

Extent of Hallucinogen Drug Abuse among Secondary School Students in Ebonyi State

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Abstract : Background and objective: The use of drugs does not constitute an evil. Drug can be used both positively and negatively and if not properly used, drugs can have serious consequences. This descriptive survey was conducted to determine the extent of Hallucinogen drug abuse among secondary school students in Ebonyi State, Nigeria. **Materials and Method:** this was a cross-sectional study that used web based questioners given in 2013. Total of 674 students were used for the study and 672 representing about 98.8% were used for data analysis. **Results:** The results of the study showed that secondary school students do not abuse hallucinogen drugs as their cluster mean is 1.27; that the extent of hallucinogen drug abuse was dependent on gender and age as P-value =.296 >.05 and P-value =.000 <.05 respectively. There was statistical significant difference in the extent of hallucinogen drug abuse among the students with regard to their class of study as (P-value =.012 <.05). **Conclusion:** The implementation of a health education program in schools is necessary to enhance public knowledge, attitude and practice of drugs use. Strategies that control the sale of drugs without prescription need to be implemented to guarantee its rational use. The researcher recommend among others the inclusion of drug education in both the primary and secondary schools curricular, along with lectures, rallies, seminars and film shows to correct this ugly situation among the Nigerian adolescents.

Key Words: Drug Abuse, Hallucinogen, Students, Ebonyi State.

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I. Introduction

The history of human race cannot be complete without drug abuse as an aspect. There is nothing wrong when human beings use drugs, especially when they are properly administered. Drugs that are properly administered are beneficial in health care services. People have used different kinds of drugs to change the way they feel or see the world. Drugs and how they are used also have different meanings in different cultures. For example in the Pacific Islands, according to Alexander et al.¹ kava is drunk as a means of making contact with the supernatural, to welcome visitors to the community and to cure illnesses. Also, some Native American Indians use a mushroom that causes dream-like states as a way of getting in touch with the Great Spirit.

People have used the above hallucinogen drugs for centuries, mostly for religious rituals². Also many traditions and cultures have used naturally occurring hallucinogenic (psychedelic) compounds in ceremonial worship for centuries. The sacramental substance "soma," described in the Hindu holy book, the Rig-Veda, as being godlike and intoxicating is thought to be derived from the juice of the hallucinogenic mushroom, Amanita muscaria³. The Assyrians used cannabis during their religious rites and for neurologic and psychiatric diseases; Egyptian papyri document its use in childbirth, and its medicinal properties were recognized by the Chinese for 2,700 years. In Eastern Europe around the 16th century, morning glory seeds were known to cause hallucinations. Natural ergot (Claviceps purpurea) has also been associated with hallucinations and altered mental status.

Thousands of the drugs used today are abound. Many of them, if properly used are of immense value to man as far as disease treatment, correction of body abnormalities, and celebration of special events are concerned. However, if not properly used, drugs can have serious consequences. The most serious consequences are from the abuse of drugs⁴. Drug abuse has been a part of human history for a long time. What is different today is increased availability of a wide variety of substances and the declining age at which experimentation with these substances take place⁵. Leary⁶ concurring with WHO⁵ adds that the concern now is the incidence, extent, prevalence, potency and diversity of designer drugs, the health effects of long term use/abuse and

government legislation. In view of Leary's assertion, the extent of hallucinogen abuse among secondary school students was the major concern of the present study.

There are various definitions of what a drug is. For the purposes of this study, drug can be considered as any chemical substance, that changes a person's mental state and that may be used repeatedly by a person for that effect. Debora et al.⁷ and Maithya⁸ conceptualized drugs as chemicals other than food and water that have a profound impact on the neurochemical balance in the brain which directly affects how people feel, think, see, behave and act. Aleke⁹ viewed drug as any substance that when taken by a living organism is capable of producing in the person or animal, some extra-ordinary changes which could be negative or positive. It covers almost everything that can be ingested, inhaled, smoked, chewed, rubbed on the skin, injected or absorbed. It includes legal and illegal substances such as alcohol, caffeine, tobacco cigarette, petrol, kava, heroin, cocaine, crack, anabolic steroids, cannabis (marijuana), medicine, non-prescribed drugs, food additives and industrial chemicals. All these drugs can be used in the right way or be abused depending on the extent of involvement⁹. United Nation Drug Control Programme¹⁰ and Deborah et al.,⁷ have described drug most commonly abused by secondary school students as psychoactive drug. According to them, the term 'psychoactive drug' is used to describe any chemical substance that affects mood, perception or consciousness as a result of changes in the functioning of the nervous system (brain and spinal cord). Hallucinogens are psychoactive drugs that alter perception (awareness of surrounding objects and conditions), thoughts, feelings and behaviours^{11,2}. Hallucinogens can be found in some plants and mushrooms (or their extracts) or can be human-made. Hallucinogens are drugs that cause hallucinations profound distortions in a person's perceptions of reality, including delusions and false notions. In this state, people see images, hear sounds, and feel sensations that seem real but do not exist¹². Hallucinogen abusers may become confused, frightened and violent and may even injure themselves. Continued use can lead to mental problems, permanent brain damage, coma and even death¹¹. UNDP¹⁰; Aleke⁹; Drug Fact² grouped hallucinogen drugs as follows: marijuana, ecstasy, LSD/Acid, Adodo mode, magic mushrooms, ketamine, PCP-phencyclidine) and noted that they are either ingested inhaled, smoked, injected, chewed, rubbed on the skin or absorbed. The present study adopted all these hallucinogen drugs as grouped by the aforementioned authors in order to determine the extent of abuse among secondary school students in Ebonyi State, Nigeria.

Though the extent of drug abuse is unknown in Nigeria, there is considerable evidence from newspapers and magazines articles that the problem of drug abuse may well be growing among secondary school students in both the rural and urban areas of Nigeria^{13,14,15}. According to Larson and Simonis¹⁶ the incidence and extent of drug abuse often occurs among secondary school students. Hornby¹⁷ defined extent as how large, important or serious something is, He further maintained that extent is used to show how far something is true or how great an effect it has. Merriam¹⁸ defined extent as the distance or range over which something extends. He further posited that extents explain the point, degree or limit to which something extends. In this present study extent refers to the degree or limit in which secondary school students in Ebonyi State, Nigeria abuse hallucinogen drugs. The life time abuse and current abuse of drugs will be used to measure the extent of hallucinogen drug abuse among secondary school students in Ebonyi State. According to Smart, Hughes and Johnson¹⁹ and Substance Abuse and Mental Health Services Administration SAMHSA²⁰ lifetime use of a substance was defined as ever use of any of the listed substances in a lifetime, while current use was defined as the use of any of the substances in the last 12 months with continuing use within the last 30 days preceding the study. This method was adopted by the present researcher to elicit information on the extent of hallucinogen drug abuse among secondary school students.

Extent of drug abuse among secondary school students is high^{21,22}. Encarta²³ defines secondary school as a school for students who have completed their primary education, usually attended by children in grade 10 to 12. Pearson²⁴ and UNICEF²⁵ posited that, it is a school for children between the ages of 10 to 19 years. UNICEF²⁵ further maintained that this is the period for adolescents. In this work therefore, secondary school students are adolescents presently attending secondary schools in Ebonyi State, Nigeria. These included all adolescents at the age of 10 years to 19years who are in the junior or senior secondary school classes.

Swaid²⁶ asserted that drug abuse among adolescents within these age bracket is almost always a social experience and a learned behaviour. He maintained that this behaviour has been found to lead to the trying out of new experiences such as drug and sex, sometimes with dire consequence for the adolescents. NSDH²⁷ and SAMHSA²⁰ have lamented over the rate at which the consequences of illicit substance use extend to health problems, productivity losses, psychological problems, crime and other social problems. They also warned that heavy involvement in substance use has been known to predict lower educational achievement, limit horizons, and include suspicions and fears, and tear apart families (NSDUH²⁷; SAMHSA²⁰). They concluded that, the sheer size of the problem is daunting. Drug abuse among youth has been found to predict job instability, early pregnancy, and infection with HIV/AIDS and other sexually transmitted disease^{28, 20,30, 31}. It is important to note that despite all these dire consequences of drug abuse to self and society, most of the Secondary School students including those in Ebonyi State, might be running away from the stark realities of

life and may be rather taking refuge in the unreal world of drug abuse. Investigating this therefore was the thrust of this study.

Several reasons have been implicated in this inordinate trend among adolescents' drug abuse in Nigeria secondary schools. According to Salami³² and Maithya⁸ the trend is determined by the existence of risk factors. According to them, the risk factors associated with drug abuse includes: lack of family and school role models, peer pressure, poor school performance, conflict between the school system and family values, easy availability of drugs, poor parenting, pressure to perform, the media, low self-esteem, stress, legalization of some drugs, lack of clear school policies on drug abuse and relaxed school rules. Salami³² and Maithya⁸ further explained the protective factors that make people less likely to abuse drugs to include: attachments with the family, peers and institutions, skills and performance capabilities that help people succeed in life, and availability of resources that help people meet their emotional and physical needs. Given the acknowledged dangers inherent in drug abuse and considering the fact that adolescents of today will constitute the productive sector of the nation's future economy, sustainable solutions must be proffered to eradicate or minimize this threat to adolescent health and society at large. The present study was an attempt like Salam (1997)³² and Maithya⁸ to identify this inordinate trend among adolescents extent of hallucinogen drug abuse among secondary school students in Ebonyi State, Nigeria.

Evidences according to Ogundele¹³; Ogundele¹⁴; Olabisi¹⁵; Egbochuku and Oizimende³⁴ abound in Nigeria and other parts of the globe³⁵ with regard to drug abuse generally but such are lacking in Ebonyi State, Nigeria. According to Larson and Simonis¹⁶, the incidence and extent of drug abuse often occurs among secondary school students. Okozia and Aluede²² submitted that drug abuse among adolescence can be determined using secondary schools students. Eneh and Stanly²¹ asserted that the extent of drug abuse among secondary school students is indeed high. Since adolescents who are mainly secondary school students share the same characteristics, common sense could show that students in secondary schools in Ebonyi State could be abusing hallucinogen drugs. More so, the socio-cultural activities existing in the state such as masquerade cult, new yam festival, traditional dances, and other festivals when ongoing, predisposes them to be more vulnerable to excessive drug use and abuse especially marijuana and other hallucinogen drugs. The extent of this abuse is not yet established hence the thrust of the present study.

This study examined some socio-demographic factors associated with the extent of drug abuse among secondary school students. These variables include: age, gender and class of study. The Studies conducted by Ezedum³⁵; Linderberg et al,³⁶; Borowsky et al,³⁷; NACADA^{38,39}; WHO⁴⁰; Springer et al⁴¹; and Rongkavilit et al.⁴² indicated that this aforementioned demographic characteristics are predictors of adolescent extent of drug abuse among secondary school students. Hence this study adopted it to ascertain the extent of hallucinogen abuse among secondary school students in Ebonyi State.

Theories of Drug Abuse

Theories of drug abuse indicate that some people truly depend on certain drugs for their survival due to a number of factors. The major emphasis of the theories is that people have their individual reasons for depending on one type of the drug or the other. Such reasons are explained by the personality theory of drug abuse, learning theory of drug abuse, biological theory of drug abuse and socio-cultural theories⁴³. Personality theories of drug abuse emphasize that there are certain traits or characteristics in the individuals that abuse drugs. Such personality characteristics, according to Eze and Omeje⁴³ are inability to delay gratification, low tolerance for frustration, poor impulse control, and high emotional dependence on other people, poor coping ability and low self esteem. Individuals with these personality characteristics find it difficult to abstain from drug abuse. Learning theory of drug abuse maintains that abuse of drugs occurs as a result of learning. The learning could be by means of conditioning, instrumental learning or social learning⁴⁴. Biological theory of drug abuse maintains that drug abuse is determined by the individuals biological or genetic factors which make them vulnerable to drug addiction. Socio-cultural theory of drug abuse maintains that abuse is determined by socio-cultural values of the people. For instance, while certain cultures permit the consumption of cannabis, psychedelic, hallucinogenic mushroom, kava and other drugs during socio-cultural or religious activities other cultures do not. Abakaliki, Ebonyi State, For instance, the socio-cultural activities existing in the state such as masquerade cult, new yam festival, traditional dances, and other festivals when ongoing, predisposes adolescents in the area to be more vulnerable to excessive drug use and abuse especially marijuana, cannabis, and other drugs. It then becomes obvious that the disorder (drug abuse) is an acquired one. The acquisition then is dependent on a host of personal inclinations, socio-cultural factors, and environmental factors, a situation explained suggestively by Bandura⁴⁴ social cognitive theory (i.e., the triadic reciprocity involving behaviour, environment and the person).

Statement of the Problem

The use of drugs does not constitute an evil. Drug can be used positively as medicine for the treatment of diseases, correction of body abnormalities and for the celebration of special events. However, if not properly used, drugs can have serious consequences. The most serious consequences are from the abuse of drugs. It is regrettably that, some persons including secondary school students use drugs negatively for other purposes other than positive use of drugs. Such negative use of drugs include calming their worries; changing the way they feel, think or behave, tension reduction/relaxation. According to Onyemachi⁴⁵ secondary school students have used drugs including pain relieving drugs, alcohol, cigarette, cannabis, marijuana to relieve pain, to feel good, to sleep, and relax, to keep awake during exams and calm their worries about grades or career and to effect relief from the burden of underlying problems rather than confronting them practically and realistically. He posited that the solace found in drugs often develops into an abuse of drugs. Epidemiological survey in Nigeria, as indicated above shows that drug abuse is common among secondary school students and is one of the most disturbing health related problems among the adolescents. One area of concern in Nigeria is the extent at which adolescents in the secondary schools abuse drugs including adolescents in Ebonyi State secondary schools. The socio-cultural activities such as traditional wrestling, traditional dances, masquerade cult, new yam festival and other festivals existing in the area, when ongoing, predisposes them to be more vulnerable to excessive illicit drug use and abuse. This in the main has prompted the researcher to investigate the extent of hallucinogen drug abuse among secondary school students in, Ebonyi State. Moreover, to the best knowledge of this researcher, other studies focused on stimulant and depressants drug abuse and not necessarily on hallucinogen drug abuse hence the thrust of the present study is on hallucinogen drug abuse among secondary school students in Ebonyi State, Nigeria.

Purpose of the Study

The purpose of the study was to determine the extent of hallucinogen drug abuse among secondary school students (EHAS) in Ebonyi State. Specifically, the study attempted to ascertain the extent of:

1. hallucinogen drug abuse among the secondary school students in Ebonyi State;
2. hallucinogen drug abuse among the students based on gender;
3. hallucinogen drug abuse among the students based on age;
4. hallucinogen drug abuse among the students based on class of study.

Research Questions

To guide this study, the following research questions are posed:

1. What is the extent of hallucinogen drug abuse among the secondary school students in Ebonyi State?
2. What is the extent of hallucinogen drug abuse among the students based on gender?
3. What is the extent of hallucinogen abuse among the students based on age?
4. What is the extent of drug abuse among the students based on class of study?

Hypotheses

The following null hypotheses were formulated to guide the study and were tested at .05 level of significance at the appropriate degrees of freedom.

1. Extent of hallucinogen drug abuse among the students is not dependent on gender.
2. Extent of hallucinogen drug abuse among the students is not dependent on age.
3. There is no statistical significant difference in the extent of hallucinogen drug abuse among the students with regard to their class of study.

II. Methodology

In order to achieve the objectives of the present study, the descriptive survey research design was employed. Descriptive survey research design is a design that consist of those studies in which data are collected from a small sample of a large population to enable the researcher describe in a systematic manner and interpret the characteristics about things that are exist^{46, 47}. posited that the purpose of descriptive research is to describe systematically the facts, qualities or characteristics of a given population, event or area of interest concerning the problem under investigation. The descriptive survey research design, were considered most appropriate for the present study hence data were collected from a small sample of a large population of the students. The data were interpreted in a systematic manner based on the characteristics of the extents of hallucinogen drug abuse among the secondary school students.

Study Setting

The location of this study was Ebonyi State, Nigeria. The people of the area are agrarian; they produce mainly cassava, yam, rice, sweet potatoes and cocoyam. The main economic activities of the people are agriculture and trading. However, the existence of socio-cultural activities in the area such as traditional wrestling (Mgba Ekka), traditional dances (Edege Igbudu & Ode Ogboji), new yam festival (okeaku), and other

festivals includes (Eke Okpoto”, “Aji Ogboji”, “Udenyi Nkomoro”, “Iri-ngangbo Ezza”, “Onwa Eke Ezza”, “Ogbodo i.e. Masquerade cult”, Hunting & Swimming), when ongoing predisposes adolescents including secondary schools adolescents to be more vulnerable to excessive illicit drug use/ abuse. The above situations prompt the need for this study on extent of hallucinogen drug abuse among secondary school students in Ebonyi State.

Population for the Study

The population for this study consisted of the entire students in the 10 state governments owned secondary schools in Ebonyi State.

Sample and Sampling Technique

The sample for this study consisted of 674 secondary school students in the State government owned secondary Schools in Ebonyi State. This represented 10 per cent of the total population. This is in line with Nwana’s⁴⁸ rule of the thumb which stated that, when a population is a few thousand, five to ten per cent of the population will be deemed appropriate to determine the sample size. The procedure for sample selection involved multi-stages. In the first stage, five (5) secondary schools were selected from the 10 secondary schools in Ebonyi State, using simple random sampling technique of balloting without replacement. The second stage involved the use of disproportionate sampling techniques to draw 134 secondary school students from each of the five secondary schools selected. The third stage involved the use of systematic sampling technique to obtain the required number of students from each of the classes in the sampled schools, where every tenth student from the admission register were selected for the study.

Instrument for Data Collection

A close-ended researcher designed questionnaire was used to collect information for the study. The questionnaire was titled Extent of Hallucinogen Abuse Questionnaire EHAQ. The questionnaire consisted of two sections: A and B. Section A was bio-data which consisted of three socio-demographic variables of the students (age, gender and class of study). Section B comprised of three items designed to determine the extent of hallucinogen abuse. The respondents were required to use the following key to indicate the extent of hallucinogen abuse as follows: Very Great extent (VGE), Great Extent (GE), Low Extent (LE), Very Low Extent (VLE), Not All (NA) with assigned values of 5, 4,3,2,1 respectively. A tick was appropriate for any response option(s) for each number.

Validity of the Instrument

The face and content validity of the EHAQ was established through the verdict of five experts from the Department of Health and physical Education, University of Nigeria, Nsukka. The experts were given drafted copies of the EHAQ accompanied with specific purpose, research questions and hypotheses. The expert’s constructive criticisms, assessment of language, grammar and coverage of items viz-a-viz the specific purposes of the study as well as supervisors comment were utilized to modify the instrument for data collection.

Reliability of the instrument.

The reliability of the instrument was established using split half method. Abonyi et al⁴⁶ explained split-half method, as a method of assessing the reliability of an instrument by dividing items into two equivalent parts and correlating the scores in one part with scores in the other. These two scores are then correlated for reliability. The coefficient of reliability here is that of internal consistency. In order to achieve the purpose of this study, twenty copies of questionnaire was administered to (20) secondary school students from another school who are not included in the study but who have the same characteristics with the study population. The questionnaire was collected back on the spot and assigned “even” and “odd” numbers. The responses were compared for degree of internal consistency, using Cronbach Alpha formular. According to Anaekwe⁴⁷ cronbach alpha is a modified form of Kuder- Richardson formula. It is used in determining the reliability coefficient of a test when the test items are non-dichotomous hence was used for the present study. The reliability correlation co-efficient of the EDAQ was 0.629 and therefore was considered reliable enough for the present study. This was in consonance with Olaitan et al.⁴⁹ assertion that in reliability test, if the reliability co-efficient index of an instrument is .60 and above, the instrument should be deemed reliable to be used in a study.

Data Collection: Permission was granted by the Principal of each secondary school participating in the study prior to data collection. A consent note with the explanation for the research purpose, method of response and assurance of anonymity was attached to each copy of the EHAQ. Six Hundred and Seventy Four (674) copies of EHAQ were administered on the students during a break period and were collected immediately after completion.

Data Analysis: The completed copies of the EHAQ were collected and crosschecked for completeness of information and responses. All statistical analysis was done using the IBM Statistical Package for Social Science (SPSS) software version 2010. The students were required to use the following key to indicate the extent of hallucinogen drug abuse as follows Very Great extent (VGE), Great Extent (GE), Low Extent (LE), Very Low Extent (VLE), Not All (NA) with assigned values of 5, 4, 3, 2, 1 respectively. The following criterion was used to answer the research questions 4.50-5.00=very great extent (VGE); 3.50-4.49=great extent (GE); 2.50-3.49= low extent (LE); 1.50 – 2.49 = very low extent (VLE); 1.0-1.49= Not at all (NA). The data was analyzed on an item-by-item basis to indicate the mean responses of various categories of respondents such as males, females, age, and class of study for the purpose of description and for answering the research questions. Data were represented as means and standard deviation.

III. Results

This section presents the result of the data analysis for this study. The results are presented according to the research questions which guided the study as shown in table 1-7.

Research question 1: What is the extent of hallucinogen drug abuse among secondary school students?

Table 1: Mean ratings of the extent of hallucinogen abuse among secondary school students (N=672)

Hallucinogen drugs	\bar{x}	SD
A. Marijuana (Indian hemp, Ganja, Grass or igbo)	1.36	.960
B. Ecstasy	1.25	.712
C. LSD/Acid	1.24	.728
D. Magic mushrooms	1.37	.941
E. Ketamine	1.25	.780
F. Adodo omode	1.22	.727
G. PCP- (Phencyclidine)	1.21	.678
Cluster mean	1.27	0.789

Data in Table 1 above reveals a cluster mean score of 1.27 which indicates that the secondary school students do not abuse hallucinogen drugs at all. Specifically, the Table shows that “Marijuana” (Indian hemp, ganja, grass or igbo) ($\bar{x} = 1.36$), “Ecstasy” ($\bar{x} = 1.25$), “LSD/Acid” ($\bar{x} = 1.24$), “Magic mushrooms” ($\bar{x} = 1.37$), “Ketamine” ($\bar{x} = 1.25$), “Adodo omode” ($\bar{x} = 1.22$), and PCP-(Phencyclidine) ($\bar{x} = 1.21$) had mean scores which falls within 1.00 – 1.49. This implies that secondary school students do not abuse hallucinogen drugs at all. The standard deviation values which ranged from .678 to .960 shows that there is no variation in the extent of hallucinogen abuse among secondary school students.

Research question 2: What is the extent of hallucinogen drug abuse among the students based on gender?

Table 2: Mean ratings of the extent of hallucinogen drug abuse among the students based on gender (N = 672)

Hallucinogen drugs	Male (N=381)		Female (N=291)	
	\bar{x}	SD	\bar{x}	SD
A. Marijuana (Indian hemp, Ganja, Grass or igbo)	1.37	.996	1.34	.912
B. Ecstasy	1.29	.783	1.18	.603
C. LSD/Acid	1.25	.749	1.23	.700
D. Magic mushrooms	1.38	.965	1.36	.911
E. Ketamine	1.27	.816	1.21	.731
F. Adodo omode	1.22	.687	1.22	.778
G. PCP- (Phencyclidine)	1.24	.761	1.16	.549
Cluster mean	1.29	0.828	1.24	0.740

Data in Table 2 above shows clusters mean score of 1.29 for male which is slightly than 1.24 for female though the cluster mean fall within 1.00-1.49 which indicates that students do not abuse hallucinogen drugs at all. Specifically, the Table reveals that “Marijuana” (Indian hemp, ganja, grass or igbo) (male $\bar{x} = 1.37 >$ female $\bar{x} = 1.34$), “Ecstasy” (male $\bar{x} = 1.29 >$ female $\bar{x} = 1.18$), “LSD/Acid” (male $\bar{x} = 1.25 >$ female $\bar{x} = 1.23$), “Magic Mushrooms” (male $\bar{x} = 1.38 >$ female $\bar{x} = 1.36$), “Ketamine” (male $\bar{x} = 1.27 >$ female $\bar{x} = 1.21$), “Adodo Omode” (male $\bar{x} = 1.22$ female $\bar{x} = 1.22$), “PCP-(Phencyclidine)” (male $\bar{x} = 1.24 >$ female $\bar{x} = 1.16$) had mean scores which falls within 1.00 – 1.49, indicating that secondary school students both male and female do not abuse hallucinogen drugs at all. The standard deviation values which ranges from 0.687 to 0.996 for male and 0.549 to 0.912 for female shows that there is no variation in the extent of hallucinogen abuse among the students based on their gender.

Research question 3: What is the extent of hallucinogen abuse among the students based on age?

Table 3: Mean ratings of the extent of drug abuse among the students based on age (N = 672)

Hallucinogen drugs	10-13yrs (n=196)		14-16yrs (n =271)		17-19yrs (n = 205)			
	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD		
A. Marijuana (Indian hemp, Ganja, Grass)	1.29	.865	1.34	.932	1.45	1.073		
B. Ecstasy	1.16	.611	1.18	.563	1.41	.923		
C. LSD/Acid	1.29	.877	1.20	.608	1.25	.717		
D. Magic mushrooms	1.28	.821	1.27	.792	1.59	1.171		
E. Ketamine	1.20	.708	1.19	.678	1.36	.947		
F. Adodo omode	1.18	.651	1.12	.505	1.39	.977		
G. PCP- (Phencyclidine)	1.20	.596	1.11	.486	1.35	.909		
Cluster mean			1.23	0.733	1.20	0.652	1.40	0.959

Data in Table 3 reveal a cluster mean score of 1.23, 1.20 and 1.40 for students between 10-13years, 14-16 years, 17-19 years respectively. By implication, all the students in different age groups do not abuse hallucinogen drugs at all. Specifically, students in these three age bracket do no abuse “Marijuana” (Indian hemp, ganja, grass or igbo) (\bar{x} = 1.29 for 10-13years, \bar{x} = 1.34 for 14-16years, \bar{x} = 1.45 for 17-19years), “Ecstasy” (\bar{x} = 1.16 for 10-13years, \bar{x} = 1.18 for 14-16years, \bar{x} = 1.41 for 17-19years), “LSD/Acid” (\bar{x} = 1.29 for 10-13years, \bar{x} = 1.20 for 14-16years, \bar{x} = 1.25 for 17-19years), “Magic mushrooms” (“Ecstasy” (\bar{x} = 1.16 for 10-13years, \bar{x} = 1.18 for 14-16years, \bar{x} = 1.41 for 17-19years), “Ketamine” (\bar{x} = 1.20 for 10-13years, \bar{x} = 1.19 for 14-16years, \bar{x} = 1.36 for 17-19years), “Adodo omode” (\bar{x} = 1.18 for 10-13years, \bar{x} = 1.12 for 14-16years, \bar{x} = 1.39 for 17-19years), “PCP- (Phencyclidine)” (\bar{x} = 1.20 for 10-13years, \bar{x} = 1.11 for 14-16years, \bar{x} = 1.35 for 17-19years) at all as they had mean score that fall within 1.00-1.49. The standard deviation values which ranges from .596 to .877 for 10-13years, .486 to .932 for 14-16years, and .717 to 1.171 for 17-19years shows that there is no variation in the extent of hallucinogen abuse among the students based on age.

Research question 4: What is the extent of hallucinogen drug abuse among the students based on class of study?

Table 4: Mean ratings of the Extent of Hallucinogen Drug abuse among the students based on class of study (N = 672)

Hallucinogen drugs	JSS1 (n=111)		JSS2 (n=113)		JSS3 (n=106)		SS1 (n=113)		SS2 (n=113)		SS3 (n=100)		
	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	
A. Marijuana	1.24	.835	1.33	.986	1.39	.981	1.44	.981	1.16	.662	1.53	1.153	
B. Ecstasy	1.25	.680	1.31	.814	1.15	.432	1.43	.972	1.07	.293	1.23	.755	
C. LSD/Acid	1.32	.896	1.45	1.061	1.19	.537	1.34	.786	1.07	.355	1.09	.354	
D. Magic mushrooms	1.34	.889	1.47	1.044	1.22	.768	1.48	1.045	1.36	.905	1.34	.948	
E. Ketamine	1.33	.898	1.30	.915	1.44	.576	1.33	.911	1.08	.339	1.26	.796	
F. Adodo omode	1.30	.782	1.31	.835	1.02	.137	1.33	.891	1.10	.577	1.23	.776	
G. PCP- (Phencyclidine)	1.16	.532	1.29	.740	1.07	.420	1.20	.643	1.14	.427	1.35	.997	
Cluster mean			1.28	0.787	1.35	0.762	1.21	0.550	1.36	0.889	1.21	0.508	1.29
0.826													

Data in Table 4 indicates a cluster mean score of 1.28, 1.35, 1.21, 1.36, 1.21, 1.29 for JSS1, JSS2, JSS3, SS1, SS2 and SS3 respectively. This implies that secondary school students do not abuse hallucinogen drugs at all as their mean score fall within 1.00-1.49. Specifically, this category of students have not abused the following hallucinogen drugs Marijuana, Ecstasy, LSD/Acid, Magic mushroom, Ketamine, Adodo omodo, PCP (phencyclidine) at all. The standard deviation values which ranged from .532 to .898 for junior secondary one, .740 to 1.061 for Junior secondary two and .643 to 1.045 for senior secondary one shows that there is no variation in the extent of hallucinogen abuse among the students based on class of study. The Table further reveals that, the standard deviation values which ranged from .137 to .981 for junior secondary school three, .293 to .905 for senior secondary two and .354 to 1.153 for senior secondary three shows that there is much variation in the extent of hallucinogen abuse among secondary school students based on their class of study.

Hypothesis 1: Extent of Hallucinogen drug abuse among the students is not dependent on gender..

Table 5: Summary of t-Test analysis testing the differences in the extent of hallucinogen drug abuse among secondary school students is not dependent on gender.

Drug Abused	Male (n= 381)		Female (n= 291)		t-cal	d.f	P-value	Decision
	\bar{x}_1	SD ₁	\bar{x}_2	SD ₂				
Hallucinogen drugs	9.03	4.270	8.70	3.489	1.046	670	.296	NS

Key: NS- Not Significant and S-Significant.

Data in Table 5 above shows the t-calculated values and their corresponding P-values for hallucinogen (t-cal =1.046; P=.296 >.05). The overall p-value of .296 is greater than .05 level of significance. Therefore, the null hypothesis that the extent of hallucinogen drug abuse among the students is not dependent on gender is accepted. This means that there is no significant difference on the extent of hallucinogen drug abuse among the students based on gender.

Hypothesis 2: Extent of hallucinogen drug abuse among students is not dependent on age.

Table 6: Summary of one-way Analysis of Variance (ANOVA) testing the hypothesis of extent of hallucinogen drug abuse among the students is not dependent on age.

Hallucinogen Drug Abused	Sum Between Groups	Squares Within Groups	Df	Mean Between Groups	Squares Within Groups	F	P-value
Hallucinogen drugs	250.096	10225.309	2	125.048	15.284	8.181	.000

* = Significant at .05 level

Data in Table 6 above shows that specifically, the calculated F- values and their corresponding P-values for hallucinogen drugs (F=8.181; P= .000 < .05) were less than .05 level of significant. Hence, the p-value of .000 is less than .05 level of significance. Therefore, the null hypothesis that the extent of hallucinogen drug abuse among the students is not dependent on age is therefore rejected. This means that age does statistically determine the extent of hallucinogen drug abuse among the students.

Hypothesis 3: There is no significant difference in the extent of drug abuse among the students with regard to their class of study.

Table 7: Summary of one-way Analysis of Variance (ANOVA) testing the hypothesis of No significant difference in the extent of hallucinogen drug abuse among the students with regard to their class of study.

Hallucinogen Drug Abused	Sum Between Groups	Squares Within Groups	Df	Mean Between Groups	Squares Within Groups	F	P-value
Hallucinogen drugs	226.867	10248.537	5	45.373	15.388	2.949	.012

Table 7 shows specifically, the calculated F- values and their corresponding P-values for hallucinogen drugs (F= 2.949; P=.012 < .05) which were less than .05 level of significance. In general, the overall p-value of 0.012 is less than .05 level of significance. Therefore, the null hypothesis that there is no significant difference on the extent of hallucinogen drug abuse among the students with regard to their class of study is rejected. This means that there is significant difference in the extent of hallucinogen drug abuse among the students with regard to their class of study.

IV. Discussion

Result in Table 1 indicated that secondary school students do not abuse hallucinogen drugs (1.27) at all. The findings were not expected and therefore surprising. This is because secondary school students are vulnerable to hallucinogen drugs due to accessibility to various types of these illicit drugs (Marijuana, Indian hemp, ecstasy, LSD/Acid, magic mushroom, ketamine, adodo omode, PCP-phencyclidine) coupled with lack of drug education and inaccessibility to health information on the consequences of drug abuse in the area. However, this study is in agreement with the study by Eneh and Stanley²¹ who found LSD/Acid ecstasy not being abused by students. It also agrees with Esen's⁵⁰ who reported that the use of marijuana, cocaine, heroin, ecstasy and LSD/Acid among Nigerian students was yet unknown. It also disagrees with those of Ogundele¹³;

Ogundele¹⁴ & Olabisi¹⁵ who reported that the extent of drug abuse is unknown in Nigeria. This agreement and disagreement with reference to the findings could be attributed to varied geographical locations, subject' composition and other demographic factors.

Data in Table 2 reveals cluster mean scores of 1.29 for male and 1.24 for female which indicates that generally, both male and female students do not abuse hallucinogen drugs at all. This finding was not expected and thus a surprise. This is because secondary school students are vulnerable to illicit drug abuse due to the prevalent of social-cultural activities in the area and the accessibility to various types of illicit drugs (Marijuana, Indian hemp, ecstasy, LSD/Acid, magic mushroom, ketamine, adodo omode, PCP-phencyclidine) coupled with inaccessibility to health information, lack of drug education on consequences of drug abuse. Little³⁰, Esen's (1979)⁵⁰; Ogundele¹³; Ogundele¹⁴; & Olabisi¹⁵ result reveals that the extent of abuse of marijuana, ecstasy, cocaine, heroin, LSD, phencyclidine and other drugs among Nigerian students was yet unknown. This finding is in agreement with the study of Eneh and Stanley²¹ who found LSD/Acid not being used by students.

Data in Table 3 reveal a cluster mean scores of 1.23, 1.20 and 1.40 for students between 10-13years, 14-16 years, and 17-19 years respectively. By implication, all the students in different age groups do not abuse hallucinogen drugs at all. The findings were not expected and therefore surprising. This is because secondary school students are vulnerable to hallucinogen drug abuse especially marijuana and cannabis which they cultivate at their back yard. However, this study is in consonance with the study by Eneh and Stanley²¹ who found hallucinogen drugs not being used by students. The finding disagrees with the study by UNDCP/WHO⁵¹ who reported that marijuana cannabis, LSD/Acid, phencyclidine, ecstasy was a popular drug abuse among secondary school students in both countries. For male and female students, the age of first use was between 10 and 17 years. It also contradict a study by Otieno and Ofulla⁵² who reveals that boys were found to be abusing hallucinogen drugs (36.9%) compared to girls (27.3%), that age group most at risk was 16-18 years, the age at which most students are in secondary school. This agreement and contradiction with reference to the findings could be attributed to varied geographical locations, subject' composition and other demographic factors considered in earlier studies.

Data in 4 reveal that students had cluster mean scores of 1.28, 1.35, 1.21, 1.36, 1.21, and 1.29 for JSS1, JSS2, JSS3, SS1, SS2 and SS3 respectively. This implies that the students do not abuse hallucinogen drugs at all. This finding was not expected and therefore surprising. However, this finding is in agreement with the study by Eneh and Stanley²¹ who found hallucinogen drugs not being used by students. The finding contradict the study by Beter (1990)⁵⁷ in which subjects were drawn from the Second year of Junior Secondary School (SS1 & SS3), the results showed that, abuse of illicit drugs (including marijuana, Indian hemp, ecstasy, cocaine and heroin) spread among adolescents in various secondary schools all over the country. The finding also contradict a study by Otieno and Ofulla⁵² who reveals that boys were found to be abusing hallucinogen drugs (36.9%) compared to girls (27.3%), that age group most at risk was 16-18 years, the age at which most students are in their senior secondary classes. This agreement and contradiction with reference to the findings could be attributed to varied geographical locations, subject's composition and other demographic factors considered in earlier studies.

Data in Table 5 indicate that the extent of drug abuse among the students is not dependent on gender as the overall p-value of 0.151 is greater than .05 level of significance. This means that there was no significant difference in the extent of drug abuse among the students based on gender. This finding was considered interesting but not astonishing. For example, evidence abound in literature that both male and female secondary school students abuse drugs alike. This finding is in consonance with those of Nwana⁴⁸ who reported that both male and female youth drink alcohol because of their strong desire to be loved. He further added that there are no significant differences between the male and female youths with regards to their drug abuse. Mandi⁵² study also indicated that a minor sex difference exists in the onset of alcohol use with males beginning to use alcohol slightly earlier than females, but these differences were not statistically significant.

Result in Table 6 reveals that the extent of drug abuse among the students is not dependent on age since the overall p-value of 0.411 is greater than .05 level of significance.

This means that there was no significant difference in the extent of drug abuse among the students based on age. This finding is in consonance with a study by SAMHSA²⁸ who reported that among youth aged 10 to 19 years, however, girls (12.5%) were as likely as boys (11.9%) to smoke or abuse other drugs in the past month. It further reported that there was no change in cigarette use or other drugs abuse among boys and girls aged 10 to 19 between 2002 and 2003. The finding is also in consonance with that of Mtomga⁵⁴ who reported that there were no statistically significant differences in drug abusers with regard to their age. It is also in line with the study by Williams⁵⁵ who observes that there is no significant difference between boys and girls in their alcohol consumption like the age of commencement of alcohol consumption.

The finding in Table 7 reveals that there is significant difference in the extent of drug abuse among the students with regard to their class of study hence the overall p-value of 0.012 is less than .05 level of significance. The finding is in consonance with that of Aleke⁹ who observed that there is significant difference

in alcohol consumption among the various age grades. It is also inconsonance with those of Onohwosafe et al.⁵⁶ who reported that differences in drug abuse were seen among the JSS classes and SSS classes in central Delta State.

V. Conclusions

Based on the findings, the following conclusions were attained. That: Students do not abuse hallucinogen drugs at all, the extent of hallucinogen drug abuse among the students is dependent on gender and age and there is significant difference in the extent of drug abuse among the students with regard to their class.

Limitation Of The Study

The following limitation was encountered in the course of the study:

1. Accessibility to the students was a difficult task because they felt that their responses could trigger the action of security operatives, hence not willing to divulge information about themselves and thus, an obvious limitation of the study.

VI. Recommendations

Based on the findings, discussions and conclusions, the following recommendations were made.

1. The Ministry of Education (Federal and State) must as a matter of urgency add to their curricular – DRUG EDUCATION for both the primary and secondary schools, along with lectures, rallies, seminars and film shows for the Nigerian adolescents on the adverse effects of drug abuse.
2. It is evident from the research that abuse of drugs is determined by both the existence of risk factors (e.g. availability of drugs, stress, peer pressure media advertisements and lack of role models) and protective factors within the individual's social and physical environment (e.g. attachment with people like family members and peers, life skills, performance capabilities that help people to succeed and availability of resources). Any education programme aimed at addressing drug abuse among students should therefore be holistic and address both the risk and protective factors. The aim should be to strengthen the protective factors where potential buffers include strong family bonding, school commitment, positive role models and a strong belief in one's own efficacy.
3. With an information component on the consequences of drug abuse, the programme should also seek to teach how to counter pressures leading to drug abuse, and more importantly, attempt to motivate students to resist them. This can be done through normative education, vicarious learning and modeling, health promotion initiatives. There should be emphasis on anti-drug social norms and attempts to form non-use norms by involving students in looking for alternative ways to achieve the perceived benefits of drug abuse. Discussion with students can involve interactive sessions where methods such as brainstorming, role plays, peer discussion and cooperative learning are used.
4. National Drug Law Enforcement Agency (NDLEA) must continue to intensify their anti drug campaigns efforts in order to have a drug –free society with a special focus on the secondary school students.

Suggestions For Further Studies

1. More scientific research should be conducted on drug use/abuse among secondary school student so as to help determine the extent of abuse.
2. Apart from the commonly abused drugs grouped together in this study, other drugs should be investigated to determine the extent and frequency of their use among students.
3. Future research should replicate this study, but emphasize qualitative data gathering techniques such as interviews and observations, given that the current study mainly used questionnaires. Using such an approach would help elicit more information on the extent of drug abuse.
4. More studies are needed with respect to other demographic variables like peer influence, location, socio-economic and environmental factors with regard to drug abuse among students. This is because the current study did not determine the association of these factors on drug abuse but age, gender and class of study.

References

- [1]. Alexander, K., Watson, C. and Fleming, J. (1987). Kava in the north: A research report on current patterns of kava use in Arnhem Land Aboriginal Communities. North Australia: Research Unit, Darwin.
- [2]. Drug Facts (2016). Hallucinogens. National Institute on Drug Abuse. Advance Addiction Science. NIDA.
- [3]. Schultes, R.E. (1969). Hallucinogens of plant origin. Science.163:245-254.
- [4]. Nwegbu, C.O. (2000). Teachers guide for health education in primary schools. Lagos: MacMillan Nig. Publishers.
- [5]. WHO (2005). Framework Convention on Tobacco Control. "Parties recognize that scientific evidence unequivocally established that exposure to causes death, disease and disability". World Health Organisation.
- [6]. Leary, T.(2010). Psychedelic drugs: The psychedelic experience/Tibetan Book of the dead. Drugs/Drug Abuse and Addiction links retrieved from <http://www.whitedragon.org.uk/articles/fruit.htm>

- [7]. Deborah, C., Ellen-Gill, M.A., Robert-Segal, M.A., & Jeanne, S. (2008, August, 2). Drug abuse and addiction: understanding the signs, symptoms, and effects. accessed from <http://www.helpguide.org/mental/drug-substance-abuse-addiction-signs-effects-treatment> on 26-2-2011.
- [8]. Maithya, R.W.(2009). Drug abuse in Secondary schools in Kenya: Developing a Programme for Prevention and intervention. A thesis submitted in accordance with the requirements for the degree of Doctor of Education at the University of South Africa: UNISA.
- [9]. Aleke, C. O. (2013). Extent of drug abuse among secondary school students in Ezza North LGA., Ebonyi State. A Master Degree Dissertation in the Department of Human Kinetics and Health Education, University of Nigeria, Nsukka. Also available on URL:<http://www.hdl.handle.net/123456789/4129>
- [10]. United Nations Drug Control Programme.(1997).World drug report. USA: Oxford University press.
- [11]. Achalu, E. I. (2004). Drug education: Health effect of commonly abused drugs. Lagos: Simarch Nigeria limited (splendid publishers).
- [12]. Psychology Today (2018). Hallucinogens. Sussex Publishers.
- [13]. Ogundele, A. (1986). The African Guardia Weekly Magazine, 3 April, P.9.
- [14]. Ogundele, A. (1987). The African Guardia Weekly Magazine, 12 March, P.5.
- [15]. Olabisi, O. (2000). Man hanged with attempted suicide, Daily Times, Friday 4th May, P.2
- [16]. Larson, M.H. & Simonis, G.F. (2005). "Helping teens in trouble". Awake (April). 8-11.
- [17]. Hornby, A.S. (2008). Oxford Advanced Learner's Dictionary of current English. (8th Ed.). Oxford University Press.
- [18]. Merriam, W. (2006). Webster's dictionary thesaurus for students. USA: Federal Stress Press
- [19]. Smart, R.G., Hughes, H. S. & Johnson, L. D. (1980). A methodology for student drug use survey. Geneva: WHO Offset publications. 35-52.
- [20]. Substance Abuse and Mental Health Services Administration (SAMHSA). (2010). Result from the 2009 national survey on drug use and health: volume 1. Summary of national findings office of applied studies ,NSDUH series. USA:Rockville, MD. Retrieved from <http://www.oas.samhsa.gov> on 3/5/2012.
- [21]. Eneh, A. U, & Stanley, P. C. (2004). Pattern of Substance use among secondary School Students in Rivers State, Nigeria. Journal of Medicine, 13(1)
- [22]. Okoza, J. & Alude, Y. (2009). Drug abuse among students of Ambros Alli University, Ekpoma, Nigeria: European Journal of Social Sciences. Volume 10, Number 1.
- [23]. Encarta English Dictionary. (2008). Microsoft corporation. [DVD].
- [24]. Pearson, E.L. (2005). Longman Dictionary of Contemporary English. The living dictionary. (4th Ed.). England: India. Also available at <http://www.longman.com/dictionaries/support/idol>
- [25]. UNICEF. (2005). Report of the international conference on primary health care. Geneva: Almata-Ata. (6-2) ICPHC/A.A/78.10
- [26]. Swaid, H. S. (1988). Adolescent drug taking: Role of family and peers. Drug Alcohol Dependence,
- [27]. National Survey on Drug Use and Health. (2004). Substance Abuse and Mental Health Services Administration. Department of Health and Human Services. Rockville, MD : Office of Applied Studies
- [28]. Substance Abuse and Mental Health Services Administration. (2003a).Trends in drug-related emergency department Visits, 1994 – 2002. The DAWN Report, 1-7.
- [29]. Botvin, G.J., Botvin, E. M., & Ruchlin, H. (1998). School based approaches to drug abuse prevention: Evidence for effectiveness and suggestions for determining cost-effectiveness. In: W.J. Bukoski & R.I. Evans (Eds.); Cost- benefits/Cost-Effectiveness research of drug abuse prevention: Implications for programming and policy (PP.59-82). NIDA Research Monograph 176. Rockville, MD: National Institute on Drug Abuse.
- [30]. Lillie- Blanton, M., Werthamer, L., Chatterji, P., Fienson, C., & Caffray, C. (1998). Issues and methods in evaluating costs, benefits, and cost-effectiveness of drug abuse prevention programs for risk youth. IN: W. J. Bukoski, & R. I. Evans (Eds.). Cost-benefits/ Cost-effectiveness research of drug abuse prevention: Implication for programming and policy (PP. 184-213). (National Institute on drug abuse research monograph 176; NIH Publication NO: 98-4021.) Rockville, MD: National Institute on Drug Abuse.
- [31]. Kerber, L., & Wallisch, L. (1999). Texas survey of substance use among university students. Texas: Austine, TX.
- [32]. Maxwell, J. C., & Liu, L. Y. (1999). 1998 Texas school survey of substance use among students: Grades 7-12. Austin, TX: Texas Commission on Alcohol and Drug Abuse.
- [33]. Salami, S. O. (1997). Patterns of drug abuse among youth in Kwara State, Nigeria: Implication for counseling. Health and Movement Education Journal, 1 (1), 45-51.
- [34]. Egbochuku, E.O., Aluede, O., & Oizimende, P. (2009). Analysis of the use, dependence andsource of knowledge of stimulants among Nigerian university undergraduates. Anthropologist, 11(3), 213-218.
- [35]. Ezedum, C.E. (1999). Self medications among typical Nigeria in school rural adolescents. Nigeria journal of Health Educations 12(10), P 28-36.
- [36]. Lindberg, L. D., Boggess, S., & Williams, S., (2000). Multiple threats: The co-occurrence of teen health risk behaviours. Urban Institute: Office of the Assistant Secretary for Planning and Evaluation (ASPE), USA.
- [37]. Borowsky, I. W., Resnick, M.D., & Ireland, M. (2001). Suicide attempts among American Indian and Alaska Native youth:Risk and protective factors. Archives of Pediatric and Adolescent Medicine, 153, 573-580.
- [38]. National Agency for Campaign against Drug Abuse. (2004). Alcohol and drug abuse in Kenya: Final national baseline survey, on substance abuse. Kenya: Government Printer Nairobi.
- [39]. National Agency for the Campaign against Drug Abuse. (2002). Alcohol and drug abuse in Kenya. Final national baseline survey, on substance abuse. Kenya: Government Printer Nairobi.
- [40]. WHO. (2004). Street children, substance use and health: Monitoring and Evaluation of Streets children Projects. Document No. WHO/PSA/ 95:13. Geneva: Bath Press, Great Britain.
- [41]. Springer, A. E., Selwyn, B. J., & Kelder, S. H. (2006). A descriptive study of youth risk behaviours in urban rural secondary school students in El Salvador. Biomed Central International Health and Human Rights, 6 (3), 1000-1186.
- [42]. Rongkavilit, C., Naar-King, S., Chuenyam, T., Wang, B., Wright, K., & Phanuphak, P. (2007). Health risk behaviours among HIV-infected youth in Bangkok, Thailand. Journal of Adolescent Health, 40 (4), 358-8
- [43]. Eze, J.E., & Omeje, (1999). Fundamentals of substance abuse. Enugu: Snaap Press Ltd.
- [44]. Bandura, A. (1986). Social foundations of thought and action, A social cognitive theory Englewood Cliffs, NJ: Prentice Hall.
- [45]. Onyemachi, O.B. (2004).The drug scourge in Nigeria, Family Health Guide. July P.8
- [46]. Abonyi, O. S., Okereke, S.C., Omebe, C. A., and Anugwo, M. (2006). Foundation of educational research and statistics. Enugu: Fred- Ogah Publishers

- [47]. Anaekwe, M. S. (2007). Basic research methods and statistics in education and social sciences (2nd Ed.). Onitsha, Anambra State-Nigeria: Sofile Publicity and Printing Limited.
- [48]. Nwana, O. C. (1990). Introduction to educational research. Ibadan: Thomas Nelson.
- [49]. Olaitan, S. O., Ali, A., Ejoh, E. O. & Sowande, K. G. (2000). Research skills in education and social sciences. Owerri: Cape Publishers International Ltd.
- [50]. Esen, A.J. (1979). Discipline in schools. *Journal of the Cross River Education*, 1 (1), 40
- [51]. UNDCP/WHO (2000: 19). Primary prevention of substance abuse: A work book for project operators. WHO: Geneva.
- [52]. Otieno, A.O., & Ofulla, A.V.O. (2009). Drug abuse in Kisumu town western Kenya. *American Journal of Food, Agriculture, Nutrition and Development*, 9(3), 846-858.
- [53]. Mandi, E. C. (1988). An introduction to alcohol education. Jos: Cheren Publishers Inc.
- [54]. Mtomga, E . A. (2008). Analysis of alcohol consumption among in school youths in Katsina-Ala Township, Benue State. Unpublished Master's Thesis in Health and Physical Education, University of Nigeria Nsukka.
- [55]. Williams, T., & Clarke, V. A. (1999). Optimistic bias in beliefs about smoking. *Australian Journal of Psychology*.
- [56]. Onohwosafe, P.S., Egenege, J. A., & Blinkhorn, A.S. (2008). Drug use among secondary school children in central Delta State, Nigeria: *International Journal of Health Promotion and Education*.

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