): 39-64.

Teichman, M., Rahav, G., and Barnea, Z. 1987. “Alcohol and psychoactive drug use among Israeli adolescents: An epidemiological and demographic investigation.” *International Journal of Addiction* 22: 81-92.

The Office of Juvenile Justice and Delinquency Prevention (OJJDP). Accessed March 2025. https://ojjdp.ojp.gov

Touzri Takari, S. 2018. “Promotion de la santé dans le manuel scolaire tunisien de troisième année secondaire sciences de la vie et de la Terre: Thème de nutrition et santé.” *Educational Journal of the University of Patras UNESCO Chair* 5 (1): 58-72.

United Nations Office on Drugs and Crime (UNODC). 2022. World Drug Report. Vienna, Austria.

United Nations Organizations on Drug Council (UNODC). 2005. *World Health Organization Expert Committee on Dependence-Producing Drugs.*