

# The Impact Of Substance Abuse Among Clinical Medical Students In University Of Nigeria Enugu Campus

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## Abstract

**Background:** Substance abuse among clinical medical students of University of Nigeria Nsukka is on the increase with a prevalence of 60%, this should be a cause for concern to the school management and administration. The impact of substance abuse which has negative effect on the physical, social, academical and all-round sphere of life is a problem in which measures have to be taken to tackle the root cause.

**Objective:** To determine the level of impact of substance abuse among clinical medical students of University of Nigeria Nsukka (UNN).

**Materials and methods:** A non-probability (convenience) sampling method was adopted for this study. Researcher administered questionnaires were used to collect data from the study participants. Statistical Package for the Social Sciences (SPSS) was used to enter and analyse the data. The significance of association was tested with Pearson chi-square,  $p < 0.05$  was considered significant.

**Result:** 95% of the respondents have had a prior knowledge of substance abuse, 61% of the respondents have abused drugs in one way or the other while 39% have not. Most abused drug is alcohol with 36% of the respondents taking it, major reason for substance abuse is complaint of overwhelming school workload (26.3% of the respondents complained). We found that 7.3% of the students said that the use of substance abuse affected their school or clinical work, while 18.3% reported that it actually helped them read for exams.

**Conclusion:** It has been found out that majority of clinical medical students abuse substances majorly due to excessive academic workload. The negative impact is also overwhelming and ways to prevent this menace is by addressing the root cause, creating awareness of its adverse effects and preventive measures.

**Keywords:** Substance abuse, Clinical medical students, University of Nigeria Nsukka (UNN).

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Date of Submission: 17-08-2024

Date of Acceptance: 27-08-2024

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## I. Introduction

### Background Of The Study

A substance is a drug that is considered harmful and usually subject to legal restriction<sup>1</sup>. Substances include alcohol, heroin, street drugs, prescription drugs, codeine, tramadol<sup>2</sup>. Some crude concoctions like inhaling urine and smoking lizard parts is also practiced by some people<sup>3</sup>. For some users, normal over the counter medications used in treating illnesses turned into being abused and addicted. These include pain medications like the non-steroidal anti-inflammatory drugs, anti-analgesics like paracetamol, sleeping pills like benzodiazepines, laxatives and others. Drugs that enhance performances either during sexual activities or sport activities have also been enlisted to be abused.

Reports from the United Nations show that about 150 million young people use tobacco and 1 in 2 young people who start and continue to smoke will be killed by tobacco related illnesses<sup>4</sup>. Also a vast majority of tobacco users started as adolescents with some of them in the peak ages of entering college. Alcohol accounts for about 5% of deaths worldwide among young people especially between ages 15 to 29. Cannabis remains the most common illicit substance used among young people.

In Nigeria precisely, nearly 15% of the population estimated to be almost 14.3 million people reported to be in active substance use<sup>3</sup>. The survey was done by Nigeria national bureau of statistics and Centre for research and information on substance abuse with technical support from the united nations office on drugs and crime. It also showed that young people in Nigeria are increasingly moving into fatal and potent mixtures of substances. Cannabis like the world statistics suggests is still leading second here in Nigeria.

The use of substance is a growing die hard habit and this means that those involved may actually be more than the apparent figure available. It is sad to note that this age bracket make up a vital part of a nations population that is the work force. Everyone ranging from the users to people around the users are all affected.

Among students including the medical students these substances have been perceived by users to give certain benefits especially to those undergoing challenges like stress. The pathway to dependence of these substances makes it more dangerous and the revenue generated among the drug traffickers also help skyrocket these figures. Some students who are in need of financial aid are also seen indulging in this business to help sort out some needs and with time ,fall prey to its use.

With the current statistics , suffice us to say that more work may need to be put into place if we would eradicate this completely in the nearest future

### **Statement Of Problem**

The use of substance is one of the top problems confronting the nation today most especially the young ones. It is no new news that Incidence of substance abuse and related anti socially acceptable behaviors have tremendously increased over the past decade. This has become a matter of utmost concern to first the government, Parents, teachers, Non-governmental organization and relevant agencies alike. It is more prevalent than we suspect and suffice us to say that ‘there is more to this than what meets the eye’. Some young people think they can use with impunity because parents do not recognize the extent of this substance abuse<sup>5</sup>.

A significant number of deaths, violent crimes, and inappropriate behaviors have been traced to the activities of persons under the influence of substance use. Health problems affecting the heart nervous system and lungs and causing deterioration of these organs too<sup>6</sup>.

Academic excellence requires more than good teachers, conducive environment, adequate reading materials and sound curriculum. More than these, it requires that the student who is the primary subject is of sound physical and psychological state and be willing to participate in the process of self-development. When this sound mind is not ascertained in the subject who in this case is a student, it becomes bothersome. Substance use and abuse is among the threats facing good learning. This lifestyle is minimal in the basic level of education which is the primary and secondary but most in the tertiary levels<sup>7</sup>. This can be explained as when young people get older, enter tertiary institutions and meet more people although recently very young people are found in tertiary institutions.

A lot of money is being currently spent on curbing the menace of substance use and abuse here in Nigeria .there are also many agencies headlining the control of this substance use in Nigeria and beyond too. However a great burden still exists in Nigeria and young people especially those in tertiary institution.

### **Justification Of Study**

Substance use is a fast growing habit in our society. Various studies and campaigns have been carried out on this and also raised to create awareness on the dangers. However, despite these widespread campaigns and information available on the dangers, students and even medical students (future doctors) are very much involved in it. This shows that more work is needed in this begging topic. More awareness campaigns and policies are not left out and research work with careful study needs to be done of which this study will help fill in the gap.

This study aims to ascertain the reason for this trend in the population that should help take care of lives in the nearest future. It is believed that this study would show the prevalence of substance abuse among undergraduate clinical medical students in the University of Nigeria Enugu Campus and reveal the factors aiding this growing habit.

### **Research Aims And Objectives**

**General Objectives:** To determine the impact of substance abuse on undergraduate clinical medical students in UNEC.

#### **Specific Objectives:**

1. To identify if any, the positive effects of substance use to the users
2. To identify the negative effects on the users
3. To determine the influence of social and cultural factors on substance users
4. To ascertain the role of stress in the use of substance.
5. To determine the prevalence of use of substances among clinical medical students in UNEC

#### **Research Questions**

1. What are the positive effects of using substance among users?
2. What are the negative effects of the use of substances on the users?
3. What is the influence of social and cultural factors on substance use?

4. What is the role of stress in the use of substance?
5. What is the prevalence of use of substances among clinical medical students in UNEC?

## **II. Literature Review**

### **Introduction**

Substance abuse is the harmful pattern of using substances such as tobacco, alcohol, illicit drugs and prescription drugs. It could take the form of excessive taking of a drug (e.g. alcohol), or the use of illicit drugs (heroin, marijuana, methamphetamines, other cannabinoids) or misuse of prescription drug (e.g. cough medications, tramadol).

Substance abuse has always been a menace in the society all over the world. According to the studies by Ritchie and Roser<sup>8</sup>; smoking, alcohol and drug use are an important risk factor for early death: 11.4 million die prematurely as a result each year. Over 350,000 die from overdoses (alcohol and illicit drug use disorders) each year. More than half of those who die from alcohol or drug overdoses are younger than 50.

The recent world drug report of the United Nations Office on Drugs and Crime (UNODC) estimated that 271 million (5.5%) of the global population (aged between 15 and 64 years), had used drugs in the previous year<sup>8</sup>. In 2017, there were 585,000 deaths due to drug use globally.

Studies have shown that Substance abuse is still a consistent and persistent problem among youth in any society. This is significant because the youths represent the future of any community. Substance abuse among youth can lead to problems at school, cause or aggravate physical and mental health related issues, promote poor interpersonal relationships, lead to early death and place stress on the family and friends. They can also develop lifelong issues such as substance dependence, chronic health problems and social and financial consequences.

### **Nigeria, Medical Students And Drug Abuse**

Nigeria is the most populous nation in Africa, with a population of over 200 million people<sup>9</sup>. Of this population, 64% are between the ages 0 to 25 years, that is 2 out of every three. This means that the majority of the Nigerian population is the youth. According to the UNODC report "Drug Use in Nigeria" - The first large scale, nationwide national drug use survey in Nigeria, 1 in 7 persons (aged 15 - 64 years) had used a drug in the past year. Also, one in five individuals who had used drugs in the past year is suffering from drug related disorders.

Nigeria is an enormously diverse country with over 400 ethnicities and many religious groups. Substance abuse is therefore viewed within a broader context in Nigeria, due to its multiple cultures. Some cultures do not identify self prescription of any drug or misuse of prescription drugs as substance abuse. However, most societies in Nigeria frown upon the excessive use of any drug or the use of illicit drugs or substances. Also any substance that can lead to change in behavior is generally considered by Nigerians as substance abuse.

It is also worth mentioning that in Nigeria, Medical Students/Doctors are seen as a crop above others hence generally people tend to believe that Medical Students/Doctors are meant to not engage in activities like smoking, drinking and drug abuse. Hence this is probably why there are not many research on substance abuse among medical students.

There are numerous studies on substance abuse among youths/students but very few exist for medical students. This is imperative as medical students represent future medical practitioners and more research should be done in order to best understand the impact of substance abuse, the risk factors, influences and consequences among medical students. This will also help to define the nature and scope of interventions that may be required for medical students who engage in drug use.

Studies have reported that for medical students to cope with challenges that they face in the course of their study, they may resort to certain forms of "medication or substance use" to enhance both physical and cognitive performance<sup>10</sup>. In a study in Enugu Nigeria by Makanjuola et al, lifetime prevalence rate of 56% was reported among a sample of medical students<sup>11</sup>.

A study among medical students also in Nigeria found a prevalence rate of 88% and 85%<sup>12</sup> in. In a more recent survey done in 2011, lifetime prevalence of psychoactive substance use among medical students in the northern parts of Nigeria was 78%, this is a part of Nigeria where there is generally a negative attitude to drug use due to religious disposition<sup>13</sup>.

### **Commonly Abused Drugs**

One of the most highly abused substances among youths world wide and in Nigeria is Alcohol<sup>14</sup> and in fact not regarded as a drug of abuse by many of its users. Its consumption has been closely linked to ritualistic or social events. An important finding is that traditional medicine form a significant source of alcohol consumption. Youth engage in heavy drinking (binge drinking), a pattern of drinking large amounts of alcohol that elevates the blood alcohol concentration to 0.08 percent or above more than adults do. This can lead to risky and potentially harmful behaviors A study from by Johnston, O'Malley et al shows that 60 - 75% of youth with substance abuse specifically alcohol problems co-occurs with mental health disorders<sup>15</sup>.

Cannabis which now is being grown locally in the wild bushes, was alien to Nigeria but suspected to have been introduced into the country by the sea route and further spread by the soldiers who returned from the Second World War<sup>16</sup>. The presence of favorable climatic condition for its growth among other factors was further ensured its continued florid abuse and existence. Cannabis is easily available and it is often used in combination with other substance such as cigarettes and alcohol. A sizeable number of drug abusers, particularly those involved in cannabis abuse have been described as drifter who are no longer within the control of the cohesive Nigerian family system.

According to Ohaeri and Odejide<sup>17</sup> over a one year period in 28 mental hospitals in Nigeria found that cannabis was responsible for 63.5 percent and 52.6 percent of such cases in the North and South Nigeria. Increasing involvement of the female in drug use has been reported<sup>18</sup> Various forms of psychiatric presentations have been described in the association with the use of cannabis including paranoid schizophrenia like disturbances, acutely disturbed behavior with perplexity, depressive and manic states, increased neurotic complaints and non-motivational states.

The Nigerian political and socio-economic fortunes has at various times further shaped the emerging pattern of substance use and abuse in the country<sup>14</sup>. The use of opiate was initially restricted to hospital staff who had access to them. There are indications that more users have been recruited as Nigeria became involved with the international drug trade<sup>19</sup>

The use of stimulant which was initially confined to the mild locally available ones like kola-nuts; which contains caffeine; has over the years witnessed the introduction of drugs like the amphetamines, caffeine concentrates are the highly potent cocaine coming into the scene most recently<sup>18</sup>. The amphetamines like methamphetamines locally known in the east as Mkpurummiri are illegally imported into Africa. Their use has commonly been reported among the youths especially students, unskilled laborers and farmers<sup>19</sup>. Students especially medical students use stimulants to keep awake during intense studying<sup>14</sup>, the labourers use them to fight fatigue while the farmers mostly in Northern Nigeria use them both to fight fatigue and to suppress appetite during famine. Substance related problems in Kaduna over three years period due to the abuse of amphetamine and like substances had assumed an epidemic proportion in the North particularly among soldiers, farmers, labourers and students.

Another class of the commonly used drugs in Nigeria are the hypnosedatives. It has been shown to be widely among the population<sup>14</sup>. It was found that 25 percent non prescription life time use and 12.5 percent current use among secondary school students<sup>20</sup>. The corresponding figures among the undergraduates samples were 36 percent and 22 percent respectively. The hypnosedatives commonly found in Nigeria include the benzo diazepam such as diazepam and nigraxepam and the barbiturates and barbiturates containing compounds such as butabarbitalone, mandrax. There are suggestions that the use of hypnosedatives may be more rampant among the females<sup>14</sup>.

### **Factors Influencing Substance Use Among Medical Students**

A study done in Pakistan found that the medical students were aware of the use of alcohol and other drugs as coping mechanisms and up to 90% of the respondents pointed to academic stress as a driver of drug use<sup>21</sup>.

Arora et al<sup>22</sup> in their study found that most of the respondents had multiple reasons for engaging in substance use. They found that 72.4% indicated stress relief as a motivator to substance use. They found that 72.4% used drugs while celebrating while 46.8% indicating using their substances of choice relieved their tiredness.

Gender has also been found to influence the level and type of substance used. For instance it was found that Men are more at risk for developing a drug dependency like alcoholism; women seem to be more vulnerable to becoming more addicted to alcohol at much lower amounts of alcohol consumption<sup>23</sup>. This gender disparity was also noted among medical students who had indicated that they were dealing with psychological distress<sup>24</sup>. Makanjuola et al also associated being male with substance use<sup>11</sup>.

Parent's substance abuse habits is an influential factor in affecting a child's substance abuse. Family history was also noted as a contributor in substance use among the medical students in Nepal<sup>25</sup>.

It was also noted that age is a contributory factor to substance abuse. BeyondBlue found that as students continued to mature while in medical college, so did the levels of alcohol consumed<sup>24</sup>. Makanjuola, et al also found in their study that students that were 25 years and more were engaging more in substance use<sup>10</sup>.

Babalola et al reported that substance use among the medical students at a Nigerian University was associated with how frequently the respondents participated in their religious activities and good health practices<sup>10</sup>.

### **Effect Of Substance Use On People**

Substance abuse in Africa has been associated with social, psychological and physical complications<sup>19,17</sup>. Asuni and Pela referred to emotional syndrome described as an effect of cannabis abuse particularly among the adolescents and young persons<sup>19</sup>. He posited that the behavior leads to poor school performance and eventual dropping out of school. He also remarked that the percentage of cannabis associated psychosis has been reported to be between 12 and 40% of all psychosis in African hospitals.

Similarly, it was observed that types of psychosis may develop in association with cannabis abuse (a). a reaction to the first exposure to cannabis abuse in a previously well integrated personality (b). escalation of a psychotic process in a personality that has already been breaking down<sup>16</sup>. The cannabis associated psychosis is a schizophrenic like disorder and may be accompanied by a bout of excitement.

Asuni and Pela also noted that cannabis use and alcohol could be important contributory factors in road traffic accidents<sup>19</sup>. They also noted that criminals involved in highway or armed robberies or acts of war use cannabis before committing such acts. The habitual user is usually a driver, unable to maintain a job or establish a continuous relationship with other especially with family members.

A study by Odejide<sup>17</sup> indicates that amphetamine and amphetamine-like substances are associated with acute development of psychotic behavior, psychomotor restlessness and insomnia, usually among students during examination period.

According to Ohaeri & Odejide<sup>17</sup>, Rocha-Silva<sup>26</sup>, uncontrolled alcohol use/abuse in Africa is adversely affecting adolescents and youths. For these young persons, occasional binge or excessive drinking may lead to unprotected sexual behavior resulting in HIV infection, drunk driving, violent behaviors, home accidents and alcohol poisoning. As for adults, prolonged and excessive use of alcohol may lead to poor job performance and eventual job loss, marital separation/divorce, physical damage such as liver cirrhosis and dementia.

### **Treatment And Prevention Of Substance Use**

In a review of literature on problems of drug abuse in Nigeria by Odejide<sup>17</sup>, he that primary prevention of substance abuse aims at educating the masses about the dangers inherent in drug abuse and also at controlling the availability of habit forming drugs. The mass media can be used to implement this goal.

Secondary prevention involves early treatment of identified case and their reintegration with the society. Furthermore, tertiary prevention deals with the rehabilitation of treated cases. He noted the paucity of facilities either by government or non-governmental agencies involved in preventive measures.s

The treatment approaches found in Ohaeri and Odejide<sup>17</sup> study was of the holistic approach to treatment, encompassing the whole of the individual. Treatment in these centers was carried out by a treatment consisting of medical doctors, psychiatric nurses, social workers, clinical psychologists and occupational therapists. Hardly can one find a full complement of such workers at any centers.

The law in Nigeria forbids potent drug being sold in patent medicine stores but it is appears the law is not adequately enforced. It is known that habit forming drugs were indiscriminately sold in Nigeria. Many of these drugs are purchased from patent medicine stores and the street vendors without prescriptions. The classified drugs amphetamine and its derivatives can be readily purchased from patent medicine stores and the street vendors without prescriptions.

The Nigerian government through the NDLEA decree 48<sup>27</sup> forbids the sale of hawking of classified drugs or poison in public places and prescribed stringent punishment for defaulters<sup>18</sup>.

The National Drug Law Enforcement Agency (NDLEA) is charged with the supply, control and demand reduction. There has been a widespread growing and planting of cannabis plants in Nigeria which should be checked by the NDLEA.

## **III. Methodology**

### **Study Area**

The study was conducted in three campuses of University of Nigeria Nsukka which include University of Nigeria Enugu Campus (UNEC, main campus), University of Nigeria Teaching Hospital Oldsite (Oldsite UNTH) and University of Nigeria Teaching Hospital Ituku. UNEC campus is located at college road, Ogui New layout and Oldsite UNTH located at UNTH road both in Enugu North Local Government Area while UNTH is located at Ituku-Ozalla along Port Harcourt expressway, all Enugu state, Nigeria. Ituku campus is approximately 22.3km from Enugu city. The population of UNEC students (oldsite and UNTH Ituku campuses inclusive) is estimated to be . The campuses are made up of mostly students of Igbo origin.

University of Nigeria Enugu Campus is made up of faculties of medical sciences, basic medical sciences, dentistry, health sciences, law and environmental sciences while UNTH and Oldsite campuses have only faculties of medical sciences and dentistry. The study focuses on clinical students of faculty of medical science under department of medicine and surgery, which is made of students in third year in UNEC, those in fourth and fifth years at oldsite campus and final year students at UNTH Ituku campus with an estimated population of ..

### **Study Design**

The study is a descriptive cross sectional study designed to assess the impact of substance abuse on clinical medical students in UNEC.

A descriptive cross sectional study design was used because it enabled us to obtain the needed information within the limited time available for the research. It was also cheaper and easier to carry out than other possible alternatives.

### **Study Population**

The study focuses on clinical students of faculty of medical science under department of medicine and surgery, which is made of students in third year in UNEC, those in fourth and fifth years at Oldsite campus and final years at UNTH Ituku with an estimated population of 750.

### **Inclusion Criteria**

1. Medical students who are presently in their clinical classes.
2. Clinical students who have consented to participate in the study.

### **Exclusion Criteria**

1. Clinical students not willing to participate

### **Sample Size Estimation**

Sample size was calculated using Cochran's formula:

$$n = \frac{Z^2 P(1-P)}{d^2}$$

Where:

n = the desired sample size

Z = the standard normal deviate usually set at 1.96, which corresponds to the 95% confidence interval.

p = Prevalence from a previous study...72.4%...

d = Margin of error or desired level of precision; placed at 0.05 for this study

$$n = \frac{(1.96)^2 \times 0.724(1-0.724)}{(0.05)^2}$$
$$= 291.84$$

Sample size = 291.84

The sample size is 291.84 and as such is the minimum sample size of the questionnaires that would be administered.

### **Sampling Method**

A simple random sampling method was adopted for this study. Our study population is among the clinical medical students of UNN. The clinical medical students consists of three levels; the 400L, 500L and 600L. We simply shared 300 questionnaires among them without any special division among them.

### **Study Instrument**

The materials to be used in this study are structured questionnaire which would reflect the objectives of the study and semi structured interview. The questionnaires will be administered by the interviewer to the study population.

### **Data Analysis**

Data analysis is the process of making meaning out of any data set and drawing conclusions from them. Data was entered and analyzed using the Statistical Package for the Social Sciences (SPSS). Participants' socio-demographic characteristics was summarized using descriptive statistics in terms of means with correspondent percentages. The independent and outcome variables were summarized descriptively in frequency tables.

Univariate and multivariate analysis were used to explore associations between the individual factors (independent variables) and the outcome variables (knowledge, preventive practices, factors influencing their knowledge/preventive practices & prevalence). Chi square was used as the statistical test to test associations between the independent variables and the outcome variables using regression analysis. A p-value of 0.05 was considered statistically significant.

### **Ethical Considerations**

The research proposal was submitted to the health Research and ethics committee, University of Nigeria Teaching Hospital (UNTH), Ituku Ozalla, Enugu State and ethical clearance was obtained.

### **Risks & Benefits**

Participants could feel uncomfortable with some of the questions contained in the questionnaire. The research proposal was submitted to the University of Nigeria Teaching Hospital (UNTH) Ethics Review Committee to analyze and give an objective opinion on it. Also, the questionnaires were piloted to review all questions that were likely to make clients uncomfortable. There was no monetary compensation for the participants as a reward for their participation. The research study was however analyzed to help get an in-dept knowledge on the impact of substance abuse on clinical medical students.

### **Right To Refusal**

Participation in the study was voluntary, and participants were not under any obligation to do so. Participants were made to understand that even if they consented to participate in the study, they were at liberty to withdraw from the study at any stage without any sanctions.

### **Anonymity, Privacy And Confidentiality**

The study involved collecting data from participants through questionnaires. Participants were assured that any information given during the study would be used for the purpose of research alone. Information given was not disclosed but treated with utmost confidentiality. Apart from the researchers, no other person knew the names of participants. Data collected were entered into MS Excel of a computer with a password that was known to the principal investigators alone. All filled out questionnaires were stored in a cupboard and kept under key. The principal investigators kept the key to the locked cupboard containing the filled-out questionnaires. The data would be stored for five years and all records destroyed in an environmentally friendly manner with witnesses when the five-year period has elapsed.

### **Consent**

Participants were told the purpose of the study and who the researchers were. They were also provided with information on risks, benefits, privacy and anonymity in the language they could understand so that they could make an informed decision as to whether or not to participate. Participants who agreed to participate were asked to sign a consent form containing the above information.

### **Conflict Of Interest**

The project was a self-sponsored one as it was fully funded by the principal investigators.

### **Limitations Of The Study**

The project topic being impact of substance abuse is a very sensitive one, students are reluctant to participate in it, we circumvent this obstacle by letting them know that their identity will be made confidential. Students are also not so open about their substance of abuse, some can't really define what abuse or misuse means. We allay this issue by clearing stating the substances we mean and what abuse means. We also have issue with meeting students in Oldsite due to the distance, this is solve by sharing the questionnaire during their clinical postings and then the few remaining at Oldsite.

## **IV. Results**

### **Introduction**

This chapter presents the results of our analysis. We distributed a total of 300 questionnaires to our participants. They all consented to the study. All of our participants are clinical medical students from different levels of study in University of Nigeria, Nsukka.

### **Sociodemographic Factors Of Participants**

**Table 4.1 Sociodemographic Factors Of Participants**

Age	Frequency	Percentage
19 - 23yrs	153	51.0
24 - 28yrs	140	46.7
29 - 33yrs	5	1.7
34 - 38yrs	2	0.7
Sex		
Male	187	62.3
Female	113	37.7

Total	300	100
<b>Level</b>		
400	27	9.0
500	173	57.7
600	100	33.3
<b>Residence</b>		
Hostel	273	91.0
Off-campus	27	9.0
<b>Religion</b>		
Christian	296	98.7
Muslim	4	1.8
Total	300	100

Most of our participants were in the age range of 19 - 28 years (97.7%). Very few were above 28 years (2.3%). Most of our participants were male (62.3%). Females made up only 37.7% of our study. 500 Level Clinical Students made up the more of the study group (57.7%), Followed by 600 Level Clinical Students (33.3%), then 400 Level Clinical Students (9.0%). A large number of our participants lived in the Hostel (91%), while very few stayed Off-Campus (27%).

### Source Of Knowledge Of Substance Abuse

**Table 4.2 Source Of Knowledge Of Substance Abuse**

Knowledge of Substance Abuse	Frequency	Percentage
Yes	285	95.0
No	15	5.0
<b>Source of Information</b>		
School	261	87.0
Media	244	81.3
Home	146	48.7
Friends	204	68.0
Total	300	100

From the above table, the vast majority of our participants have heard about substance abuse (95%). The main source of information for this knowledge were School (87%) and Media (81.3%). A good number of the participants heard about substance abuse from Friends (68.0%) and some from their homes (48.7%).

Some of the substances that our participants believe that are commonly abused are Cannabis (Popularly known as weed) (91%), Alcohol (90%), Caffeine (85.3%), Methamphetamine (84.7%), Heroin (81.3%).

We also found 75.7% (227) of our participants practiced self-prescription, yet only 32.3% (97) considered it as as form of substance abuse.

### Prevalence Of Substance Abuse

From our study we calculated the prevalence of substance abuse, the prevalence of self medication and prevalence of the different substances that are commonly abused.

**Table 4.3**

Substance Used	Frequency	Percentage
Alcohol	108	36.0
Cannabis (weed)	38	12.7
Cocaine	35	11.7
Caffeine	72	24.0
Methamphetamine (Mkpurunmiri)	14	4.7
Heroin	5	1.7
Tramadol	22	7.3
Nsaids	38	12.7
Cigarette	34	11.3
Prescription drugs	27	9.0
Cough syrup	25	8.3

From our analysis, we had a prevalence rate of 61%. 183 out of the 300 participants had used some of the above substances for the past one year.

From the above, Alcohol is the most commonly abused/used substance among the participants (36%), followed by Caffeine (24%) and Cannabis (12.7%) completing the top three substances that are abused among the participants



From our study, we also found that 76% (228) of the participants recorded that they know some of their colleagues that abused of the above listed substances. From the 228 participants, 64.5% of them knew between 1 to 20 colleagues each, that abused some of the above substances.

**Table 4.4 Frequency Of Usage**

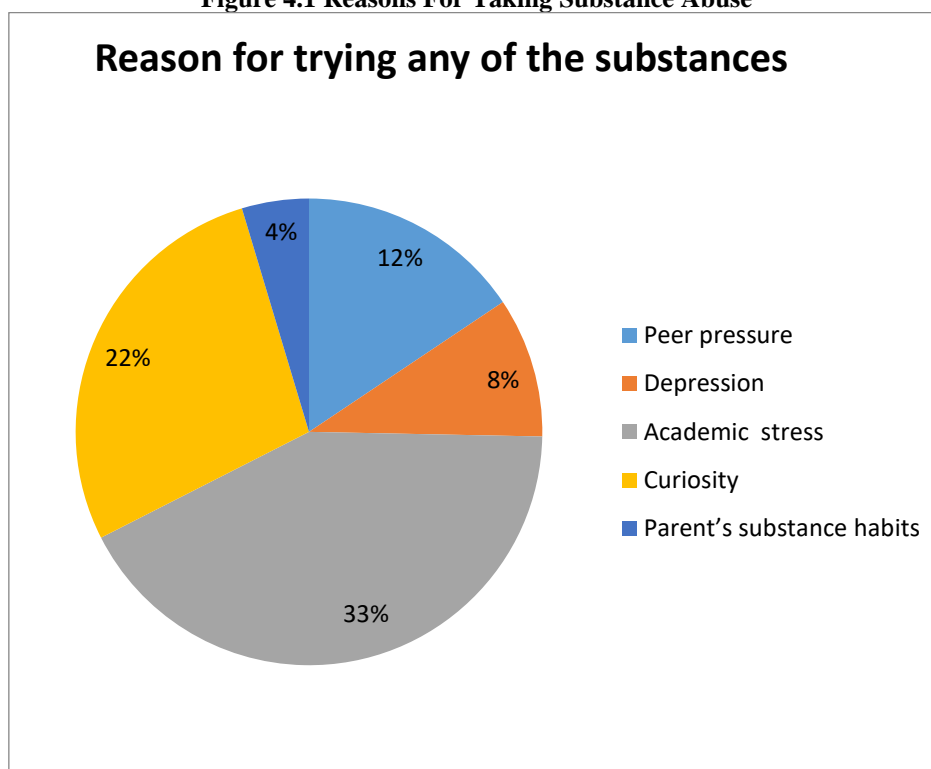
Frequency of Usage	Frequency	Percentage
At least once a day	20	10.9
At least once a week	37	20.2
At least once a month	52	28.4
At least once a year	74	40.4

From our study, we found that most of the participants that used the above substance started taking any of the substance for the first time before or at 20 years (80.3%).

We also found that 76% (228) of the participants recorded that they know some of their colleagues that abused of the above listed substances. From the 228 participants, 64.5% of them knew between 1 to 20 colleagues each, that abused some of the above substances.

**Reasons For Substance Usage**

**Figure 4.1 Reasons For Taking Substance Abuse**



Above are some of the reasons for trying or taking some of the above substances. 33.3% of the participants noted that it was because of the Academic Stress of studying medicine made them start any of the substances mentioned.

**Effects Of Substance Usage**

Below we studied for some of the effects both physical and psychological (Both Positive and Negative Effects) of taking any of the above substances in our study.

**Table 4.5 Positive Effects Of Taking Any Of The Substances**

Positive Effects	Frequency	Percentage
Has the use of substance helped you reading better than you would on your own	55	18.3
Has it helped with your performance in any exam in school	39	13.0
Have you felt more confident during school or postings	37	12.3

Have you been able to sleep better after the use of any of these substances	57	19.0
Has the use of substances helped you face some challenges better in school	50	16.7
Has it also helped you achieve your desired weight	11	3.7
Has it also helped to keep your weight in check	11	3.7
Has the use of substances improved your appetite	30	10.0
Has it helped relieve you of physical and emotional pains	63	21.0
Do you feel more in charge after taking these substances	50	16.7
Has it improved your performances in extracurricular activities	44	14.7

From the above table, we found that very few number of the participants have experienced positive effects of the substances being studied, the predominant effect being that the substance helped relive them of their physical and emotional pains (21%), followed by the substance helping them to sleep well at night (19%).

**Table 4.6 Negative Effects Of Taking Any Of The Substances**

Negative Effects	Frequency	Percentage
Have you noticed sudden change in behaviour since you started using the substances	21	7.0
Have you felt like being in isolation since you started using these substances	17	5.7
Have you felt some from of dependence since you started using the substance(s)	23	7.7
Has it stopped you from studying as a student	11	3.7
Has it limited your attendance to group attendance to group discussion and lectures	17	5.7
Have you been lacking funds more often since the use of any of the substance	16	5.3
Have you notices that people avoid you in class/school due to your use of substance	15	5.0
Have you missed exams, clinics, classes since you started using any of the substances	22	7.3
Have you noticed a lack of interest in school activities	22	7.3
Have you noticed a sudden decline in the extracurricular activities you used to enjoy since use	19	6.3
Have you lost friendships and relationships since the use of substances	20	6.7
Have you experienced any physical symptom	35	11.7

From the above table very few also experienced negative effects of taking any of the substances being studied. The predominant being that they experienced physical symptoms since taking these substances.

From the physical symptoms we asked about, the predominant symptoms the 35 participants experienced is Headache (3.7%), Dizziness (2.3%) and Tiredness (1.0%)

We also asked questions pertaining to behavior about dependence for taking any of the above substances. We found that 7.7% of the participants had tried to stop taking these substances but could not. We also found that 10% spent between 5000 to 10000 a month on buying these substance. Only 7.3% participants thought about taking the next time they would take the substance.

**Role Of Stress On Substance Abuse**

We tried to determine the role stress has to play on the use of substance abuse. We first tried to establish if the participants were stressed from the workload of medical school. We then asked if the use of substances has helped them in coping with excess workload of medical school.

**Table 4.7 Role Of Stress On Substance Abuse**

Role of Stress	Frequency	Percentage
Have you taken substances(s) to help you cope with excess work load in school	79	26.3
Does the use of substance help you catch up on school work better	69	24.0
Has the use of substances helped your concentrate better during clinics and posting	47	15.6
Has the use of substances helped relieve some signs of fatigues with excess work load like pains and aches	85	28.4
Does the use of substances help with feelings of anxiousness during school and posting	45	15.0

28.4% of the population have used some of the substances to help relieve pain and aches associated with increased work load. 26.3% have used some of the substances to help cope with the excess work load in medical school.

**Relationship Between Sociodemographics And Knowledge Of Substance Abuse**

From the above table, we studied the relationship of the different socio-demographics of the participants with the knowledge of substance abuse.

**Table 4.8 Comparison Of The Sociodemographics With Knowledge Of Substance Abuse**

Variable	Have you heard about substance abuse before		
	Yes	No	P-value
<b>Age</b>			.069
19 - 23yrs	150(98.0)	3(2.0)	
24 - 28yrs	128(91.4)	12(8.6)	
29 - 33yrs	5(100.0)	0(0.0)	
34 - 38yrs	2(100.0)	0(0.0)	
<b>Sex</b>			.046
Male	174(93.0)	13(7.0)	
Female	111(98.2)	2(1.8)	
<b>Marital status</b>			.814
Married	15(93.8)	1(6.2)	
Single	270(95.1)	14(4.9)	
<b>Level</b>			.161
400L	27(100.0)	0(0.0)	
500L	166(96.0)	7(4.0)	
600L	92(92.0)	8(8.0)	
<b>Residence</b>			.211
Hostel	258(94.5)	15(5.5)	
Off-campus	27(100.0)	0(0.0)	
<b>Religion</b>			.000
Christian	283(95.6)	13(4.4)	
Muslim	2(50.0)	2(50.0)	

The p-value for age and knowledge of substance abuse is 0.069. This shows that there is no statistically significant relationship between age and knowledge of substance abuse.

The p-value for sex and knowledge of substance abuse is 0.046. This shows that there is a statistically significant relationship between sex and knowledge of substance abuse.

The p-value for level of education and knowledge of substance abuse is 0.161. This shows that there is no statistically significant relationship between the two.

The p-value for place of residence and knowledge of substance abuse is 0.211 which shows that there is no significant relationship between the residence and knowledge of substance abuse.

The p value of religion of the participants and knowledge of substance abuse 0.000 shows that there is a statistically significant relationship between the two

**Relationship Between The Negative Effects Of Substance Abuse And Sociodemographics**

**Table 4.9 Relationship Between Sociodemographics Of Participants And The Negative Effects Of Substance Use**

Variable	Negative Effects			P-value
	Yes	No	Sometimes	
<b>Age</b>				.775
19 - 23yrs	9(5.9)	137(89.5)	7(4.6)	
24 - 28yrs	11(7.9)	119(85.0)	10(7.1)	
29 - 33yrs	1(20.0)	4(80.0)	0(0.0)	
34 - 38yrs	0(0.0)	2(100.0)	0(0.0)	
<b>Sex</b>				.001
Male	20(10.7)	153(81.8)	14(7.5)	
Female	1(0.9)	109(96.5)	3(2.7)	
<b>Marital status</b>				.430
Married	2(12.5)	14(87.5)	0(0.0)	
Single	19(6.7)	248(87.3)	17(6.0)	
<b>Level</b>				.425
400L	2(7.4)	25(92.6)	0(0.0)	
500L	10(5.8)	154(89.0)	9(5.2)	
600L	9(9.0)	83(83.0)	8(8.0)	
<b>Residence</b>				.685
Hostel	20(7.3)	237(86.8)	16(5.9)	
Off-campus	1(3.7)	25(92.6)	1(3.7)	
<b>Religion</b>				.745
Christian	21(7.1)	258(87.2)	17(5.7)	
Muslim	0(0.0)	4(100.0)	0(0.0)	

From the above table, the p-value for age and negative effects of substance abuse is 0.775 which shows that they do not have any statistically significant relationship.

The p-value for sex and negative effects of substance abuse is 0.001 which shows that they have a statistically significant relationship.

The p-value for marital status and negative effects of substance abuse is 0.430. This shows that there is no statistically significant relationship between them.

The p-value for level of education and negative effects of substance abuse is 0.425. This shows that there is no statistically significant relationship between them.

The p-value for place of residence and negative effects of substance abuse is 0.685. This shows that there is no statistically significant relationship between the two.

The p-value for religion and negative effects of substance abuse is 0.745. This shows that there is no statistically significant relationship between the two.

**Relationship Between Sociodemographics And Sociocultural Factors Affecting Substance Abuse**

**Table 4.10 Relationship Between Sociodemographics And Sociocultural Factors Affecting Substance Abuse**

Variable	Sociocultural Factors			P-value
	Yes	No		
<b>Age</b>				.834
19 - 23yrs	43(28.1)	110(71.9)		
24 - 28yrs	43(30.7)	97(69.3)		
29 - 33yrs	1(20.0)	4(80.0)		
34 - 38yrs	1(50.0)	1(50.0)		
<b>Sex</b>				.000
Male	72(38.5)	115(61.5)		
Female	16(14.2)	97(85.8)		
<b>Marital status</b>				.339
Married	3(18.8)	13(81.2)		
Single	85(29.9)	199(70.1)		
<b>Level</b>				.101
400L	12(44.4)	15(55.6)		
500L	44(25.4)	129(74.6)		
600L	32(32.0)	68(68.0)		
<b>Residence</b>				.172
Hostel	77(28.2)	196(71.8)		
Off-campus	11(40.7)	16(59.3)		
<b>Religion</b>				.361
Christian	86(29.1)	210(70.9)		
Muslim	2(50.0)	2(50.0)		

From the above table, the p-value between age and the sociocultural factors affecting substance abuse is 0.834 which shows no statistically significant relationship between them.

The p-value between sex and the sociocultural factors affecting substance abuse is 0.000, which shows that there is a significant relationship between them.

The p-value between marital status and the sociocultural factors affecting substance abuse is 0.339 which shows no statistically significant relationship between them.

The p-value between level of education and the sociocultural factor affecting substance abuse is 0.101 which shows no statistically significant relationship between the two.

The p-value between place of residence and the sociocultural factors affecting substance abuse is 0.172, which shows no statistically significant relationship between the two.

The p-value between the religion of the participants and the sociocultural factors affecting substance abuse is 0.361, which shows no statistically significant relationship between the two.

## **V. Discussion**

Substance use is a common problem all over the world and young people are frequently involved. There is a tendency for abuse and ultimately addiction and dependence. Its abuse has a lot of effect on individuals involved and the society at large.

From our results, majority of participants are currently between the ages of 19 to 23. This corresponds to the commonly involved age bracket of substance use and also vulnerability. Majority of participants were also males and regarding the marital status, most participants were single because of that young age and males generally do not get married at such a young age.

Furthermore, the respondents were mostly in 500 level of the clinical class. The class runs for about 18 months with a period that looks like it is relatively free as the students would refer it to be. This is also an avenue for students to engage in some extracurricular activities and take up posts in their organizations be it religious or non-religious. Majority of the participants were Christians as Christianity is the predominant religion too. From the study, we noticed that most respondents reside in the hostel. This is probably due to the cheaper accommodation offered within the school compared to outside and also proximity of information in the school environment.

Our study revealed that most participants were noted to have a clear understanding of what a substance is and what substance use is. Most also got their information about substance from school and followed closely by the media. However many of the participants identified substances that could be abused.

The prevalence of use among the clinical undergraduate medical students as revealed by our study is about 61%. This shows that a significant amount of students engage in the use of substance and these substances range from the alcohol, caffeine, cocaine, laxatives, NSAIDs and sedatives too. On the part of NSAIDs and sedatives, most of the respondents using these were noted to be females. This can be explained by the monthly menstruation that comes with dysmenorrhea for females and sedatives for sleeping better at night especially for people who take stimulants to keep awake to read. Most of them end up finding it difficult to sleep when they are off the stimulants. Alcohol was almost equally shared by both genders and cocaine mostly by the males. From a recent study among medical students in Enugu, alcohol was also found to be the most abused substance<sup>27</sup> and these students were in clinical class.

In addition, it was further revealed that the common substances in use were alcohol, followed by caffeine, weed, NSAIDs, and the least used being heroin. This finding can be attributed to the fact that in Nigeria, generally speaking there is sociocultural acceptance of alcohol<sup>28</sup> and in any social or cultural gathering, alcohol is a norm. It can also be as a result of the economic status of the nation and how relatively cheap it is and accessible.

Closely followed by alcohol is Caffeine which can be attributed to students and their reading culture. Majority of students use this as an avenue to read for longer hours either during the day or at night (what students refer to as night-class)<sup>29</sup>. Over the years in medical school, students have been found to take caffeine as it has been proven to work as a stimulant<sup>30</sup> and how inexpensive it is not minding if there are actually side effects.

About 26.3% of the participants reported that they tried or started using these substances because of friends. This could be because they spend most of their time with friends and most get information on things from their friends too whether it is right or wrong. Actually about eight out of 12 months, is being spent in school for both first and second semesters. In a previous study, it was noted that there is a correlation between place of residence of students and substance use<sup>31</sup>. This also correlates with our findings that most of the participants stay within the school environment where people with different characters and background and upbringing reside. This also shows that the amount of time available for students to interact, pick up habits is actually a lot with barely enough time to spend with families as some students do not even go home all year round. Peer pressure has played a very big role here too.

From our study most people started taking substances between ages 16 to 20 years. This shows that many students started this when they entered university as this is the current age for young people to get into the

university. This could be because of less monitoring from parents and guardians making it more easy to mingle with peers and pick up these habits.

We also noted that most participants take substance at least once weekly and about 76% of participants knew their classmates that were taking substances. A greater percentage of these classmate were found to be around 1 to 10 in number. The leading substance noted from our study among the classmates of the participants was weed and alcohol. The reasons for usage slightly changed a little with academic stress leading before peer pressure. Succeeding academically is one of the foremost concerns of any student. It is this desire to excel academically is what reflected in our study as most people said that to cope with stress they had to use some substances as the work load was overwhelming. Another group of people also noted that they had started using out of curiosity and very few students attributed theirs to parents substance use. This again goes to show that being among fellow young people in the university helped to cultivate this habit in them.

Substance use has effects on the users. From our study it is perceived to have some benefits and that is why the users engage in it. The effects can either be negative or positive. From the study, many of the positive effects are related to academic work which is one of the priorities of participants as students. A good number of respondents reported that it helped them to cope with stress. The academic system is a lot of work and hectic with extra volume in the medical school. Our study also says that they have been able to keep up with some challenges in medical school.

Another benefit noted from our study was the recreational reasons with the study participants using it during leisure. This goes to show that as a habit, students use it to feel good with themselves and gain some self-confidence.

On the other hand, we noted that it didn't help improve their weight or help keep in check neither did they also notice sudden changes in behaviour since the use of the substances. A good number of participants also reported that it didn't stop from studying or limited their core academic activities like attending lectures, clinics or group discussions and also isolating themselves from their fellow classmates. Most other students were neither here nor there with the effects of substance on academics.

As regards funding and buying of the substances, our report showed that the participants having been lacking funds to buy as they were cheap to obtain. In relations with fellow classmates and some friends, we noted that there has been no strain in relationships and friendships as regards those that have been taking substances and they are not avoiding people in their class that engage in these habits.

About 11% of the participants experienced physical symptoms with the use of some substances and a fewer number of people had experienced overdose with the symptoms. Out of the 11%, most physical symptoms experienced were headaches and dizziness and we also found that these participants were not engaging with risk taking behaviours. A greater number of participants had not tried to stop the usage in the past for whatever reason.

Use of substances invariably has its health effects, sooner or later. Previous studies show a wide range of health effects which ranges from heart diseases to infectious diseases, metabolic diseases and neoplasms. Very few of our respondents only noted headaches and dizziness as their physical symptoms. Many health effects from prolonged use would show up much later in life at older age group.

Previous studies have shown that dysfunctional families play a role in the use of substances but according to our report, most respondents were very happy with their homes and their family members do not even take substances. Although about 10 respondents reported that they did come from separated homes, most respondents about 70% reported that it is not acceptable to take substances in their locality and no family history whatsoever on the use of substance too. About 80% of the respondents also noted that they have groups or friends which they take the substances with.

A vast majority of respondents noted that they had to spend less than a thousand naira to obtain the substance and no one had reported that they had to borrow money to buy the substance they use. From our report, there is a low prevalence of addiction as many of the respondents reported that they have been able to stop taking it when they wanted to. Majority also noted that they take it about once in a month and see no need to seek external help to stop.

From our study, most of the participants reported that school work has been very overwhelming and their mental health not so good. This is not a new occurrence as it has been noted in previous studies that medical students in Nigeria face additional problems most especially from the work load and volume being expected of them to cover. The lack of motivation also reported by the students could also be as a result of the academic work most especially in clinical class with postings, ward rounds and clinics. Fewer number of respondents noted that substances did not help them cope with the stress either physical or emotional stress. Likewise it didn't help them to be relieved of the stress and only about 5.3% noted that substances actually did help. Some also noted that they were having feelings of anxiousness in school as has been found in another previous study.<sup>32</sup>

## **VI. Recommendation And Conclusion**

### **Conclusion**

This study sought to determine the impact of substance abuse among clinical medical students of University of Nigeria Nsukka.

95% of the respondents have had a prior knowledge of substance abuse, 61% of the respondents have abused drugs in one way or the other while 39% have not. Most abused drug is alcohol with 25% of the respondents taking it, major reason for substance abuse is complaint of overwhelming school workload (61% of the respondents complained). 11% of the students said it has prevented them from studying while 39% reported that it actually helped them in exams. It has been found out that majority of clinical medical students abuse substances majorly due to excessive academic workload. The negative impact is also overwhelming and ways to prevent this menace is by addressing the root cause, creating awareness of its adverse effects and preventive measures.

The findings reveal that a high number of students are involved in substance abuse which is mostly alcohol, major reason for the abuse is due to high academic burden used as a stress relieve. Some of the students also use it to enhance their studies, both ways the negative impact of these substance abuse cant be over emphasized. The major negative impact of these substance abuse is lost of interest in academic activities. Ways to curtail these menace should be carried out by the school authorities and administration

### **Recommendation:**

1. From the study the major source of information about substance abuse is from the school so the school should create more awareness and lay more emphasis on its adverse effect. Also churches and other religious bodies can help in awareness creation.
2. Major cause of substance abuse being heavy academic workload on students, school administration especially the faculty of medical sciences and dentistry should space out the workload on students or if possible reduce it. They should devise a means to make study easy and entertaining for students.
3. Parents of the students should also be involved in the handling of such a case.
4. School authorities can ban the sale of alcohol around the university premises.
5. Centres offering treatment care to drug addicts should be created in school for treatment and rehabilitation of affected students.
6. School should also provide guidance and counsellors for each faculty on matters relating to substance use and abuse.
7. Enactment of laws against substance use in school and also enforcing it.
8. Challenging students understanding of substance use and effect by creation of associations, rallies, quizzes and debates on substance use.