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## Assessment of the level of knowledge, attitude and risk perception of HIV/AIDS among students in Owerri west metropolis, south-eastern, Nigeria

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### Abstract

HIV/AIDS is recognized as a worldwide disease and the most notorious and serious global epidemics of our generation. According to National Centre for Health Statistics (NCHS) AIDS became the leading cause of death among youths between the ages 25-44 years. The study was to investigate the knowledge, attitude, and risk perception among students in Owerri West Metropolis, Imo State, Nigeria. A cross sectional survey was conducted among 400 students using a validated, self administered questionnaire as a research instrument. The questionnaire included assessment on level of knowledge, attitude, perception, risky behavior and HIV/AIDS preventive measures. A random sampling technique was used to select the respondents used as sample for the study. Data obtained were analyzed using descriptive and chi-square statistics. The results obtained indicated that students have good knowledge on HIV/AIDS, causes and mode of transmission, signs and symptoms, risky behaviors, perception and preventive measures. About 87.5% of the respondents are aware of the disease HIV/AIDS while not aware had 12.5%. From the result, 70% of the students know that HIV is a viral disease while 75% has the knowledge that it can be passed from one person to another All had high significant difference at  $p \leq 0.01$  probability level. In conclusion, there is need to focus on preventive measures which can be achieved through proper AIDS education. Parents and teachers should encourage students to imbibe the spirit of abstinence with regards to sex.

## 1. Introduction

One of the most dreaded killer diseases in the world today is the Human Immune Deficiency Virus/Acquired Immune Deficiency Syndrome, otherwise known as HIV/AIDS. It has continued to be thorns in the flesh of Africans and Nigerians in particular. The menace of HIV/AIDS has reached every community and locality in Nigeria with varying degree of severity. In Nigeria approximately 170,000 died from AIDS in year 2007 (UNAIDS, 2008). It was estimated that in Nigeria about 3.1% of adult between ages 15-49 are living with HIV/AIDS (UNAIDS, 2008).

This first case of HIV/AIDS in Nigeria was identified in 1986. Since then, the HIV prevalence has grown exponentially. Globally, epidemic evidence of 2005 survey shows that all states in Nigeria have a prevalence rate of 5% including Federal Capital Territory. According to UNAIDS (2003) an increasing number of youth within the age of 15-25 years have continued to get infected with HIV. National HIV/AIDS Reproductive Health Survey also reported that youths are more vulnerable to sexual infection because of their age, gender and sexual orientation. This assertion was supported with the work done by UNICEF, UNAIDS and WHO, (2007) that youths are the most sexually active individuals.

Nigerian students have imbibed negatively on sexual activity and immoral behavior such as sexual promiscuity, rape, and unprepared marriage due to illegal pregnancies. These attitudes have created a lot of problems and led to the spread of HIV among youths.

It has been argued by Adefuye *et al.*, (2009) that HIV/AIDS is high among students, prostitutes, artisans and drug addicts among others. There are so many conceptions that HIV/AIDS prevalence is high among students of tertiary institutions (Adefuye *et al.*, 2009). Tertiary institutions (university/college) environment was found to provide great opportunity for HIV high risk behaviors (Adefuye *et al.*, 2009; Ojiefu *et al.*, 2009). This includes high rate of pre-marital sex, drug addiction, and cultism among others which are common phenomenon in tertiary institution in Owerri and are potential channels of HIV/AIDS infections. Although, HIV/AIDS is gradually reducing, but more efforts should be geared towards effective approaches that can result in lowering HIV infection among youths and adults

Knowledge is described by Carlson (1996), as the sum of people's conceptions, views and perceptions which have been established and tested as the correct reflection of objective reality. Therefore knowledge in this study is referred to as all understanding based on perception, the reality in which is proven in human practice. Lack of knowledge among youth may be one of the reasons why people are actively engaged in indiscriminate sexual behavior which result in contracting AIDS.

Perception of people on an issue is influenced by different factors for different people, nevertheless, behavior

performed toward an issue per time is an indicator of how an individual has perceived or evaluated the matter (Oluh, 2007).

Ukpong (2006), noted that people have different perception on health issues, their perception go a long way to determining their health seeking behavior and attitude to treatment. According to him, the value place of a service is dependent on the way is perceived, evaluated and acted upon by a person.

### 1.1. Concept of HIV/AIDS

Human immune deficiency virus (HIV) is a virus that causes Acquired immune deficiency syndrome (AIDS). This virus infects the cells that make up the human body and replicates itself within those cells. In order to make new copies of itself, it must infect the cells of a living organism (Nielson, 2003). When it gets into the human body system several billions of HIV particle copies are produced every day and circulate in the blood.

HIV is said to attack the body defenses (white blood cells) especially the so called CD4 cells which are like the coordinators of the immune system serve as eyes and ears or rather telephone to the body's army. Garland (2003) stated that the HIV virus attaches itself to the cell and later penetrates into it. Having entered the CD4 cell, it quickly multiplies by using the cells it invaded to make copies of itself and eventually kills the CD4 cells. The CD4 working in the body of a healthy person is supposed to be between 650 and 1250 cells per cubic millimeter. When a person's CD4 count drops below 200, the person is said to have AIDS, but when the count is about 350, doctors usually prescribe some antiretroviral drug therapy. When the CD4 cells are destroyed, the whole immune system does not work in harmony; this allows many different infections to enter the body and destroy it.

Ahmadu (1997) stated that there are two genetically and immunologically distinct human deficiency viruses, which have been discovered as causing HIV/AIDS disease. These are HIV-1 and HIV-2 which remains the dominant virus associated with AIDS in West Africa. An increasing number of different strains of both HIV-1 and HIV-2 are identified by molecular virology and by phenotype in cells culture. This increase is due to minor differences in the molecular structure of the virus. Ahmadu (1997) also added that HIV is capable of altering its antigens composition or its structure to avoid immune destruction and so continues to weaken the infected person's immunity. Therefore, HIV is cunning, crafty and deceiving, even to the body's immune system.

Acquired immune deficiency syndrome is a set of symptoms and infections resulting from the damage to human immune system. The major consequence of this, is a progressive effective reduction of the immune system and leaves the individual prone to opportunistic infections (WHO, 2006). It is important to note that there is no cure for HIV/AIDS but treatment for people living with it has improved enormously.

## 1.2. Origin of HIV/AIDS

The origin of HIV/AIDS is not known, but scientists have proposed theories about the origin of HIV/AIDS none of which has yet been proven. Haan (2004) stated that the earliest known case of HIV was from a blood sample collected in 1959 from a man in Kinshasa, Democratic Republic of Congo. The genetic analysis of this blood sample suggested that HIV-1 may have stemmed from a single virus in the 1940s or early 1950s. Haan (2004), went on to state that the virus existed in the United States by mid-to late 1970. Doctors in Los Angeles and New York reported illnesses of pneumonia, cancer and among people with healthy immune system. In 1982, AIDS was used by health officials to describe the occurrence of such opportunistic infections as Kaposi's sarcoma and Pneumocystis carinii (pneumonia) in previously healthy people. That was the year the formal tracking (surveillance) of AIDS cases began in United States of America.

However, scholars stated that the major source of HIV/AIDS was sub-Saharan African continent. Bankole and Singh (2004), confirmed the above statement and added that sub-Saharan Africa has been more devastated by HIV/AIDS epidemic than any other region of the world. The high risk groups are the Sexually Transmitted Infections (STI) patients, commercial sex workers (CSWs), injection drug users, long distance drivers, and miners' workers (Olugbenga-Bello, Asekun-Olarinmoye & Adeomi, 2011)

Garland (2003), presented explanation of HIV/AIDS acronym thus: H- Stands for Human- the virus are only found in humans; it is not found in animals or insects. I - Stands for Immune Deficiency: this means, the virus reduces the immune system.

V- Stands for Virus: this means that they are the smallest of all microorganisms and hundreds of times smaller than the bacterium or malaria parasite.

The Acquired Immune Deficiency Syndrome (AIDS) is the final stage of the disease. It continues in the human body till death. It can be explained thus:

A- Stands for Acquired: this indicates that its victim did not inherit it.

I&D- Stands for Immune Deficiency respectively: this shows that the victims have a common characteristic of a breakdown in their body immunity.

S- Stands for Syndrome. It covers the case of rare but ravaging disease that takes defenses.

Raen (1993) on the other hand stated that the disease is a syndrome because it consists of several signs and symptoms. Both mean the same as the signs and symptoms are as a result of the different kinds of diseases that attack the body.

An infected HIV person can look and feel very well for many years. It can take 5 to 10 years or even longer and during that period of silence the infected person can easily infect other people without knowing. The cure of HIV is yet to be found.

### 1.2.1. Major Routes of HIV/AIDS Transmission

HIV spreads from person to person, through blood fluids, mainly semen, blood. Infection requires direct contact between the body fluids as when semen of infected person contacts of sore (from another sexually transmitted disease) in the vagina, mouth, rectum of another person. Chukwu (2008) states that the mode of transmission remains the same virtually in every human society but significantly differs in rate. The various means of transmission include:

- Sexual route – the majority of HIV infection are acquired through unprotected sexual relation. In Nigeria, about 85% of AIDS infection is through sexual intercourse with infected persons (NERDC, 1995).

Momoh (2004) added that the sexual intercourse is the primary way of contracting HIV/AIDS because it involves the exchange of body fluid. Odey (2004) supported the above assertion by emphasizing that it is the major mode of transmission of HIV/AIDS. In realization of this mode of HIV/AIDS, scholars have recommended that people should keep only one sex partner. But if they must have sex with an irregular partner, condom should be used.

- Blood or blood product route- the spread of HIV by exposure to infected blood usually results from sharing of contaminated hypodermic needle and syringes used for illicit drugs.

Daudu (2005) and Raen (1993) asserted that HIV/AIDS is contracted through direct contact with blood infected by the virus through blood transfusion or through infected needles, razors, circumcision, barbing, traditional birth attendants, blood covenants, scarification (tribal marks) and careless handling of patients by health workers.

- Mother to Child transmission (MTCT)

One of the greatest advances in HIV disease management has been in pregnant women.

Raen (1993), and the AIDS alliance in Nigeria (2000) stated that women with HIV/AIDS can transmit HIV to their babies while in the womb or during child birth, though there is limited risk of infection through breastfeeding. For this reason breastfeeding is recommended because the risk of death through diarrhea from feeding bottle is still greater.

Garland and Haan (2004), added that mother to child infection accounts for about 10% of total HIV infections which is approximately 3 out of every 10 child born to an infected mother. The danger of mother to child transmission is less when HIV positive women breastfeed exclusively for the first six months. The risk is however higher with mixed feeding and complications developing from poor breastfeeding techniques, especially in cases where the mother has mastitis or cracked nipples. The risk also increases the more when the mother has become infected with HIV while breastfeeding as the viral load in the initial stage of infection is very high.

### 1.3. Signs and Symptoms of HIV/AIDS

Usually, early infection of HIV/AIDS is not noticeable immediately. In most cases, a few months or years (6months to 12 years) is the infection develops to AIDS depends on the defense mechanism (body cell) of the person. There are two categories of AIDS symptoms, minor and major. The minor signs of HIV/AIDS include the following: Shortness of breath, Cough that can last for more than one month, Itching rash, Swollen glands at two or more sites, e.g. in the area under the arm or groin, Tiredness even when the person has done no work, Thrush in the mouth and throat, Thick white coating on the tongue or throat, Consistent headache

#### 1.4. The Major Signs Include

- Fever – unexplained prolonged fever or recurrent fever or night sweats for more than one month.
- Diarrhea – chronic diarrhea on a continuous or intermittent form for more than one month. However, a person is diagnosed as having AIDS if he /she have one major sign plus two minor signs.
- Weight loss – there will be a progressive weight loss of more than 10% of body weight

#### 1.5. HIV Testing/Diagnosis

The most common used test for HIV infection is referred to as Enzyme Linked Immune-sorbent Assay (ELISA). If the ELISA finds HIV antibodies, the result must be confirmed typically by a test called a Western blot. It is conducted by using the person's blood, serum or saliva. There are different types of HIV testing. They include:

- HIV antibody test – this test looks for antibodies in blood, urine or saliva.
- Viral load test/polymerize chain reaction – it identifies HIV in the blood within 2-3 weeks of infection. It is usually used on babies born by HIV positive mothers.
- Rapid HIV test – this test does not require a highly trained laboratory scientist. It is done with rapid diagnostic test kits.

#### 1.6. Youths' Ignorance of HIV/AIDS

The youth are young people that constitute one fifth of the world's population and nearly two fifths in the developing countries' population (Population Reference Bureau (PRB), 2000). Macphail and Campbell (2001) noted that young people have continued to engage in high risk sex despite of their knowledge of HIV/AIDS and how to prevent it. The study by Hawking et al (2001) in Nigeria revealed that undergraduate students were knowledgeable about HIV/AIDS transmission and symptoms, but such knowledge did not prevent them from engaging in unprotected sexual intercourse. The students in secondary schools are considered very important with regards to issues of knowledge in HIV/AIDS, because many students

fall into the age target group by United Nations definition of youth.

Education is a key factor in helping people overcome their fears, ignorance and prejudices and also reduce the spread of HIV/AIDS. However, lack of knowledge about HIV/AIDS is one of the barriers to HIV/AIDS perception.

#### 1.7. Attitude or Perception towards HIV

Stigma refers to a situation when people living with HIV/AIDS are viewed as shameful and the disease is perceived to be a result of personal irresponsibility. If not counteracted, such attitudes fuel prejudice against those living with HIV/AIDS, marginalizing and excluding individuals. Ultimately such attitudes allow societies to excuse themselves from the responsibility of caring for and looking after those who are infected. More importantly, stigma leads to secrecy and denial that hinders people from seeking counseling and testing for HIV as well as care and support services. Such much discrimination against HIV positive could youth or cause them dropping out of school.

Different psychosocial literatures on health related behaviour emphasize the perception of being at risk of HIV/AIDS infection as one of the necessary conditions for preventive behavior to be adopted Bernadi (2002). Indicating the relationship between knowledge, attitudes and practices, Zenabu (1999) pointed out that intervention in curbing the spread of HIV/AIDS could be achieved when individuals acquire knowledge and then create the desired attitude, which finally leads to behavior modification or health seeking behavior (Bernadi, 2002).

Akwara, et al; (2003) observed that studies on perception of risk of HIV/AIDS are poorly understood and inconclusive because of difficulty of spreading and disentangling the complex relationship between the variables.

A study by Prata et al; (2006) in Mozambique showed that in 2000 an estimate 12% of adult aged 15-49 were infected with HIV and the most estimates show an increasing prevalence of infection and about half of new infections occur among 15-24 years old. The study concluded that the relationship between individual's perception of their risk acquiring HIV and their use of condoms is poorly understood which they argued are crucial to the development of effective strategies to fight HIV/AIDS.

#### 1.8. Effects of HIV/AIDS

AIDS is termed a deadly disease caused by a virus. The virus infects the human body and causes serious damage to the body's immune system by destroying the defensive mechanism of the body, which can fight against other diseases. Once it has destroyed most of the defense cells of the body, the body no longer fights other infections like tuberculosis, hepatitis, diarrhea and other cancers. The victim is vulnerable to any form of minor disease and

therefore, the person develops full blown AIDS or successive illnesses and dies.

### **1.9. Prevention of Human Immune Virus / Acquired Immune Deficiency Syndrome**

Presently, there is no confirmed medical cure for HIV/AIDS. At the moment, HIV/AIDS is being managed and treated with drugs called Antiretroviral (ARV). The antiretroviral drugs only suppress the effectiveness and multiplication of HIV virus but no drug till date is able to permanently destroy the virus inside the human body. The effective preventive measures against HIV/AIDS are as follows:

- Use condom of approved quality. Advertising practitioners council of Nigeria (APCON) suggested that it is acceptable to engage in premarital sex provided condom is used.
- Sex education. This provides information, knowledge and confidence. Lack of sex education has left many people in doubt and misconception about sex.
- Total abstinence from sexual intercourse with casual partners.
- Being faithful to one's sex partner by maintaining a single partner.
- By avoiding behaviors that are likely to put one at risk of infection e.g. cultism, drug intake.
- Media campaigns and public awareness. Radio and television campaign like one created by Family Health are thought to have been successful in increasing knowledge and changing behavior (Chukwu, 2008).
- Insisting on using new sterilized sharpen objects such as needles and syringes during injection, immunization and circumcision. This also applies to blades and clippers which must be shared with anyone to avoid blood contact.
- Avoiding contact with infected blood and blood products and receiving only screened blood for HIV/AIDS before transfusion during sickness.

### **1.10. Treatment**

Current treatment of HIV infection consist of highly active antiretroviral therapy (HAART) which has been beneficial to many HIV infected individuals. There is no evidence that people infected with HIV can be cured by currently available therapies. The decision to start therapy must balance the risk of an individual advancing to the stage of symptomatic disease against the dangers associated with the therapy. These risks include depression, feelings of isolation and substance abuse which is the reason that resistance develops as the patient's failure to correctly follow the prescribed treatment by not taking the medication at the current time. High active antiretroviral therapy (HAART) combination consist at least three drugs.

HAART can delay progression to AIDS, help to rebuild and maintain the immunization and reduce complications.

HIV/AIDS has been identified as the worst health crisis the world which a lot of people are facing today. It has become a major public health issue worldwide especially among developing nations, complicated by socio economic factors such as ignorance, unemployment, stigmatization and poor nutrition (Noulen, 2007). Different factors interact in a complex manner to acquire and spread HIV infection which makes the control and prevention of the epidemic difficult (Yayeh et al; 2003).

According to World Health Organization (2004), adolescents are infected by HIV/AIDS because the youths often do not know how serious the HIV/AIDS pandemic is, its causes, prevention and protection. The researcher observed that many youths in Nigeria do not have free access to information about HIV/AIDS. This is because in many occasions students engaged in high risk behavior without knowing the serious consequences of such risky behavioral manifestation. In addition, studies on HIV/AIDS have been conducted using people of various ages and states around the world and in Nigeria, but none has been focused on students in Owerri West Metropolis. This reason initiated the study on knowledge among students in Owerri West Metropolis.

The objective of this study was to assess the student's level of knowledge, attitudes and Perception on HIV/AIDS among students in Owerri West Metropolis.

## **2. Research Methodology**

This research work presents the research design, study area, target population, sample and sampling techniques, data collection, validity of the instrument, reliability of the instrument, administration of instruments for data collection, ethical considerations, and data analysis.

### **2.1. Area of Study**

The study was carried out among youths in Owerri West Metropolis, Imo state, south eastern, Nigeria.

### **2.2. Study Design**

The descriptive cross-sectional survey was used for this study. Considering the extensive nature of the population, it is quite clear that it is too large to handle or manage. Based on this, the researcher sample from the study population was for easier and better management. Ekuafeh (2005), stated that the closer the population of a research work, the more generalization power it has. Therefore, the survey research design was suitable and reliable in testing the students' knowledge on HIV/AIDS, cause and mode of transmission, perception and attitude, risky behaviour, preventive measures and students' source of information on HIV/AIDS.

### 2.3. Target Population

The population for the study was students (15-35yrs) from two selected secondary schools and three tertiary institutions in Owerri West Metropolis.

### 2.4. Sample and Sampling Techniques

This study, a stratified random sampling was used. The sample size of 400 students aged (15-35years) were randomly selected. 100 respondents were gotten from each tertiary institution given a total of 300 and 50 respondents from each secondary school making a total of 100. Therefore, when the respondents added together from secondary schools and tertiary institutions gave a total of 400. In order to ensure equal gender participation in the study, efforts were made to involve both male and female students

### 2.5. Instrument for Data Collection

The research instrument used for data collection was a well structured questionnaire prepared by the researcher. The questionnaire was developed based on the objective of the study. The instrument was constructed to obtain relevant information from students (15-35yrs) in Owerri West Metropolis on their Knowledge, Attitude and Risk Perception on HIV/AIDS. Hence, the questionnaire contained questions on socio-demographic data, level of knowledge on HIV/AIDS, level of knowledge on causes and mode of transmission of HIV/AIDS, knowledge on signs and symptoms of HIV/AIDS, knowledge on risky behavior, knowledge on perception

### 2.6. Validity and Reliability of the Instrument

Having constructed the questionnaire that would elicit information for the study, the researcher ensured that the validity of the content by checking the questionnaire item to make sure it tallied with the research objectives. The questionnaire was submitted to an expert in HIV/AIDS counseling for necessary corrections and a statistician was contacted for statistical analysis of the data. The reliability of the questionnaire was ascertained from HIV/AIDS educator ensured the content was in line with the objectives.

### 2.7. Administration of Instrument

The administration of the instrument and collection of data were done personally by the researcher and two research assistants who were trained by the researcher. The choice of this method of administration and collection was based on the need to achieve maximum return rate of the questionnaire. Having obtained permission from the heads of the selected schools, Deans and Head of the various departments where data was collected, the researcher administered the questionnaire directly to the respondents.

### 2.8. Ethical Consideration

Ethical considerations were carefully and systematically adhered to before, during and after the study. Permission to carry out the research from the two selected secondary schools was obtained and the participant's consent was involved in the study. Each respondent was told the purpose of the study, explained about the confidentiality of all information given and has right to withdrawal from participating if there was feeling of discomfort. No names were written on the questionnaire to ensure confidentiality.

### 2.9. Data Analysis

The data obtained were analyzed using descriptive and chi-square statistics.

## 3. Results

The results from the data collected from the questionnaire administered to both male and female students in selected secondary and tertiary schools in Owerri West Metropolis were presented in tables and charts as shown below.

### 3.1. Demographic Characteristics

Accordingly, data on respondents' age, sex, educational level and marital status were collected and analyzed.

The sex distribution in Figure 1 showed that 185 (46.2%) are male while 215 (53.75%) were female. The age of respondents reported that 15-19years are 80(20%), 20-24 years are 180 (45%), 25-29 years are 110(27.5%) and 30 years and above are 30 (7.5%). Educationally, a total of 100 representing 25% are in secondary school while 300 representing 75% are in tertiary institution. In marital status, 360(90%) had single, 10 (2.5%) were engaged and 30 (7.5%) got married while divorced had (0%) as all seen in table 1.

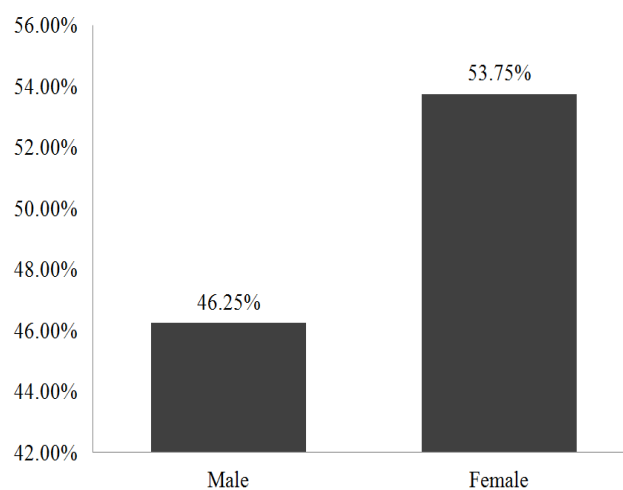


Figure 1. Percentage gender of respondents

**Table 1.** Showing demographic data of respondents.

Item	Frequency	Percentage
SEX:		
Male	185	46.25
Female	215	53.75
Total	400	100
AGE:		
15-19	80	20
20-24	180	45
25-29	110	27.5
30&above	30	7.5
Total	400	100
EDUCATION:		
Secondary	100	25
Tertiary	300	75
Total	400	100
MARITAL STATUS		
Single	360	90
Engaged	10	2.5
Married	30	7.5
Divorced	0	0
Total	400	100

Source: Fieldwork

From Table 2, about 87.5% of the respondents are aware of the disease HIV/AIDS while not aware had 12.5%. From the respondents, 80% believes AIDS is real in the study while 20% do not believe. 280 representing 70% knows that HIV can be prevented and 120 representing 30% said they do not know. 96.5% of the respondents agree that AIDS kills while 37.5 do not agree. 220 representing 55% knows the meaning of HIV/AIDS while 45% have no idea.

**Table 2.** Level of knowledge on HIV/AIDS.

Items	Frequency	Percentage
I am aware of the disease HIV/AIDS.		
Yes	350	87.5
No	50	12.5
Total	400	100
Do You believe HIV/AIDS is real in Imo state?		
Yes	320	80
No	80	20
Total	400	100
Do you know HIV/AIDS is preventable?		
Yes	280	70
No	120	30
Total	400	100
Do you know HIV/AIDS kills		
Yes	386	96.5
No	14	3.5
Total	400	100
Can someone infected with HIV still look healthy?		
Yes	250	62.5
No	150	37.5
Total	400	100
HIV/ AIDS mean Human Immuno Deficiency Virus and Acquired Immune Deficiency Syndrome.		
Yes	220	55
No	0	0
No idea	180	45
Total	400	100

Source: Fieldwork 2013

The results in table 3 show that 70% of the students know that HIV is a viral disease.75% has the knowledge that it can be passed from one person to another. 87.5% of the respondents agree that lesbianism and homosexuals can lead to HIV infection. 96.25% do not agree with hugging and shaking of hands as a mode of HIV transmission. 80% which is 320 respondents said that transfusion of unscreened blood is a mode of HIV transmission. 310(77.5%) agrees that sharing of sharp objects with an infected person is a mode of transmitting HIV/AIDS. Virtually, all the respondents representing 97% do not agree that sharing of food with an infection is a mode of transmission. All the respondents 100% correctly agree that sexual intercourse is a mode of transmitting HIV/AIDS and 96% rejects that mosquito bites can transmit HIV/AIDS. 22.5% said that sharing toilet with an infected person is a mode of transmitting HIV/AIDS while 97.75% said it is mode of transmission.

**Table 3.** Level of knowledge on causes and its mode of transmission

Items	Frequency	Percentage
HIV/AIDS is caused by a virus.		
Yes	280	70
No		
No idea	120	30
Total	400	100
HIV/AIDS can be passed from one person to another.		
Yes	300	75
No	100	25
Total	400	100
I do not believe that sex is one of the ways of contracting HIV/AIDS.		
Yes	100	25
No	300	75
Total	400	100
Practicing lesbianism and homosexuals can lead to infection with HIV/AIDS.		
Yes	350	87.5
No	50	12.5
Total	400	100
Hugging or shaking with infected persons can transfer HIV to non infected persons		
Yes	15	3.75
No	385	96.25
Total	400	100
Transfusion of unscreened blood		
Yes	320	80
No	80	20
Total	400	100
Sharing of sharp objects like razor, needles with infected persons.		
Yes	310	77.5
No	90	22.5
Total	400	100
Sharing food with an infected person.		
Yes	12	3
No	388	97
Total	400	100
Sexual intercourse		
Yes	400	100
No	0	0

Items	Frequency	Percentage
Total	400	100
Through mosquito bites or insect bites.		
Yes	16	4
No	384	96
Total	400	100
Sharing toilet seats with infected person.		
Yes	9	2.25
No	391	97.75
Total	400	100

Source: Fieldwork 2013

Table 4 revealed the students' knowledge on risky behavior. All the students (100%) said yes to unprotected sexual intercourse as a risky behavior. They also responded in unison (100%) that having sex without condom with unknown person is a risky behavior. A large number of respondents (97.75%) agreed that having more than one sexual partner is a risky behavior while 2.250% opposed it.

**Table 4.** Level of knowledge on risky behavior

Items	Frequency	Percentage
Unprotected sexual intercourse		
Yes	400	100
No	0	0
Total	400	100
Avoiding use of unsterilized surgical instruments		
Yes	320	80
No	08	20
Total	400	100
Having more than one sexual partner.		
Yes	391	97.75
No	09	2.25
Total	400	100
Having sex without condom with unknown person		
Yes	400	100
No	0	0
Total	400	100
Use of condom during intercourse		
Yes	011	2.75
No	389	97.25
Total	400	100
Being faithful to your partner.		
Yes	05	1.25
No	395	98.75
Total	400	100
Having only one sexual partner.		
Yes	010	2.5
No	390	97.5
Total	400	100

Source: Fieldwork 2013

Table 5 shows the students' perception about HIV/AIDS. 83% of the respondents perceived HIV/AIDS as a human threat. 274 (68.5%) are willing to do HIV test. 97.75% believe that HIV/AIDS exist while 25% perceive it as a spiritual illness. About 57.5% said they won't share their beds with an infected person and 80% said they would

avoid a person with HIV infection. 26.5% reported that they cannot hug an infected person.

**Table 5.** Level of knowledge on perception

Items	Frequency	Percentage
Is HIV/AIDS a threat to human health?		
Yes	322	83
No	68	17
Total	400	100
Are you willing to do HIV test?		
Yes	274	68.5
No	126	31.5
Total	400	100
Is HIV/AIDS a spiritual illness?		
Yes	100	25
No	300	75
Total	400	100
Does HIV/AIDS exist?		
Yes	391	97.75
No	09	2.25
Total	400	100
HIV/AIDS can be gotten from mosquito bites.		
Yes	15	3.75
No	385	96.25
Total	400	100
Can you sleep on the same bed with an HIV infected person?		
Yes	230	57.5
No	170	42.5
Total	400	100
I would avoid caring for a HIV/AIDS person/relation.		
Yes	320	80
No	80	20
Total	400	100
I cannot hug a HIV/AIDS infected person.		
Yes	106	26.5
No	294	73.5
Total	400	100

Source: Fieldwork 2013

From the students' response on sign and symptoms of HIV/AIDS as table 6 indicated; those stated true it causes excessive weight gain 0.75% while false had 99.25%, true for excessive weight loss had 87.5% and false were 12.5%, true for always feeling tired had 73% against 27%, cough that can last for more than one month had 57% while false had 32%. Among all the students interviewed, those responded true to the following signs and symptoms; excessive appetite was 60.25%, excessive loss of appetite had 45.25%, persistent headache was 37.5%, itching and rash of the body were 30%, Sore throat for one month 16%, Excessive passing of urine for more than one month 20.75%, Shortness of breathe 30%, Illness like tuberculosis, pneumonia may be experienced 45.75%, Thrust in the mouth and throat, 17.5%, may have no signs and serious illness for a long time 53.25%, excessive night sweat 23.5% and Experiencing malaria symptoms had 37.5%.



**Table 6.** Level of knowledge on signs and symptoms

Items	No=400 True	%	No=400 False	%	No=400 No Idea	%
Excessive weight gain	3	0.75	397	99.25	0	0
Excessive weight loss	350	87.5	50	12.50	0	0
Feeling tired always	292	73	108	27	0	0
Cough that can last for more than one month.	228	57	140	35	32	8
Excessive appetite	241	60.25	159	39.75	0	0
Excessive loss of appetite	181	45.25	219	54.75	0	0
Persistent headache	150	37.5	50	12.5	200	50
Itching rash of the body.	120	30	20	5	260	65
Sore throat for one month	64	16	90	22.5	246	61.5
Excessive passing of urine for more than one month.	83	20.75	230	57.5	87	21.75
Shortness of breathe	120	30	80	20	200	50
Illness like tuberculosis, pneumonia may be experienced.	183	45.75	60	15	157	39.25
Thrust in the mouth and throat	70	17.5	73	18.25	257	64.25
May have no signs and serious illness for a long time	213	53.25	187	46.75	0	0
Excessive night sweat	94	23.5	0	0	306	76.5
Experiencing malaria symptoms.	150	37.5	50	12.5	200	50

Source: Fieldwork 2013

**Table 7.** Level of knowledge on preventive measures

ITEM	N=400 Yes	% Yes	N=400 No	% No
Taking antibiotics before and after sexual intercourse.	18	4.5	382	95.5
Use of contraceptive pills.	0	0	400	100
Being faithful to one sexual partner.	390	97.5	010	2.5
Use of condom if you must have sex casually.	389	97.25	011	2.75
Use of herbs from the traditional medicine.	125	31.25	275	68.75
Immunization against HIV/AIDS.	80	20	320	80
Receiving only screened blood.	400	100	0	0
Abstinence from sex.	380	95	20	5
Avoiding bad friends and being very careful.	320	80	80	20
Introducing sex education in schools.	345	86.25	55	13.75
Avoiding body contact with infected persons.	96	24	304	76
Avoid sharing sharp instruments that might have blood on them.	310	77.5	90	22.5
Receiving unscreened blood only from relations.	25	6.25	375	93.75
Avoid premarital sex.	355	88.75	45	11.25

Source: Fieldwork 2013

Table 7 represents the respondents' knowledge on preventive measures. All the respondents (100%) responded "NO" to use of contraceptive pills and taking antibiotics before and after sexual intercourse had 4.5% as a preventive measure and also accepts receiving screened blood as a preventive measure. 389(97.25%) have the knowledge on use of condom as a preventive measure.

97.50% respondents agree that being faithful to one sexual partner is also a preventive measure. 31.25% believe on the use of traditional herbs, immunization against HIV/AIDS had 20%, 80% said avoiding bad friends and being very careful, 86.25% said they should Introducing sex education in schools, 95% agreed to stay in abstinence, 24% were on avoiding body contact with infected persons, Avoid sharing sharp instruments that might have blood on them had 77.5%, Receiving unscreened blood only from relations had 6.25% while avoid premarital sex had 88.75%.

**3.2. Table 8 Shows Statistical Analysis Using Chi-Square**

Statistical analysis  
 Respondents' knowledge on HIV/AIDSs  
 $X_{tab} = 24.72$   $X_{cal} = 262.9$   
 Highly significant at  $p = \leq 0.01$   
 Respondents' level of knowledge on causes and mode of transmission  
 $X_{tab} = 38.93$   $X_{cal} = 2550.0$   
 Highly significant at  $p = \leq 0.01$   
 Respondents' Knowledge on Signs and Symptoms  
 $X_{tab} = 38.93$   $X_{cal} = 3729.1$   
 Highly significant at  $p = \leq 0.01$   
 Respondents' Knowledge on Risky Behaviour  
 $X_{tab} = 27.69$   $X_{cal} = 2404.9$   
 Highly significant at  $p = \leq 0.01$   
 Respondents' Knowledge on Perception  
 $X_{tab} = 30.58$   $X_{cal} = 1256.08$   
 Highly significant at  $p = \leq 0.01$   
 Respondents' Knowledge on Preventive measures  
 $X_{tab} = 46.96$   $X_{cal} = 3452.6$   
 Highly significant at  $p = \leq 0.01$

**Table 8.** Percentage coefficient of variation of respondents on source of information on HIV/AIDS

Item	Frequency
Radio	392
Friends and peers	320
Health workers	400
Television	350
Total	2820
Mean	235
Standard Deviation	118.67
% coefficient of variation (CV)	50.5

CV: coefficient of variation, Source: Fieldwork 2013

Respondents’ knowledge on HIV/AIDS was highly significant at  $p = \leq 0.01$ . Chi-square statistics showed that Xcal (262.9) was greater than Xtab (24.72) at  $p \leq 0.01$ . This implies that the students have good knowledge of HIV/AIDS. Respondents’ level of knowledge on causes and mode of transmission was highly significant at  $p = \leq 0.01$ . Even though 30% of the students do not know the causative organisms of HIV/AIDS as shown on Table 3, statistical result obtained, Xcal (2550) was greater than Xtab (38.93). This indicated that students have high knowledge on the causes and modes of transmission with a high significant level at  $p = \leq 0.01$ .

### 3.3. Respondents’ Knowledge on Signs and Symptoms

From the analysis on students’ response on signs and symptoms of HIV/AIDS, Xtab(38.93) was less than the Xcal (3729.1). The findings was statistically significant at  $p = \leq 0.01$ , this implies that the students have sound knowledge on signs and symptoms of HIV/AIDS. The findings on signs and symptoms as shown in Table 4 above, shows that 37.5% said it was headache, 73% said tiredness. 350 out of 400 (87.5%) said it involves weight loss, 60.25% said excessive appetite while 53.25% are of the opinion that it may have no signs.

#### 3.4.1. Respondents’ Knowledge on Risky Behaviour

All respondents indicated that sexual intercourse is a risky behaviour. 100% also indicated that having sex without condom with an unknown person is a risky behaviour. 2.25% said that being faithful to one partner is a risky behavior, 2.7% said no to condom use during intercourse which is not significantly high compared to those that said yes. In otherwise, the total responses statistically gave rise to a high significant level at  $p = \leq 0.01$ . Xcal (2404.9) being greater than Xtab (27.69) indicates that majority of the students have knowledge on risky behaviors.

#### 3.4.2. Respondents’ Knowledge on Perception

Regarding to students knowledge on perception, 26.5% cannot hug someone with HIV/AIDS, 25% perceive it as a spiritual illness and 20% would avoid caring for someone with HIV/AIDS. When compared statistically with the

students that opposed these opinions or said yes, Xcal (1256.08) was greater than Xtab (30.58). This revealed that students’ perception about HIV/AIDS is highly significant.

### 3.4.3. Respondents’ Knowledge on Preventive Measures

Ninety eight percent of the respondents showed in Table 7 said that taking antibiotics is not a preventive measure against HIV/AIDS while 95% accepted abstinence as a preventive measure. Other results analyzed from Table 7 attested that students have a sound knowledge on preventive measures with significant level at  $p = \leq 0.01$

All results obtained and analyzed statically showed a high significance level at  $p = \leq 0.01$  which indicates that students in Owerri West Metropolis have good knowledge on HIV/AIDS, causes and mode of transmission, signs and symptoms, risky behaviours, perception and preventive measures.

From the results on table 8, all participants receive information from health workers had 400(14.2%). 392 (98%) was from the radio, 320 (80%) from friends and peers and 350 (87.50%) from the television. The coefficient of variation of 50% implied that there was high variation (difference) among the respondents’ sources of information.

## 4. Discussion

The present study assessed the knowledge, attitude, and risk-perception of HIV/AIDS among students in Owerri West Metropolis in Imo state, Nigeria. The age distribution of the respondents showed that majority of them fall between 20-24 years. Majority of the respondents are single with 90% of the total sample. It is not a surprise because Owerri has more than four higher learning institutions.

The study demonstrated that the knowledge of respondents on HIV/AIDS is highly significant at  $p = \leq 0.01$ . This is in line with the findings of the work done by Onuorah and Eze (2005) which showed that students are to a great extent aware of HIV/AIDS and the ways by which it can be transmitted. The respondents’ representing 100% identified “sexual intercourse” as a major means of contracting HIV/AIDS and use of condom as a preventive measure. This revealed that students are highly knowledge on the cause and mode of transmission even though 45% have no idea on the meaning of HIV/AIDS. Despite the fact that the students are aware of HIV/AIDS mode of transmission and preventive measures, about 2.75% engage in unprotected sex. From the result, 5 % do not see abstinence as a preventive measure against HIV infection. This finding collaborates with that of Macphail and Campbell (2001) who noted that young people have continued to engage in high risk sex in spite of their knowledge of HIV/AIDS and how to prevent it. This means that having adequate knowledge about HIV/AIDS may not necessarily result in an equivalent behavioral change (Roscoe and Kruger, 1999).

This study shows that majority of the students are aware of the symptoms associated with HIV/AIDS. A high percentage of respondents with 53.25% accepted that there may be no signs of HIV infection with weight loss for a long time. This finding was in line with the study done by Hawking et al (2001) who found out that Nigeria undergraduate students were knowledgeable about HIV/AIDS transmission and symptoms, but such knowledge did not prevent them from engaging in the unprotected sex.

Revelations of the study on perception an attitude showed a high significance level. On the other hand, 2.5% said they were being faithful to one partner does not reduce the risk of HIV infection and 12.5% are of the opinion that practicing lesbianism is not a risk that can lead to HIV infection. This was similar to the work done by Isaac and Olabode (2006) in which the findings of their work showed the students' perception of unprotected sex, did not influence their attitude towards the practice. 31.5% are not willing to test for HIV yet, they engage in sexual practices. This shows that some students are still ignorant about the HIV infection. Twenty five percent of the respondents were of the opinion that HIV/AIDS is a spiritual disease. As stated by the participants, HIV/AIDS was acknowledged to be a threat to human life with 83 %. 96.25 % of the respondents attested that hugging and kissing could not lead to HIV/AIDS which is in line with Ehizouwa (2011) who said shaking of hands, hugging and touching of a HIV patient cannot lead to HIV transmission.

According to Silverman (1989), the knowledge people have about any condition determines what they do about the condition. From the result of this research, 97.25% of the students use condom as a preventive measure which showed a reasonable about HIV/AIDS prevention through condom use.

Regarding sources of information on HIV/AIDS, the participants reported their main sources of information as radio, print media, health workers, television and friends and peers. The study was in line with Baba and Omotara (2001) who found out that television was a major source of information in all the schools they used for their case study. It also corresponds with investigation done by Nnabueze (2000) who reported that media and friends and peers are major sources of information to students on HIV/AIDS. From the result above, it was evident that vast majority of the participants received information from the mass media and health workers. Very little communication regarding HIV/AIDS occurred between participants, school teachers, pastors and HIV campaigns. This scenario must be as a result of lack of interest on the part of teachers, lecturers, and non involvement in the organization of health programs and campaigns.

One explanation for the consistency of the findings of the present study with those of the previous ones is that students' across the globe share almost same characteristics such as risk-related sexual behavior which make them have similar conception about HIV/AIDS. Therefore the findings

of the present study are considered plausible and not misleading.

## 5. Conclusion

Based on the findings of this study, it was concluded that awareness and knowledge of HIV/AIDS is high in Owerri West Metropolis. Despite the knowledge, the risk of contracting HIV infection still exists as risky behaviors are still practiced among students. The students claim that HIV/AIDS is a threat to the society and are aware of the transmission routes and preventive measures but the virus keeps spreading among the youths which show that some youths still possess ignorant attitudes. This study also showed that health education is effective measure for improving HIV knowledge and high risk behavioural changes among youths and other common risk groups like commercial drivers, injection drug users and long distance drivers in Nigeria (Olugbenga-Bello, Asekun-Olarinmoye & Adeomi, 2011).

## Recommendations

- The study recommends that curriculum experts in health education to incorporate concepts/topics on HIV/AIDS education in the contents of textbooks.
- There is need to focus on preventive measures which can be achieved through proper AIDS education.
- There is also need to review the health education curriculum of those saddled with the responsibility of imparting knowledge to students.
- Parents and teachers should encourage students to imbibe the spirit of abstinence with regards to sex
- Parents, teachers, clergies and even the students should be involved in HIV education programs. The stimulation of interest in parents, teachers and health workers concerning HIV/AIDS campaigns may help to educate themselves and their children or students regarding the subject matter.
- As being observed that television is among the common source of information on HIV/AIDS, the state agency in charge of HIV/AIDS can sponsor the drama and music of HIV/AIDS activities. The surge in the movie industries and drive towards the patronage of home videos by the masses will go a long way in sensitizing people on HIV/AIDS.

## Conflict of Interest

All authors of this article have no conflicts of interest throughout the period of this work.

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