



## Extent of Use and Awareness of the Harmful Effects of Psychotropic Substances amongst Undergraduate Students of Nnamdi Azikiwe University Awka

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### Abstract

**Background:** Substance abuse commonly known as drug abuse refers to the harmful or hazardous use of psychotropic substances including alcohol and illicit drugs (WHO 2017), has become a worrisome development amongst youths all over the world. To clamp down the menace due to these illicit drug cultivation, sale and use, the Nigerian Government joined the rest of the world by establishing the National Drug Law Enforcement Agency (NDLEA). Despite the suppressive and preventive efforts of the agency, the cycle of illicit drug production and abuse has increased. This has led to serious socio-economic and psychological decay in the society resulting in several cases of death, rape, theft and all types of vices amongst undergraduates.

**Objectives:** To determine the level of substance abuse and the substances commonly abused by undergraduate students using Nnamdi Azikiwe University, Awka. as the study prototype and to assess the level of knowledge of undergraduate students on the harmful effects of substance abuse.

**Methods:** A descriptive cross-sectional study which involved undergraduate students in the three campuses of Nnamdi Azikiwe University, Awka in Anambra state. The entire student population were stratified by Faculties and random sampling technique was used to get the representative subjects from each faculty making sure that the various levels were taking into consideration. Data gotten were imported and analyzed using SPSS version 20 software.

**Results:** A total of 43.1% of the students surveyed abuse psychotropic substances and marijuana was the substance most significantly abused, despite the high level of awareness of the harmful effects of psychotropic substances amongst the students. Greater percentages of males (75.61%) were involved in drug abuse but this was not statistically significant giving a p-value of 0.120. Peer pressure had a great influence on drug abuse while parents' level of education had no significant effect.

**Conclusion:** This high level of involvement in substance abuse by undergraduates calls for multidimensional approach to nip this menace in the bud.

**Keywords:** Alcohol; National Drug Law Enforcement Agency (NDLEA); Psychotropic Substances

## Introduction

### Background of Study

Substance abuse is becoming an increasing problem amongst youths all over the world. Substance abuse also known as drug abuse is the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs. One of the key impacts of illicit drug use on society is the negative health consequences experienced by its users [1]. The history of substance abuse in Nigeria dates back to the early trends of civilization which took place as man settled from being a gatherer to a farmer. Some of the early crops man cultivated were intoxicants like alcoholic wines, tobacco, nicotine, opium and other substances. On return of veterans to Nigeria after the war, they brought with them concealed contents of cannabis (Indian hemp) as souvenirs. Subsequently, widespread and illegal cultivation of Cannabis as a farm product started. By 1980's, the country became flooded with many of such substances including Cocaine, Heroin and Hallucinogens etc. and their harmful events were becoming evident [2]. In many African countries including Nigeria, alcohol and tobacco has acted as "gateway drugs" to life use of other substances [3].

College students in Nigeria experiment with drugs without knowing which drug to take, when to take it and how to take it [4]. Youths "get high" from abusing these substances such as inhalants, alcohol, and cannabis among others.

Psychotropic substance abuse has posed some societal problems, for instance alcohol abuse is a factor in half of all the fatal accidents, killing over 20000 people each year [5]. Also, associated violence and spousal abuse is related to alcohol [6].

These colossal increase in cultivation and use led to the public outcry by Nigerians on the damaging effects of drug abuse and illicit drug trafficking.

These coupled with the United Nations Convention against illicit traffic in Narcotic drugs and psychotropic substances, made the Nigerian Government act by establishing the National Drug Law Enforcement Agency (NDLEA) by the promulgation of Decree Number 48 of 1989, (Now CAP N30 LFN 2004). The main aim of the establishment of the agency was to exterminate illicit drug trafficking and consumption in Nigeria. Any involvement in drugs, especially their importation, exportation, sale, transfer, purchase,

cultivation, manufacture, extraction and possession is universally unacceptable and so the establishment of the NDLEA was Nigeria's deliberate attempt at joining the rest of the world in getting rid of this menace within her borders. A sister agency, the National Agency for Food and Drug Administration and Control (NAFDAC) [7] was also established to work in harmony and control use of and abuse of some prescription drugs.

Not minding the establishment of these Agencies and their numerous laws and actions, everyday over 500 000 bottles of codeine are consumed by youths including undergraduates across Nigeria, others take tramadol, rophynol, marijuana and other opioids [8]. This has led to serious socio-economic and psychological decay in the society resulting in several cases of deaths, rape, theft, kidnapping and all such vices among undergraduates.

Previous studies have actually worked on the prevalence of substance abuse amongst university undergraduate students even in Nnamdi Azikiwe University Anambra state Nigeria. A study by [9] on factors influencing hard drug use among university undergraduates of Nnamdi Azikiwe University Awka revealed that peer pressure is a major factor influencing drug use. In a study conducted by [10] on Extent of Drug Abuse amongst University students in Anambra state Nigeria, it showed that high proportion of respondents were male students and the study also revealed that compulsive use of drugs was associated with the female gender. They however did not dwell on the awareness of the students on the consequences of their involvement in substance abuse. This study will therefore help to consolidate on previous studies and ascertain the reasons why undergraduate students of Nnamdi Azikiwe University Awka abuse these substances, the substances commonly abused and their awareness of the harmful effects of such drugs.

### Statement of the problem

There seem to be an increase in the use of these substances of abuse in our society, especially amongst undergraduate students, not minding the stringent measures being taken by the Agency (NDLEA). Majority of Nigerian undergraduates ignorantly depend on one form of drug or the other for their daily activities. Illicit drug use is injurious to the individuals, family and the society; spawning crimes, academic difficulty, health related problems, poor peer relationship, social economic consequences i.e. lack of productivity

in the economy, spreading diseases like AIDS and killing our youths who are our “future leaders”.

It is no longer news that substance abuse has become a disturbing issue and many international agencies have worked so hard to combat this throbbing issue but the rate keeps increasing everyday especially amongst youths [11]. In just 2017, more than two cases of deaths and several cases of exam malpractice, mental problems, involvement in rape and other social vices amongst Nnamdi Azikiwe university students were reported and this is a disturbing and unhealthy development.

### Justification of the study

The findings from this study will further validate previous studies and will provide enough facts to help law makers enact laws that will help halt the production of these commonly abused substances and thus, finding lasting solution to the problem. The work would be of great benefits to undergraduates because it will help broaden their perception about substance abuse and its consequences. This study will encourage drug abuse counseling to be recommended as an integral part of the university curriculum. The study will also encourage the university authorities to intensify their effort to create awareness through public enlightenment programs such as mass media, radio stations and seminars, hand bills, posters etc. on the consequences of substance abuse.

### Aim and Objectives of the Study

The aim of this study is to ascertain the awareness and extent of substance abuse amongst undergraduate students of Nnamdi Azikiwe University Anambra state.

The objectives of the study include:

- To determine the substances commonly abused by undergraduate students of Nnamdi Azikiwe University, Awka.
- To know the common places where these substances are purchased.
- To identify the common reasons why these substances are used by undergraduate students of Nnamdi Azikiwe University.
- To access the level of knowledge of undergraduate students of Nnamdi Azikiwe University on the harmful effects of substance abuse.

- To ascertain their knowledge of the import of regulating bodies; NDLEA, NAFDAC.

### Hypothesis

#### Null hypothesis

- The undergraduate students of Nnamdi Azikiwe University are not aware of the harmful Effects of psychotropic substance.
- Undergraduate students of Nnamdi Azikiwe University do not use psychotropic substances.

#### Alternate hypothesis

- The undergraduate students of Nnamdi Azikiwe University are aware of the harmful Effects of psychotropic substance.
- The undergraduate students of Nnamdi Azikiwe University use psychotropic substances

### Literature Review

The use of psychotropic substances can be said to be as old as mankind, and the social vices associated with it kept emerging until it could no longer be neglected. Over the past decades, there have been global efforts in combating the physical, psychological and social-economic problems associated with illicit drug use and trafficking. The international community spearheaded by the United Nations provided a platform for individual states to build on in the fight against illicit traffic in narcotic drugs and psychotropic substances [12]. The UN went further to declare 1991 to the year 2000, ‘The Decade of Action against Drug Abuse’. Nigeria, being in attendance for the first time ever at the UN 1988 convention was not left out in the fight. The National Drug Law Enforcement Agency (NDLEA) was then established by the promulgation of Decree Number 48 of 1989 (Now CAP N30 LFN 2004). The NDLEA were charged with the responsibility of exterminating illicit drug trafficking and consumption in Nigeria. According to Babandiga (1991) “substance abuse is a problem that poses threat to the health and survival of the youths”. NDLEA operates by fighting the menace of illicit drugs production, circulation, marketing and consumption. The NDLEA act does not endorse death penalty for offenders, it however aimed at rendering offenders financially incapacitated, through long periods of incarceration ranging from 15 to 25 years and sometimes life imprisonment for producers and traffickers. They also provided punishment on conviction to a jail term of 25 years’ imprisonment or two million naira fine, for any organization involved in the of-

fence. The Agency also in its decree No 33 of 1990 prescribed a jail term of five years for persons caught abroad for trafficking in drugs through Nigeria and by so doing bringing the name of our great nation to disrepute. Though the responsibility of prosecuting the war on drugs primarily rests on the NDLEA, this war is being fought relentlessly in collaboration with other law enforcement agencies such as NAFDAC, the Nigerian Police Force, the Nigerian Customs Service and a host of others. In recent times, the agency has worked closely with the government of the United States of America and has helped synergize their efforts by providing security training, orientations, full body scanning machines to international airports; the use of these machines in the apprehension of drug smugglers has improved the precision of the agency and overall safety of unsuspecting drug addicts that form the endpoint of these substance supply lines. It was reported that between 2006 and 2008 alone, over 12,500 suspected culprits were arrested [13]. Notwithstanding over two decades of suppressive and preventive efforts by the agency, the cycle of illicit production, distribution, and its abuse have continued to increase in scope, as the NDLEA report of 2011 showed that illicit drug use is on the increase.

Substance abuse is a major problem in schools [14]. The study of [5] revealed that an average number of undergraduate students (43.9%) of the University of Benin (UNIBEN), were exposed to drugs with alcohol and coffee being the most commonly abused substance. The indulgence of youths in substance abuse has increased greatly and made one ponder on the validity of the statement "Youths are the leaders of tomorrow". If the greater percentage of the youths are lost to this vial enemy (substance abuse), then what the future holds is but a mere spectacle of the consequences untold, undocumented and ultimately lacking prerequisite measures to contain what would be the biggest pandemic of the open era.

A lot of factors contribute to the continual indulgence of undergraduates in psychotropic substance abuse.

Different theories arise as to why these substances are constantly being abused by youths. University students believe that the university is a place of freedom. Sensation seeking and risk-taking tendencies also are part of the normal developmental process for young people [15]. The use of drugs may be triggered by emotional stress in an effort to alleviate a number of social problems [9]. Most

individuals became attracted to drugs because they believed that it helped them adapt to the changing environment, and youths got involved in a particular risk of substance abuse because of the need for acceptance and influence of peer pressure related to this stage of development [16]. There is also the belief that drinking, smoking and taking drugs helped to reduce tension and frustration, relieve boredom and fatigue, and sometimes helped the user to cope with harsh realities of their world [17]. All these made them to be vulnerable to such illicit drugs and other psychoactive substances.

Studies have shown that the type of psychoactive substance most students use depends on what were available in their environment and the affordability of these substances. Some psychoactive substances are readily available because they are cultivated locally not far from the reach of the students thereby encouraging the use of these substances [18]. The arrest and prosecution of 35 people by the NDLEA for growing Indian hemp in Ondo state, Nigeria is an indication that these substances are readily available to local users [19].

Addiction to these substances may result in dependence which once it sets in, makes them incapable of maintaining essential human relationship, become socially ostracized, developmental problems and other health co-morbidities; Loss of motivation, recurrent memory lapses and often unpredictable emotional swings, culminating in failed examinations [20]. Continuous use may result in their bodies developing tolerance, thus greater amount of these drugs are required to produce the same effects. The result not only limited to an accelerated degeneration in physiologic functions but also incorporates a constant criminal tendency of the individual to be able to purchase such substances.

According to the study conducted by the National survey of substance abuse in Nigeria across the six geopolitical zones in Nigeria, in the year 2007, statistics showed that; Cannabis was the most commonly used illicit drug with a lifetime use of 6.6%, 12-month of 2.6%, and 30-day of 1.8%. The prevalence rates of inhalants use were 6.8% lifetime, 3.9% 12-month and 3.2% 30-day. The geopolitical zones with the highest prevalence use of inhalants were the South East and the North-Central zones. Tranquilizer use was highest in the South West. Higher rates of drug use were generally associated more with the male gender than the female gender [21] also stated that the age of first use was between 10 - 29 years, multiple

drug use happened nationwide (7.88%), for organic solvents and multiple drug use, there was greater prevalence in rural than urban areas, modes of drug intake were through smoking (cannabis), inhalation, or sniffing (organic solvents, cocaine, heroin), chewing (local leaves or 'zakami') and licking or swallowing (psychotropic drugs). Some of the local names of these substances that were commonly abused by Nigerian youths were; Indian hemp otherwise known as weed, igbo, tafe, skunk (which is a mixture of both cocaine and Indian hemp), codeine otherwise known as "coder" cocaine also known as crack, Alcohol also called Sepe, paraga, opae-nyin, ogogoro, booze, ngwo etc. [22]. The use of these substances of abuse and its harmful effects by undergraduate students have become a thing of concern because of the several cases of recorded deaths, school dropouts and student's involvement in many social vices like rape, stealing, kidnapping etc. Thus, the outcry for an innovative measure that would modify or incorporate already existing strategies to combat the perils of psychoactive substance abuse has become the order of the day and this can only be achieved by first evaluating the extent of use and awareness of the harmful effects of psychotropic substances amongst the youths of today.

### Definition of terms

- **Substance abuse:** It refers to the use of all chemicals, drugs and industrial solvents that can produce psychological and physical dependence. It can also be referred to the repeated non-medical use of potentially addictive chemical and organic substances. According to [23], substance abuse includes the use of chemicals in excess of normally prescribed treatment dosages and frequency, even with the knowledge that they may cause serious addiction and eventually lead to serious problems.
- **Drug:** Any product other than food or water that affects the way people think, see, feel and behave. It is a substance that due to its chemical nature affects physical, mental, and emotional functioning [24].
- **Drug abuse:** It refers to the use of drugs for non-medical purposes. It is an excessive or inappropriate use of a drug by a person; such use is being considered as immoral or illegal by the culture and also resulting in harm to the person or society. It can also be referred to as drug use in a manner that deviates from approved medical or social patterns [25].

- **Drug addiction:** It means that a person can no longer function without these substances. An addicted person usually show decline in academic performance, frequently fail to attend classes, lose interest in school work and display weakened motor coordination and ill-health [26].
- **Drug related problems:** This term is used to describe all the negative effects associated with drug abuse which includes ill-health, violence, academic underperformance etc. [24].
- **Illegal/legal drugs:** Illegal drugs refer to the substances deemed harmful to the mental and physical wellbeing of an individual by the government who seeks to discourage consumption by law. Legal drugs refer to those drugs that government allows consumption [24].
- **Interventions:** Attempts to help drug users positively modify their behaviour and change their attitude towards the misuse of drugs.
- **Psychoactive substances:** it refers to any substance taken that can modify a person's behaviour, perceptions, mood, cognitions and motor functions [23].
- **Protective factors or risk factors:** Factors that help prevent substance abuse are called protective factors while those that increase the risk of abuse are called risk factors [27].
- **Undergraduate:** According to [28] refers to a student at a college or university who has not yet ended a degree.
- **Youth:** It is defined as the period of time when someone is young especially the period when someone is a teenager [24].

### Review of related literature

Many studies have tried to assess the effects of psychotropic substances on our youths. In a study conducted by [29] on knowledge of health effects of substance abuse among students of tertiary institutions in south-western Nigeria using random, stratified and proportional random sampling techniques. They found out that the knowledge of health effects of substance abuse is high and adequate knowledge of the health effects did not prevent them from quitting its use. Another study conducted by [30] on the prevalence and factors affecting psychoactive substance use among undergraduate students in university of Uyo, Nigeria, using a cross-sectional descriptive study method. The outcome of the study revealed that the perceived factors affecting psychoactive substance abuse among

undergraduates in university of Uyo included peer group influence, curiosity, parental influence and increased leisure influence.

## Methods

### Study design

The study design used for the study was descriptive cross-sectional. It involved students in all the campuses of Nnamdi Azikiwe University, Awka in Anambra State, where undergraduate courses are offered. A Semi structured questionnaire, adapted from previous studies [31] and modified to meet the objectives of the study was utilized for data collection.

### Study area/setting

The study was conducted in all campuses of Nnamdi Azikiwe University located in Awka, Agulu and Nnewi, all in Anambra state Nigeria. Anambra state is a state in the south-eastern part of Nigeria with coordinates 6°20N 7°00E. It has a total area of 4,844 km<sup>2</sup> (1870 sq mi). The indigenous ethnic groups in Anambra state are the Igbos (98% of the population) and a small population of the Igalas (2% of the population) who live mainly in the north-western part of the state. Awka is the state capital of Anambra state. This study was conducted among the students of Nnamdi Azikiwe University Awka (NAU) because it is the most prominent Federal University of Anambra state. The main campus of the University is located at Awka sited thirty-five kilometers to the South-West of Awka, the second campus is at Nnewi (Nnamdi Azikiwe University Teaching Hospital, NAUTH) and Okofia where the college of health and basic medical sciences are situated, the third campus is at Agulu (Faculty of Pharmaceutical Sciences).

### Study population

The study population included all students undergoing undergraduate programs in all the campuses of Nnamdi Azikiwe University (NAU) where undergraduate courses are offered.

### Sample size and Sampling techniques

The sample size for the study was calculated from the study population using the Yamane formula for calculating sample size [32].

$$n = \frac{N}{1 + N(e)^2}$$

Where: n= Sample size; N= Total Population of the students e= Level of precision ± 5%, with confidence interval set at 95%; Calculation of sample size (n) from the above formula N= 31901; e= 0.05

$$= \frac{31901}{1 + 31901(0.05)^2}$$

$$= \frac{31901}{80.7525}$$

$$= 395.05 \text{ sample size } 395 \text{ students}$$

$$\text{But overage is } 5\% \times 395 = 19.75$$

$$= 395 + 19.75 = 414.75$$

$$= 415$$

The percentage of students in each department was calculated using the formula written below:

$$\frac{\text{total number of students in the department} \times 100}{31901}$$

The number of students from each department was then calculated using the formula below; this represents the number of questionnaires shared for each department.

$$\text{percentage of students in the department} \times 415100$$

### Sampling technique

Stratified, random sampling technique was used for sampling. The entire student population was stratified by Faculties. The sample size gotten from the entire study was shared by ratio which was determined by the population of students in the various faculties as received from the Secretary to the Dean, Student Affairs department of the University in May 2018. Simple random sampling technique was used to get the representative subjects in each Faculty making sure that the various levels were taken into consideration.

### Eligibility criteria

#### Inclusion criteria

All undergraduate students undergoing regular study in all the three campuses of Nnamdi Azikiwe University Awka who gave their informed consent to participate in the study.

#### Exclusion criteria

##### All non-students

All undergraduate students not undergoing regular programs i.e. Continuing Education Program (CEP) and Diploma students All

non-undergraduate students i.e., Pre-science students All students who are not students of Nnamdi Azikiwe University.

**Duration of the Study**

The study lasted for a period of four (4) months from May 2018 to August 2018.

**Ethical consideration**

Ethical approval was gotten from Nnamdi Azikiwe University teaching Hospital Ethics Committee with registration number 101/2018/099 and the study commenced after collection of the ethical approval. Oral consent of the students was sought after due information on the study objectives.

**Data collection**

Data was collected using semi-structured questionnaire. It had three sections; the demographic information of students, the knowledge, use and perception of the students towards substance abuse and the consequences of substances of abuse.

**Data analysis**

The data obtained from this study were collated using Microsoft excel spreadsheet and analyzed using the Statistical Package for Social Sciences (SPSS Version 20). Statistical analysis was performed by describing the characteristics of respondents. Proportions were summarized as percentages.

**Results**

A total of 415 questionnaires were shared for the study out of which 400 were retrieved. Five were subsequently removed because of incomplete filling leaving us with 395 questionnaires duly filled by the participants. In this survey, 296 (54.7%) of the participants were males while 179 (45.3%) were females. Majority of them, 215 (54.4%) were between the ages of 21 - 25 years old, while minority, 2 (0.5%) were above 30 years old. Out of the 395 participants, 369 (93.4%) were singles, 25 (6.3%) were married and 1 (0.3%) was divorced as shown on table 1.

Most of the participants 219 (55.4%) were either in 100 or 200 level and the participants were predominantly Christian 377 (95.4%). Faculty of management sciences had the highest number of participants 68 (17.2%) while the Faculty with the least number of participants was Faculty of Medicine 7 (1.8%), as shown in table 1.

Variable	Variable category	Response, n (%)
Gender	Male	296 (54.7)
	Female	179 (45.3)
Age	< 20 years	156 (39.5)
	21 - 25 years	215 (54.4)
	26 -30 years	22 (5.6)
	> 30 years	2 (0.5)
Marital status	Single	369 (93.4)
	Married	25 (6.3)
	Widowed	0 (0)
	Divorced	1 (0.3)
Level of education	100 - 200 level	219 (55.4)
	300 - 400 level	156 (39.5)
	500 - 600 level	20 (5.1)
Religion	Christianity	377 (95.4)
	Islam	8 (2.0)
	Traditional	5 (1.3)
	Others	5 (1.3)
Faculty	Biological sciences	39 (9.9)
	Physical sciences	40 (10.1)
	Art	35 (8.9)
	Social sciences	59 (14.9)
	Engineering	29 (7.3)
	Medicine	7 (1.8)
	Health sciences and tech	17 (4.3)
	Law	14 (3.5)
	Education	42 (10.6)
	Agriculture	12 (3.0)
Basic medical sciences	Others	-
	Pharmaceutical sciences	7 (1.8)
	Management sciences	68 (17.2)
	Environmental sciences	17 (4.3)

**Table 1:** Social demographic features of participants. Numbers in parenthesis are percentages in column. -: missing values.

A total of 180 (45.6%) of participants’ fathers had higher education while few number, 17 (4.3%) had no formal education. Similar

trend was also found among participants mothers highest level of education (Table 2).

Majority of participants, 240 (60.8%) said that they live with their parents, 85 (21.5%) lived with their relatives, 55 (13.9%) lived with non-relatives while very few number, 13 (3.3%) lived with their step-parents (Table 2).

From table 2, 177 (44.8%) of participants fathers were self-employed. Similar pattern was recorded among their mothers were majority, 160 (40.5%) were self-employed.

A total of 343 (86.8%) students responded that none of their family member was a drug addict. On the other hand, 49 (12.4%) reported that their family members were drug addicts (Table 2).

Mother's occupation	House-wife	23 (5.8)
	Self-employed	160 (40.5)
	Public servant	43 (10.9)
	Civil-servant	122 (30.9)
	Others	47 (11.9)
Is any member of your family a drug/substance abuse?	Yes	49 (12.4)
	No	343 (86.8)
	No idea	3 (0.8)

**Table 2:** Social demographic features of participants' parents. Numbers in parenthesis are percentages in column.

Variable	Variable category	Response, n (%)
Highest level of fathers' education	No formal education	17 (4.3)
	Primary education	44 (11.1)
	Secondary education	99 (25.1)
	Higher education	180 (45.6)
	No idea	55 (13.9)
Highest level of mothers' education	No formal education	11 (2.8)
	Primary education	17 (4.3)
	Secondary education	117 (29.6)
	Higher education	204 (51.6)
	No idea	45 (11.7)
Which of the following people live in the same house with you?	Parents	240 (60.8)
	Step-parents	13 (3.3)
	Relative(s)	85 (21.5)
	Non-relatives (s)	55 (13.9)
	None of the above	2 (0.5)
Father's occupation	Farmer	29 (7.3)
	Self-employed	177 (44.8)
	Public servant	52 (13.2)
	Civil-servant	84 (21.3)
	Others	53 (13.4)

Out of 395 participants, 354 (89.6%) have received information about substance abuse whereas 42 (10.4%) did not receive such information. Majority of information received, 184 (46.6%) was from mass media while least information, 96 (24.3%) received by them was from religious programs (Table 3).

Level of awareness of drugs that cause addiction among students include; marijuana (332, 84.1%), cocaine (291, 73.7%), tramadol (271, 68.61%), tobacco/nicotine (254, 64.3%), codeine (248, 62.8%) and others. The least was analgesics (86, 21.8%). From the results in table 3, 296 (74.9%) of students agreed that everyone who abuses these substances can be addicted (Table 3).

Out of the 395 participants, 78 (19.7%) were cigarette smokers while higher proportion, 317 (80.3%) were none smokers. Majority, 49 (12.2%) of them smoked less than five cigarettes per week, 12 (3.0%) smoked less than five cigarettes per day, while 1 (1.8%) smoked more than five cigarettes per day (Table 3).

From table 3, Marijuana was the psychoactive substance mostly used by students, 82 (20.8%) followed by nicotine (67, 17.0%), tramadol (62, 15.7%), codeine (60, 15.2%) and others. Cocaine was the least abuse substance, 2 (0.5).

From table 4a, majority of students, 116 (29.4%) started using this substance when they were below 18 years. Also, 77 (19.5%) said they had been using this substance less than one year before this study, 65 (16.5%) said between 2-3 years while 10 (2.5%) said



Variable	Variable category	Response, n (%)
Have you ever received information about substance abuse?	Yes	354 (89.6)
	No	42 (10.4)
If yes, what was your source of information?	Mass media	184 (46.6)
	Social media	150 (38.0)
	Seminars	146 (37.0)
	Lectures	132 (33.4)
Which of the causes following drugs addiction?	Religious programs	96 (24.3)
	Marijuana	332 (84.1)
	Analgesics	86 (21.8)
	Cocaine	291 (73.7)
	Rohypnol	104 (26.3)
	Ecstasy	102 (25.8)
	Heroin	217 (54.9)
	Tobacco/Nicotine	254 (64.3)
Codeine	248 (62.8)	
	Valium	115 (29.1)
Tramadol	271 (68.61)	
	Yes	296 (74.9)
Do you think everyone who abuses these substances can be addicted?	No	99 (25.1)
	Yes	78 (19.7)
Do you smoke cigarette?	No	317 (80.3)
	Less than cigarettes five per day	12 (3.0)
If you smoke cigarette, how often do you smoke it?	More than cigarettes Five per day	1 (1.8)
	Less than five cigarettes per week	49 (12.2)
	More than five cigarettes per week	9 (2.3)
	Nicotine	67 (17.0)
Which of the above psychoactive substance(s) have you used?	Marijuana	82 (20.8)
	Tramadol	62 (15.7)
	Codeine	60 (15.2)
	Rohypnol	13 (3.3)

Cocaine	2 (0.5)
Ecstasy	27 (6.8)
None	204 (51.6)
Alcohol	14 (3.5)

**Table 3:** Knowledge, use and perception of substance abuse.

for more than 6 years ago. From this category, 76 (19.2%) said they had been using these substances before gaining admission into the University (Table 4a).

Among the users of these substances, 23 (5.8%) had engaged in illegal activities while 147 (37.2%) had not. Most of them, 110 (27.8%) were introduced to these substances via friends.

Majority of these addicts, 92 (23.3%) agreed that these substances are readily available around school while lesser number, 78 (19.7%) said no.

Most of them, 78 (19.7%) got these substances from their peers than drug peddlers (50, 12.7%) and farmers (14, 3.5%).

On substance use, 50 (12.7%) of them use these drugs with friends, 44 (11.1%) used them at parties while 41 (10.4%) used them in other situations. Few of them used them before sport (10, 2.5%) and during exam (25, 6.3%) (Table 4a).

Variable	Category	Response, N (%)
How old were you when you first tried the substance(s) ticked above?	10 - 12 years	9 (2.3)
	13 - 15 years	9 (2.3)
	16 - 18 years	116 (29.4)
	> 18 years	36 (9.1)
How long have you been using the substance(s)?	< 1 year	77 (19.5)
	2 - 3 years	65 (16.5)
	4 - 5 years	18 (4.6)
	> 6 years	10 (2.5)
Have you been taking these substances before gaining admission into the University?	Yes	75 (19.2)
	No	95 (24.1)
Have you ever engage in illegal activities to obtain the substance(s)?	Yes	23 (5.8)
	No	147 (37.2)

How did you get introduced to the substance(s)?	Friends	110 (27.8)
	Family members	10 (2.5)
	Environment	40 (10.1)
	Internet	4 (1.0)
	Others	6 (1.5)
Are these substances readily available around school?	Yes	92 (23.3)
	No	78 (19.7)
How did you get any of the substance(s)?	Farmers	14 (3.5)
	Drug peddlers	50 (12.7)
	Peers	78 (7.1)
	Others	14 (3.5)
In what occasions do you use the substance(s)?	Before exams	50 (12.7)
	Before doing sports	78 (19.7)
	With friends	50 (12.7)
	At parties	44 (11.1)
	Others	41 (10.4)

**Table 4a:** Trend in the utilization of substances of abuse. Numbers in parenthesis are percentages in column.

From table 4b, most of this substance of abuse was used through smoking, 83 (21.0%) and oral, 73 (18.5%). Less proportion used them by sniffing (8, 2.0%) and injection (3, 0.8%). Major factors that enhance the use of these substance by addicts include; teenage curiosity (234, 59.2%), lack of knowledge about complications of drugs (183, 46.3%), friends offer (150, 38%), access to drugs (127, 32.2%) among others (Table 4b).

The participants gave their various reasons for the continuous use of these substance and majority submitted that; feeling high (285, 72.25), depression (184, 46.6%), better acceptability by friends (134, 33.9%), improved memory and learning ability (102, 25.8%) and improvement in some somatic diseases (52, 13.2%).

From table 5, majority, 93 (23.5%) said that engaging in substance abuse could cause the victim to engage in sex that they

Variable	Variable category	Response, N (%)
How do you use these substances (drugs)?	Sniff	8 (2.0)
	Smoke	83 (21.0)
	Oral	73 (18.5)
	Injections	3 (0.8)
	Others	2 (0.5)
What is your ideal on the influence of the following options below in enhancing substance abuse?	Teenage curiosity	234 (59.2)
	Lack of knowledge about complications of drugs	183 (46.3)
	Joy seeking	141 (35.7)
	Positive attitude toward drug abuse	64 (16.2)
	Friends offer	150 (38)
	Presence of an addicted person in the family	89 (22.5)
	Family dispute	87 (22)
	Access to drugs	127 (32.2)
What is the motivation of substance(s) abuse?	Low costs of drugs	89 (22.5)
	Having free time	89 (22.5)
	Feeling high	285 (72.2)
	Improved memory and learning ability	102 (25.8)
	Depression	184 (46.6)
	Improvement in some somatic diseases	52 (13.2)
	Better acceptability by friends	134 (33.9)

**Table 4b:** Motivating factors on the utilization of substances of abuse. Numbers in parenthesis are percentages in column.

Numbers in parenthesis are percentages in column.

could regret the next day. Other consequences of substance abuse include; scuffle or fight/engagement in unprotected sex 77 (19.5%), loss of money or other or other valuables 76 (19.2%), poor performance at school or work, 75 (19%), among others listed. Accident or injury was the least consequence, 59 (14.9%) indicated by students.

Problems	NO	Yes	
		Due to substance use	Due to other reasons
Quarrel or argument.	73 (18.5)	63 (15.9)	216 (54.7)
Scuffle or fight.	100 (25.3)	77 (19.5)	171 (43.3)
Accident or injury.	110 (27.8)	59 (14.9)	164 (41.5)
Loss of money or other or other valuables.	81 (20.5)	76 (19.2)	187 (47.3)
Damage to objects or clothing.	109 (27.6)	62 (15.7)	174 (44.1)
Problems in your relationship with your parents.	137 (34.7)	70 (17.7)	138 (34.9)
Problems in your relationship with your friends.	123 (31.1)	68 (17.2)	156 (39.5)
Performed poorly at school or work.	135 (34.2)	75 (19)	140 (35.4)
Victimized due to robbery or theft.	176 (44.6)	53 (13.4)	115 (29.1)
Trouble with police.	180 (45.6)	73 (18.5)	99 (25.1)
Hospitalized or admitted to an emergency room.	176 (44.6)	70 (17.7)	106 (26.8)
Engage in sex you regretted the next day.	151 (38.2)	93 (23.5)	105 (26.6)
Engage in unprotected sex.	143 (36.2)	77 (19.5)	131 (33.2)

**Table 5:** Consequences of substance/drug abuse  
Numbers in parenthesis are percentages in column.

Table 6 represent the inferential statistics on the level of awareness of the students on the harmful effects of psychotropic substances. The result showed that, there is a significant difference between the student gender and the level of awareness of the harmful effects of psychotropic substances since  $p\text{-value} < 0.05$ .

S/No	Meaning
1	Quarrel or argument
2	Scuffle or fight
3	Accident or injury
4	Loss of money or other or other valuables
5	Damage to objects or clothing
6	Problems in your relationship with your parents
7	Problems in your relationship with your friends
8	Performed poorly at school or work
9	Victimized due to robbery or theft
10	Trouble with police
11	Hospitalized or admitted to an emergency room
12	Engage in sex you regretted the next day
13	Engage in unprotected sex

**Table 6a:** Key of Table 6b.

S/No	Female (%)	Male (%)	p-values
1	11.49	9.79	0.015
2	14.19	9.55	0.001
3	11.15	14.50	0.044
4	13.54	10.14	0.156
5	13.51	12.29	0.059
6	16.20	13.85	0.012
7	13.52	15.64	0.048
8	15.54	16.20	0.124
9	11.14	11.17	0.148
10	17.50	11.70	0.001
11	15.87	12.85	0.014
12	21.62	16.20	0.001
13	27.82	17.52	0.004

**Table 6b:** Statistics on influence of gender and awareness of harmful effects psychotropic substance abuse.

Comparing the percentages both the male and female have high level of awareness to the harmful effects of substance abuse but the female respondents had a higher percentage which means that they are more aware of the harmful effects of psychotropic substances.

From the result in table 7 it was observed that the respondent within ages 21-25 showed a higher percentage to the use of psychotropic substances with marijuana being the most abused substance. However, p-value > 0.05 showed no level of significant difference between the ages and use of psychotropic substances.

Substances	< 20 yrs. (%)	21-25 yrs. (%)	26-30 yrs. (%)	>30 (%)	yrs.	p- value
Nicotine	23.9	71.6	4.5	-		0.202
Marijuana	28	63.4	8.5	-		0.002
Tramadol	37.1	51.6	9.7	-		4.356
Codeine	45.0	51.7	3.3	1.6		0.760
Rohypnol	46.2	52.6	-	-		0.907
Cocaine	-	100	-	-		1.683
ecstasy	44.4	55.6	-	-		0.728

**Table 7:** Statistical analysis on age and use of psychotropic substances.

Table 8 showed that there was a significant association between gender of the students and the use of psychotropic substances. The percentages showed that a higher number of male respondents abuses drugs more than the female respondents.

Substances	Male %	Female %	p-value	X <sup>2</sup>
Nicotine	15.5	11.73	0.024	7.445
Marijuana	18.24	15.6	0.015	5.210
Tramadol	16.22	7.8	0.005	15.34
Codeine	14.86	8.94	0.001	9.930
Rohypnol	3.36	1.67	0.086	2.683
Cocaine	0.337	0.33	0.702	0.018
Ecstasy	7.09	3.4	0.009	0.234

**Table 8:** Statistical analysis on gender and use of psychotropic substances.

Where x<sup>2</sup> is the chi-square value.

## Discussion

The purpose of this study is to ascertain the extent of use and awareness of the harmful effects of psychotropic substance abuse amongst undergraduate students of Nnamdi Azikiwe University. Based on the study objectives the following findings were estab-

lished 43.1% of the students that participated in this study consume psychotropic substances with marijuana being the most abused substance. The respondents of these study gave their various reasons why these substances are consumed by undergraduate students and majority pointed out that feeling high (ecstatic pleasure), peer pressure, curiosity, depression, assess to drugs, having free time are the common reasons why these substances are abused. A far greater number of students have knowledge of the harmful effects of psychotropic substances and the female respondents have higher level of awareness of the harmful effects of psychotropic substances than the male respondents. Majority of the respondents of this study also reported that most of these substances are purchased within the school premises.

The results of this study which further corroborate that the harmful effects of psychotropic substances cannot be overemphasized. The abuser might justify the act by positing the rewarding benefits derived from it but these feelings are ephemeral and can lead to severe consequences and health effects like cancer, psychosis, impairment of cardiovascular and respiratory system of the individual. Psychotropic substance abuse has led to serious socioeconomic and psychological decay in the society resulting in several cases of deaths, rape, theft, kidnapping and all such vices among undergraduates.

The positive impact of this study is that it helped to identify the various reasons why these substances are abused by undergraduate students of Nnamdi Azikiwe University. It also determined the most commonly abused psychotropic substance used by undergraduate students of Nnamdi Azikiwe University and where they are purchased. The study gave an insight on substance abuse to lecturers, student and the general public.

In comparison to the related literatures mentioned above. The study on the predisposing factors influencing psychoactive substance consumption among students in tertiary institutions in Nigeria by [33], showed that majority of the students identified themselves with one form of psychoactive substance and the various reasons that led to the high consumption of these substances includes peer pressure, curiosity, relieve from anxiety etc. it was also revealed that peer pressure may serve as a powerful tool to much deviant behavior because pressure from friends can impair good judgment and fuel risky behavior to students into dangerous activi-

ties like drug abuse etc. In this present study, It was pointed out by most students 92 (23.3%) that these substances were readily available and thus purchased around the school premises and this is similar to the previous work done by [33] who stated that the type of psychoactive compounds students use depend on what is available in their neighborhood and the type they could afford it was also indicated that most of the psychoactive substance are cultivated locally and not far from the reach of students therefore encouraging substance abuse.. Among the psychotropic substance, marijuana was the most abused substances by the students 82 (20.8%) this was in line with the study by [34] on the predisposing factors associated with drug abuse who reported that the rate of marijuana abuse amongst youths has increased radically. In a similar vein, previous study by [35] on the factors influencing substance abuse among undergraduate students in Osun state, Nigeria also revealed that marijuana is cheap and can easily be purchased from drug peddlers and perceived by somany to be of little harm in the same vein [36] revealed that large number of young people experiment with marijuana with as high as 37% are school children and young adults. The result from this present study also revealed that the predominant age of student that abuse these psychotropic substances were within the ages of 21 - 25 with age of first use being 16 - 18 years. This is similar with the previous study conducted by [37] who reported that most undergraduates in Nigeria were between the ages of 14 - 25 years which is the age of adolescence and this age is associated with increased curiosity and a need to experiment and explore new things. In this present study, the respondent showed fairly high level of awareness of the harmful effects of psychotropic substances and there was a significant difference ( $p < 0.05$ ) between the male and female respondents on the level of awareness of the harmful effects of psychotropic substances. Specifically, the male respondents showed lower level of awareness compared to the female. This means that the male gender has a higher tendency to abuse drug similar result was also found in the study conducted by [24] on drug abuse among secondary institution in Bayelsa state, Nigeria which showed that a higher percentage of male student were involved in substance abuse and they had low perception to the harmful effects of psychotropic substance. In line with this, a study by [38] on the prevalence of Drug abuse among Nigerian Adolescent implication for counseling stated that the reason for the adduced difference between the male and female gender towards substances is that probably the male undergraduates want to be bold, compulsive use of drugs as influenced by their

male counterparts and to increase their masculine strength. Thus, they rely more heavily on drugs than the female gender. It was evident from the findings that due to limited knowledge on matters of drugs as sourced from their peers and the resulting influence has led to the upsurge of substance abuse especially amongst undergraduate students.

Some of the limitations of this study were due to uncooperative attitude of the students during data collection and biased nature towards answering the questions by the students.

### Conclusion

This above evaluation has revealed that almost a half of the undergraduates that participated in this study admitted to using psychotropic substances with marijuana being the most abused substance. The impact of substance abuse among youth especially in Nigeria tertiary institutions is a stigma to the society. Some of the perceived factors influencing the use of these substances amongst undergraduate students of Nnamdi Azikiwe University students include peer pressure, teenager's curiosity and poor knowledge awareness of the harmful effects of substance abuse.

### Recommendations

A multidimensional approach is needed to nip this menace in the bud by increasing awareness of the harmful effects of these substances through seminars, lectures, rallies, advertisement, counseling services which focus on specific problems arising from substance abuse etc. especially within tertiary institutions. Nigeria Drug Law Enforcement Agency (NDLEA) and other control groups should not relent in carrying out their responsibilities to ensure that Nigeria becomes a drug free Nation. Random drugs/substance tests should be implemented in the tertiary institutions to curb the use of psychotropic substances. There should be proper monitoring of the trans-border activities to curb the rate of illegal/ illegal immigrants that are likely to possess such substances.

Further research should be done on potential screening processes that would help identify substance abusers, and reforms that would encourage rehabilitation and social reintegration of these victims of substance abuse.

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