

**TITLE PAGE**

**KNOWLEDGE AND ATTITUDE TOWARDS RISK FOR ACQUIRING HIV AND USE  
OF VOLUNTARY COUNSELLING AND TESTING AMONG ADOLESCENTS IN  
SENIOR SECONDARY SCHOOLS STUDENTS, ENUGU NORTH LOCAL  
GOVERNMENT AREA, ENUGU STATE.**

**M.SC. DISSERTATION**

**PRESENTED TO**

**DEPARTMENT OF NURSING SCIENCE  
FACULTY OF HEALTH SCIENCES AND TECHNOLOGY  
UNIVERSITY OF NIGERIA  
ENUGU CAMPUS**

**BY**

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**IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF  
DEGREE: MASTERS OF NURSING (M.SC.) IN COMMUNITY HEALTH NURSING**

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**APRIL, 2016.**

**APPROVAL**

This Dissertation Titled **“KNOWLEDGE AND ATTITUDE TOWARDS RISKS FOR ACQUIRING HIV AND USE OF VOLUNTARY COUNSELLING AND TESTING AMONG ADOLESCENTS IN SENIOR SECONDARY SCHOOLS STUDENTS, ENUGU NORTH LOCAL GOVERNMENT AREA, ENUGU STATE”** was originally carried out by Anyiamijeomaonyinyechi with Registration number **PG/ M.SC./14/69041** of the Department of Nursing Sciences and Technology, University of Nigeria Enugu campus.

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## **DEDICATION**

This work is dedicated to Almighty GOD and to my dear husband, MrUcheMaduakolam, for all his love.

## **ACKNOWLEDGEMENT**

I am humbly grateful to almighty, gracious and ever faithful God who has shown me once more that with him all things are possible.

My special thanks goes to my supervisor DR, (Mrs) N.P.Ogbonnaya for her tireless effort, support and readiness to assist at all stage of this dissertation, your midnight calls and test messages were not in vain. I am also grateful to coordinator of post graduate programmes Prof (mrs) IjeomaEhiemere for her motherly love and encouragement throughout the program.

I am equally grateful to all the lecturers in the Department of Nursing Sciences for the part they played in successful completion of my programme.

My special thanks goes to my darling husband, EngrUchennaChidubemMaduakolam for his love, prayers and financial support throughout the programme, and to my beloved son master Uchenna Emmanuel Maduakolam.

Lastly, I thank all the principals, teachers and students of Government secondary school Abakaliki road and Day senior secondary school independent layout for their cooperation and assistance during data collection exercise.

May the Almighty God bless and keep you all in Jesus Name óAmen.

## TABLE OF CONTENTS

Title Page	i
Approval	ii
Certification	iii
Dedication	iv
Acknowledgement	v
Table of Content	vi
List of Tables	ix
Abstract	x
<b>CHAPTER ONE: INTRODUCTION</b>	
Background of the Study	1
Statements of the Problem	4
Purpose of the Study	6
Objectives	6
Research Questions	6
Hypotheses	7
Significance of the Study	7
Scope of the Study	8
Operational Definition of Terms	8
<b>CHAPTER TWO: LITERATURE REVIEW</b>	
Concept of Human Immunodeficiency Virus/Acquire Immune Deficiency Syndrome (HIV/AIDS)	10

Epidemiology of HIV among Senior Secondary Schools Students	11
Transmission of HIV/AIDS	16
Prevention of HIV/AIDS	17
Adolescents HIV Risk Behavior	18
The Concept of Voluntary Counseling Testing (VCT)	19
Attitudes towards testing for HIV among Adolescents	29
Utilization of Voluntary counseling and Testing (VCT) Services by secondary School Students	30
Relationship between knowledge and Utilization of VCT Services	35
Theoretical Review	37
Empirical Review	39
Summary of Literature Review	57
<b>CHAPTER THREE: RESEARCH METHODOLOGY</b>	
Research Design	59
Area of the Study	59
Population for Study	61
Sample	62
Sampling Procedures	63
Instrument for Data Collection	64
Validity of the Instrument	64
Reliability of the Instrument	65
Ethical Consideration	65
Procedure for Data Collection	65
Method of Data Analysis	66

## **CHAPTER FOUR: PRESENTATION OF RESULTS**

Demographic Characteristics of Student 67

Test of Hypotheses 80

## **CHAPTER FIVE: DISCUSSION OF FINDINGS**

Discussion of Major Findings 85

Summary of Findings 91

Implication for Nursing 93

Limitations of the Study 94

Conclusion 95

Suggestions for Further Studies 94

Recommendations 95

References 96

Appendices 107



## LIST OF TABLES

<b>Table 1:</b> Demographic Distribution of the Students	68
<b>Table 2:</b> Respondents knowledge of HIV/AIDS among Adolescents	70
<b>Table 3:</b> Respondents Perceptions towards risk of acquiring HIV/AIDS	72
<b>Table 4:</b> Respondent Attitude towards use of VCT Services	74
<b>Table 5:</b> The Adolescents' General Attitude towards use of VCT Services	74
<b>Table 6:</b> Respondents use of VCT	75
<b>Table 7:</b> The Relationship between Knowledge and Utilization of VCT	79
<b>Table 8:</b> T-test Comparison of the Mean Scores on the Knowledge of HIV/AIDS between Men Female Students	80
<b>Table 9:</b> Results of Chi-square ( $X^2$ ) on Respondents Perceptions towards risk of acquiring HIV	81
<b>Table 10:</b> Results of Chi-square ( $X^2$ ) on Adolescents' Attitude and use of VCT Services	81
<b>Table 11:</b> T-Test Comparison of Mean scores on gender difference in the Utilization of VCT	82
<b>Table 12:</b> Result of Chi-square ( $x$ ) between Knowledge and Utilization of VCT	82

## ABSTRACT

This study was designed to determine the knowledge and attitude towards risk of acquiring HIV and use of voluntary counseling and testing in senior secondary schools Enugu. The study sought answers to five research objectives and tested five hypotheses. The population of the study consisted of one thousand, three hundred and fifty eight (1358) adolescent students. Sample size of four hundred and sixteen (416) senior secondary schools students in Enugu State were selected for the study; using stratified proportionate and simple random techniques. A validated researcher's developed questionnaire consisting of Thirty seven (37) items questionnaire was the instrument used for the data collections. The instrument was validated by three experts and cronbach correlation reliability coefficient was used to determine the consistency of the instrument. The instrument yielded a reliability coefficient of 0.78. Frequency counts, percentages, mean statistics and standard deviation were used to answer research objectives while five hypotheses were tested using student t-test and chi-square at 0.05 level of significance. Findings revealed that a good number of the adolescents 359(66.1%), had poor knowledge of HIV/AIDS, the adolescents perceptions towards risks of acquiring HIV/AIDS was positive with frequency of 329(83.9%), attitude towards use of VCT was also positive with a means score > cut off point of 2.50, also the adolescent shows good use of VCT 208(53.1%). Significant relationship existed between knowledge and utilization of VCT services among students ( $p < 0.05$ ), There was no significant difference ( $p > 0.05$ ) in the knowledge of HIV/AIDS between male and female students There was no significant relationship ( $P > 0.05$ ) between adolescent's perceptions towards risk of acquiring HIV/AIDS and use of VCT services, There was no significant relationship ( $P > 0.05$ ) between adolescent's attitude and use of VCT services. There was no significant ( $P > 0.05$ ) gender difference in the utilization of VCT services among adolescents in Senior Secondary Schools in Enugu. There was no significant relationship between knowledge and utilization of voluntary counseling and testing services among adolescents. The study concluded that Adolescents in senior secondary schools Enugu have poor knowledge of HIV/AID, showed high perception towards risks of acquiring HIV/AIDS, Showed good attitudes towards used of VCT services. The study recommended that HIV/AIDS should be taught in class for young people like every other general subject in order to improve the knowledge, Adolescents should be provided with a VCT service at their schools, with trained peer educators to increase access to the same service for the school age population and Adolescents and parental VCT information sharing should be encouraged and strengthened, so that adolescents can learn from their parents without fear.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **Background to the Study**

AIDS stand for Acquired Immune Deficiency Syndrome. AIDS is a pattern of devastating infections caused by the Human Immunodeficiency Virus (HIV), which attacks and destroys certain white blood cells that are essential to the body's immune system. It has been established that more than 70% of people who have contacted HIV live in sub-Saharan African (UNAIDS,2007).Nigeria has entered a stage where the epidemic could increase at an exponential rate unless adequate national and regional responses are mounted to stem the spread of HIV/AIDS.

In an attempt to eradicate HIV, there is a need to educate people on risk behaviors, most especially the adolescents who are very sexually active. A study has it that adolescents and young adults are in the Centre of the epidemic, because young people ages 15-24 account for approximately half of new adult HIV/AIDS infections and 28% of the global total adults living with HIV/AIDS, (Kaiser Family Foundation, 2012).It was also confirmed that adolescents are at the Centre of the HIV/AIDS epidemic in terms of rates of infection, vulnerability and of the 1.5 billion young people worldwide, 11.8 million are estimated to be living with HIV. (United Nations Population Fund, 2013). Secondary schools students' behavior towards HIV/AIDS has been found to been very poor. Cynthia (2013) in a study found out poor attitude of adolescents toward HIV/AID. It is also reported that every day between 5,000-6, 0000 young people (ages 15-24) contract HIV and that many of them still lack comprehensive and correct knowledge about how to prevent the infection. In HIV, eradication, knowledge is very important. (WHO 2012)

However, Diclement, et al (,2008), also reported a poor correlation between knowledge and sexual behavior since knowledge have been clear enough to assess for HIV/AIDS, the study showed that people practice unsafe sex despite their knowledge of HIV/AIDS. Knowledge essentially is the recall recognition of specific and universal elements in a subject area. In the context of HIV/AIDS, having knowledge implies ability to recall facts concerning causes, transmission, prevention, concerning HIV/AIDS (Adegbola, et al, 2007). It is expected that when one has the knowledge of HIV/AIDS, the accompanying behavior would be logical. That is having the knowledge of prevention, transmission and other facts would motivate logical safe sex behavior.

In relation to HIV/AIDS the possibility that the possession of adequate and correct knowledge is highly correlated to preventive efforts is a strong motivating factor in most educational projects since it is assumed that knowledge will help to overcome fear, denial and also contribute to behavior modification. The power of increased knowledge to motivate logical sexual behavior to reduce HIV infection and modify sexual behavior change constitutes the crux of most HIV/AIDS education campaign. The ongoing and past HIV/AIDS programmes have provided information and education on radio and television while other primary prevention, intervention have continued all over the different South East States. The process of provision of information and education is based on assumption that youths would practice safe sex be (WHO, 2014). However it seems there is lack of balance between the knowledge of HIV/AIDS and the advancement in sexual behavior of many youths.

According to National Aids Reproductive Health Survey NARHS, (2012), accurate knowledge on key basic information on HIV/AIDS which is the pre-requisite for taking preventive and care actions was generally low. There is a relatively low level awareness of HIV/AIDS as observed

among the adolescent population in Nigeria, (Ogundana,2009).However Ogundana reported that a quarter of respondents acknowledged that they often had unsafe sex with high risk partners.

The findings of Adedimeji, (2008), revealed that a 100% awareness rate was available among respondents. However Adedimeji reported that among those who are aware of the consequences of HIV infection, no serious preventive efforts are taken towards avoiding infection for instance, while almost all those interviewed acknowledged the efficacy of the Condom as a barrier method for infection, less than 20% of male and 5% of female mentioned, did not use condom in sexual encounter with someone they are meeting for the first time.

Omorepie (2010) reported that majority of youths are aware that HIV/AIDS exist, there exists an underestimation of personal risk. Osho and Olayinka, (2009), knowledge of correct routes for HIV transmission appears to have played a role in condom use frequency. To some extent Osho and Olayinka, (2009) reported that knowledge of HIV/AIDS is being put into practice in south west Nigeria through condom use. Odu, (2006), found a high level of knowledge of risk reduction of HIV/AIDS and HIV testing in Nigeria. Olawale, (2011), opined that perception, thinking pattern, attitude and belief about an issue can have an impact on observable behavior. It could be seen therefore that knowledge and perception of individuals should be taken into consideration in determining the sexual behavior.

Perception of being at risk for HIV/AIDS and utilization of Voluntary counseling and testing is an effective and pivotal strategy for both HIV/AIDS prevention and care, and it is also a principal entry point to care and support for people living with HIV/AIDS. VCT help HIV negative people make informed Choices when engaging in sexual intercourse, such as having single partner or using a condom. There is strong evidence that voluntary HIV counseling and testing can affect sexual behaviors and a multi-country trial suggested that VCT is cost- effective

and efficacious in promoting behavior change, particularly in high HIV prevalence setting and VCT can even lower HIV incidence rates (Allen, et al, 2007).

Also adolescents view themselves as being unique and as such immune to disease and death, there thinking is that something bad will happen to someone else, not me, (WHO, 2013). In the case of HIV/AIDS, adolescents may view others as being vulnerable to the disease while they are invulnerable, this personal fable can lead the adolescent to engage in risky behaviors. Macphail, et al (2008) study HIV voluntary counseling and testing on adolescent in south Africa, the study showed that adolescents were afraid of knowing their HIV status and felt that testing was only for symptomatic individuals, the study also reported that youth avoids screening because they are afraid of stigma and discrimination that may emanate from the community, the study recommended that voluntary counseling and testing services should be youth friendly. The use of VCT services by young people has shown also to be limited, and under-used primarily due to the issues such as lack of confidentiality, cost of services and unfriendly attitudes of clinical staff (UNFPA, 2013). This research therefore, aimed at assessing knowledge and attitude towards risk for acquiring HIV and utilization of VCT on the prevention of HIV/AIDS among adolescents in senior secondary school students in Enugu.

### **Statements of the Problem**

Knowledge, positive or negative attitude towards risk for acquiring HIV/AIDS and utilization of Voluntary counseling and testing is an effective and pivotal strategy for both HIV/AIDS prevention and care, and it is also a principal entry point to care and support for people living with HIV/AIDS. There is strong evidence that voluntary HIV counseling and testing can affect sexual behaviors and a multi-country trial suggested that VCT is cost-effective and efficacious

in promoting behavioral change, particularly in high HIV prevalence setting and VCT can even lower HIV incidence rates (Allen, et al., 2007)

Knowledge, attitude towards risk of acquiring HIV and voluntary counseling and testing (VCT) has been identified as a critical intervention tool in HIV prevention and care strategies. Voluntary Counseling and Testing (VCT) provides an opportunity for one to know his/her HIV status after receiving enough information to make the decision. A study by Allen, et al. (2007) had shown that VCT has been useful in facilitating and sustaining behavior change. Abraham, Gloria and Tshweneagae (2012) in a study, Adolescents' knowledge and attitudes towards VCT services revealed clearly indicated needs for a more accessible voluntary HIV counseling and testing services for adolescents.

According to the World Bank (2013), senior secondary students in Africa are at high risk of contracting HIV/AIDS because of high-risk activities such as unprotected casual sexual practices with multiple partners. The use of VCT services by adolescents has also been limited, and under-used primarily due to the issues such as lack of confidentiality, cost of services and unfriendly attitudes of clinical staff (UNFPA, 2010). However, it has been observed that utilization of VCT services in conventional health care setting has been limited. This is especially in the case for hard to reach targets such as adolescent. The researcher observed the following problems; that the knowledge of HIV/AIDS and perceptions of risk of acquisition among adolescents has not been clearly established in this group. There is limited information about utilization of voluntary HIV/AIDS counseling and testing services among youths especially the adolescents. Therefore there is need to investigate the level of HIV/AIDS awareness as well as the attitudes towards use of VCT services among the adolescents in this area. It is against this background that the researcher intends to conduct a study on knowledge and attitude

towards risk for acquiring HIV and voluntary counseling and testing among adolescents in senior secondary schools students Enugu. There is no such study in nursing literature in Nigeria. The present study will therefore provide baseline data for any intervention program me and for further studies.

### **Purpose of the Study**

The purpose of the study is to investigate knowledge and attitude towards risk for acquiring HIV/AIDS, and utilization of voluntary counseling and testing (VCT) services among adolescents in senior secondary schools, in Enugu North Local Government Area.

### **Objectives**

The specific objectives for the research are to:

1. Assess the knowledge of HIV/AIDS among adolescent.
2. Determine adolescent perception towards risk of acquiring HIV/AIDS.
3. Determine adolescentsøattitude towards use of VCT services.
4. Determine adolescentø use of voluntary counseling and testing services.
5. Establish the relationship between knowledge and utilizations of voluntary counseling and testing services among adolescents.

### **Research Questions**

1. What is the level of knowledge of HIV/AIDS services among adolescents?
2. What are the adolescent perceptions towards risk of acquiring HIV/AID?
3. What is the attitude of adolescents towards use of VCT services?
4. What is the level of use of VCT services among adolescents?



5. What is the relationship between knowledge and use of VCT services on the prevention of HIV/AIDS among adolescents in senior secondary schools Enugu?

### **Hypothesis**

1. There is no significant difference in the knowledge of HIV/AIDS between male and female students.
2. There is no relationship between adolescent's perceptions towards risk of acquiring HIV/AIDS and use of VCT services.
3. There is no relationship between adolescent's attitude and use of VCT.
4. There is no significant gender difference in the utilization of VCT services among adolescents in senior secondary schools Enugu.
5. There is no significant relationship between knowledge and use of VCT services in the prevention of HIV/AIDS among adolescents in senior secondary schools Enugu state.

### **Significance of the Study**

The findings from the present study will provide information about the adolescent knowledge level; this will help the community health nurses to design health promotion interventions on increased risk of acquiring HIV/AIDS, if the knowledge is poor. This will help in bringing a desired behavioral change in the adolescent risk sexual behaviors, Assessing the knowledge and attitude towards risk of acquiring HIV/AIDS is important as perceptions of being at risk will help to increase the use of voluntary counseling and testing services of the adolescent.

The findings from this study if published, and made available will also provide information which will be of immense benefit to the community health nurses and public health nurses to improve the level of awareness and preventive measures through school health programs,

community mobilization and public health education, it will also provide information for future research and education in adolescents sexual health behaviors.

Non-governmental organization would also find this study useful in designing health education campaign on the benefits of VCT services utilization to individuals at risk particularly, adolescents.

### **Scope of the Study**

The study was delimited to senior secondary schools students in SS1, SS2, and SS3 students in Enugu North Local Government Area where the study was executed. It was also delimited to knowledge and attitude towards risk for acquiring HIV and voluntary counseling and testing among adolescents in senior secondary schools students Enugu.

### **Operational Definition of Terms**

**Adolescents:** means senior secondary schools students in SS1, SS2, SS3 aged 15-24 years in Enugu, Nigeria.

**Perception towards risk of acquiring HIV:** Students' attitude towards perceiving themselves as susceptible to HIV infection. Students were considered to have information about risk if they had been exposed to at least one of the conditions like having sex without condom, having sex with prostitute, having sex with HIV infected person and having injury with HIV infected sharp materials susceptible to HIV infection.

**Attitude towards HIV:** adolescent feeling towards HIV/AIDS. It is an internal condition which is influenced by importance attitude to its human behavior. It varies according to the importance people attach to issues. Consequently, adolescent's attitude towards HIV/AIDS prevention may be guided by the importance attached to it.

**Voluntary counseling and testing (VCT):** is a process by which an individual undergoes counseling to enable him/her to make informed choices about being tested for HIV.

**Attitude towards voluntary counseling and testing:** Adolescents behavior, feelings towards use of VCT.

**Utilizations of voluntary counseling and testing:** is a process by which the adolescents uses HIV/AIDS counseling and screening services to know their status.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

This chapter deals with the review of relevant concepts, theories and empirical studies. The conceptual review will cover the Concepts of Human Immunodeficiency Virus/Acquire Immune Deficiency Syndrome, epidemiology of HIV/AIDS among young people, concept of voluntary counseling and testing, Knowledge of Students on VCT services, attitude towards HIV/AIDS, Utilization of VCT services among Students, Relationship between knowledge and utilization of VCT services, related theory used was Health believe model and Empirical studies on knowledge and utilization of VCT services was also reviewed.

#### **Concept of Human Immunodeficiency Virus/Acquire ImmuneDeficiency Syndrome (HIV/AIDS)**

Human immunodeficiency virus (HIV) infection results from 1 of 2 similar retroviruses (HIV-1 and HIV-2) that destroy CD4+ lymphocytes and impair cell-mediated immunity, increasing risk of certain infections and cancers. Initial infection may cause nonspecific febrile illness. Risk of subsequent manifestations related to immunodeficiency is proportional to the level of CD4+ lymphocytes. HIV can directly damage the brain, gonads, kidneys, and heart, causing cognitive impairment, hypogonadism, renal insufficiency, and cardiomyopathy. Manifestations range from asymptomatic carriage to AIDS, which is defined by serious opportunistic infections or cancers or a CD4 count of  $< 200$ / L. HIV infection can be diagnosed by antibody, nucleic acid (HIV RNA), or antigen (p24) testing. Screening should be routinely offered to all adults and adolescents. Treatment aims to suppress HIV replication by using combinations of 3 or more drugs that inhibit HIV enzymes; treatment can restore immune function in most patients if suppression of replication is sustained

## **EPIDEMIOLOGY OF HIV/AIDS**

HIV is a virus that is transmitted from person to person through the exchange of body fluids such as blood, semen, breast milk and vaginal secretions. Sexual contact is the most common way to spread HIV AIDS, but it can also be transmitted by sharing needles when injecting drugs, or during childbirth and breastfeeding. As HIV/AIDS reproduces, it damages the body's immune system and the body becomes susceptible to illness and infection. There is no known cure for HIV infection (Mark, 2010). Furthermore, Mark, (2010) stresses that, Acquired immune deficiency syndrome (AIDS), is a condition that describes an advanced state of HIV infection. With AIDS, the virus has progressed, causing significant loss of white blood cells (CD4 cells) or any of the cancers or infections that result from immune system damage. Those illnesses and infections are said to be "AIDS-defining" because they mark the onset of AIDS. Like HIV, there is no known cure for AIDS. HIV/AIDS is a global crises, a challenge to human life and dignity with ability to erode social and economic development. It has great influence on stability, life expectancy and economic development. It is a major public health problem with sub-Saharan Africa severely affected by the epidemic (Lancet, 2007). No other disease has captured people's attention in recent times as much as HIV.

In 1987, the World Health Organization (WHO) first recognized the seriousness of the emerging AIDS epidemic. Hubley, (2008) and since then HIV has become a global problem. In 2003 an estimated 5 million people acquired the human immunodeficiency virus (HIV) bringing to 40 million the number of people living with the virus around the world and of these 40 million, 26.6 million people are in Sub-Saharan Africa (MOHSS, 2006). The AIDS pandemic has evolved over time, with four main phases of evolution. In the initial phase, HIV emerged from endemic

rural areas to spread among urban populations at an accelerating rate. In the second phase dissemination occurred and involved definable risk groups.

Behaviors in these risk groups, including sexual Promiscuity and injection drug use, led to the third phase of escalation which occurred through the 1980s. A fourth phase of stabilization has occurred in some regions such as Western Europe, North America, and Australia, where control measures appear to be having a positive effect. However, some regions such as central Africa and Asia continued to experience escalation of the pandemic through the 1990's (CDC, 2007). Although the HIV infection rate in the United States increased rapidly in the 1980's, peaked in the early 1990s, and has declined since, the reservoir of HIV-infected persons developing AIDS and requiring therapy continued to increase through the 1990's and into the 21st century (Fauci, 2009; & CDC, 2007). At the end of the 20th century, over 21 million persons worldwide had died from AIDS, over 34 million were living with HIV infection, and over 95% of HIV infected persons resides in developing nations Gayle, & Hill,( 2008)

Nigeria has the second highest number of people living with HIV in the world after South Africa. UNAIDS (2009) estimated 33.4million people living with HIV in 2008 in the world. Nigeria, with about 2.98million people living with HIV, makes about 9% of the global HIV burden. However, there is gender inequality in the distribution with males accounting for 1.23million and female accounting for1.72million in the HIV estimates and projections for 2008. Women are more affected in the defining feature of the epidemic with policy implications for prevention of mother to child transmissions (Simon, 2006). Hence, addressing gender inequality is crucial in the control of the epidemic (Shisana, Davids, 2008; Ezumah, 2013). Nigeria recorded the first case of acquired immunodeficiency syndrome (AIDS) in 1986 (FMH, 2007). Heterosexual intercourse remains the primary mode of transmission for HIV and accounts for 80-95% of HIV

infections in Nigeria (Adeyi, et al, 2006). Tracking the course of HIV epidemic in Nigeria requires good reporting and surveillance systems.

Thus, Nigeria through the Federal Ministry of Health instituted regular surveillance system using clinic-based and population-based surveys to monitor the epidemic. This is needed to obtain reliable information about HIV prevalence and behaviors associated with HIV transmission or acquisition. These surveys have shown the dynamic nature of HIV epidemic in relation to temporal changes, geographic distribution, magnitude, and modes of transmission. Furthermore, this surveillance system provides opportunities to monitor trend in prevalence, create awareness about early response, inform priority setting for new interventions and measure the effectiveness of public health interventions in the control of the epidemic (Ainsworth, &Teokul., 2008; Jha, , et al., 2011). The national HIV prevalence rate had steadily increased from 1.8% in 1991 to 5.8% in 2001 with a decline to 5.0% in 2003 and 4.4% in 2005 (Sentinel Survey, 2006).

However, there is wide variation in the prevalence rate across age groups, geographic locations and occupations. 15 states have HIV prevalence rates above the national average of 4.4% with Benue State having the highest prevalence rate of 10%, while Jigawa, Ekiti and Oyo have the least prevalence rates of less than 2.1% (UNAIDS Country Report; 2007). Furthermore, a prevalence rate of 5.2% was reported for the age group 15-24 years, with adolescent girls being three times more vulnerable than boys.

Although the national average for HIV prevalence rate is 4.4%, Nigeria ranks third globally in terms of actual number of people living with HIV/AIDS, currently estimated at 3.86 million adults (UNGASS, 2007). The 2007 Integrated Biological Behavioral Surveillance Survey (IBBSS) provides a deeper insight into the behaviors driving the HIV/AIDS epidemic in the general population. These include risky sexual behavior (56.13% of women and men aged 15-49

years reporting having multiple sexual partners), high rate of unsafe sex practices and low condom utilization (35%). The percentage of Most at Risk Persons (MARPs) who are living with the virus is currently estimated at 32.69% for sex workers, 13.46% for Men having Sex with Men (MSM) and 5.62% for Intravenous Drug Users (IDUs). Similarly, the incidence of sexually transmitted infections (STIs) is high, with 60% of all new annual STI infections occurring among young people. This is largely due to high sexual networking and unsafe sex practices.

HIV has the potential of hindering the realization of the Millennium Development Goals (MDG) and its spread promotes poverty, and has unleashed immense suffering on different countries and communities worldwide (UNGASS, 2007). HIV epidemic rose from 1.8% in 1991 and placed at 5.8% in 2001. It is currently at 4.6% in 2008 antenatal survey. Subsequently, the trend reversed and took a downward turn from 5.8% in 2001 to 5% in 2003 and then to 4.4% in 2005 (FMH, 2001; FMH, 2004). In addition, the National HIV prevalence was 3.6% from the National HIV/AIDS and Reproductive Health Survey (NARHS, 2007). NARHS has the advantage of being a population based survey. NARHS (2007) report shows 78.6% of males and 78.5% of females accepted to be tested among the survey participants. Likewise, among the male participants, HIV testing coverage was higher in the rural areas (81%) than the urban area (75%). While among the female participants, HIV testing coverage in the rural areas was (75%) compared to the urban areas (78%). Similarly, North East zone had the highest testing coverage (85%) and age group 15-24yrs (80%). At the same time, the report shows that more females (4.0%) were infected than males (3.2%). Prevalence was slightly higher in urban areas (3.8%) compared to rural areas (3.5%). North Central Nigeria has the highest prevalence of 5.7% with South East having the least 2.6%. Youth (ages 15-24yrs) had a prevalence of 2.4% which was about 67% of the national HIV prevalence of 3.6% in the survey which buttresses the fact that



youths are important risk group in HIV epidemic (AIDS, 2008). In both low and high prevalence setting, HIV and AIDS affects key macro-sectors of the economy, such as education, agriculture and industry and in the process; places obstacles on human development. In fact, it has the potential to destroy gains made in education by government in terms of access Veronica, (2007).

### **Epidemiology of HIV among Adolescents**

The World Health Organization estimates that 10.3 million youth aged 15-24 years are living with HIV/AIDS (most without knowing that they are infected) and half of all new infections are occurring among young people on a global basis. Smriti and [Marfatia](#) (2014) Each year, about 4 million people younger than 20 years are diagnosed with STIs including herpes, human papillomavirus (HPV), chlamydia, gonorrhea, and the HIV.

Young people aged between 15 and 24 years account for over 50% of all HIV infections occurring worldwide (UNAIDS 2010). Preventing HIV among adolescents is particularly urgent in sub-Saharan Africa where, in many countries, youths comprise over 30% of the population and general HIV prevalence rates are high (UNAIDS, 2011). Several cultural, biological and environmental factors place young people; especially adolescents aged 10 to 19, at an increased risk. Adolescents often begin their sexual lives at an early age (UNAIDS 2001:33). HIV prevalence rates among youth reflect the realities of these risks. Altogether, HIV rates are high among youth with HIV infected females being disproportionately affected, with a ratio to infected males in excess of 4:1 in some populations (UNAIDS 2011).

Young people between the ages of 15 and 24 years are the most threatened globally as they account for 45% of all new cases of HIV worldwide. Lack of knowledge and information often prevents adolescents from making well-informed decisions about their decisions about their situation and prevents them from finding ways out of abusive or exploitative situations.

Adolescents who are unaware of their rights or are unaware of the potential for exploitation and violence are at risk for abuse. They need information and knowledge to protect them (Adolescent Development and Participation Unit Program Division 2006).

HIV prevalence was found to be particularly high among orphaned adolescents Jerker & Nicholas (2009). Higher rates of sexual behavior were found among orphans than among other children (Jerker & Nicholas 2009). There are many reasons why orphan may be sexually more vulnerable than other children. Being orphaned has been associated with psychological stress including low perceived self-efficacy, feelings of lack of control over sexual health and riskier sexual behaviors. There is also more disaggregated data and a wealth of evidence that suggest relative poverty in the context of inequality and urbanization can increase riskier behaviors and raise the odds of contracting HIV ó particularly for young people (Jerker & Nicholas 2009)

### **Transmission of HIV/AIDS**

Transmission of HIV can occur from male to male, male to female, and female to male. Female to female transmission remains extremely rare, though women with same sex contact are also often bisexual and have additional risk factors for HIV infection (Bevier, et al., 2011). Even a partial modification of sexual behavior practices may help retard the rate and extent of HIV transmission. Amongst males ø having sex with males in the U.S. in the 1990's, the prevalence of HIV infection remained high at 7.2%, and the prevalence of unprotected anal intercourse over a prior 6 month period was 41% (Valleroy, et al., 2009).

The transmission of HIV in definable risk groups allows for control measures to be taken to prevent the spread of AIDS. Since HIV is primarily spread as a sexually transmissible disease, then educational efforts must be aimed at sexually active persons and must be explicit regarding the behaviors that lead to the spread of HIV. A significant number of both boys and girls become

sexually active as teenagers and must be included in prevention strategies. Given that the level of promiscuity will often be difficult to modify within a population, then educational campaigns are best focused upon the use of barrier precautions, particularly condom use. Sexual activity does not appear to increase with condom use Guttmacher, et al., (2007). All sexually active persons with more than one sexual partner, or whose partner is a member of a risk group for AIDS, Equally, Thore and Katrin, (2006) said that, there is a risk of HIV transmission if an HIV-negative person comes into contact with the blood, semen or vaginal fluids of an HIV-positive person. Furthermore, they stated that exposure of intact skin to HIV contaminated body fluids (e.g. blood) is not sufficient to transfer the virus. Transmission is possible if HIV-containing material enters the body by: accidental needle stick injury or incision by surgical instruments exposure of damaged skin or mucosal membranes unprotected sexual intercourse with an HIV-infected person. IDU sharing needle or equipment transfusion of HIV-contaminated blood or blood products

### **Prevention of HIV/AIDS**

To beat the disease, an intervention from three levels is needed, namely Prevention intervention, care and support intervention, and voluntary counseling and testing intervention (HSRC, 2006). The prevention intervention concerns strategies to prevent people from contracting HIV, such as encouraging people to wear condoms to abstain and to remain with one sexual partner (Veronica, 2007). The cure of AIDS is still to be discovered. As such, the focus has been placed on Prevention and treatment program as solutions to controlling the disease. Antiretroviral treatments are now available to those in need. Trail for the HIV vaccine are being carried out around the globe to prevent future infections. There seems to be more hope placed on the vaccine for controlling the disease than on the cure. A solution to controlling HIV should be appropriate

or affordable for the poor; and reliance on the development of a vaccine may not be the answer (Veronica, 2007).

HIV prevention efforts have been outpaced by the HIV/AIDS epidemic, with a rising trend of HIV incidence in most countries. Should the current trends continue, most countries in the African Region are unlikely to achieve Millennium Development Goal No 6 (MDG, 2006). It is therefore imperative to reshape strategies of prevention, identify measures to quickly scale up successful interventions and highlight what should be done differently.

### **Adolescents HIV Risk behavior**

Adolescence (15-24 years) is a phase of physical growth and development accompanied by sexual maturation, often leading to intimate relationships. Adolescent HIV/AIDS is a separate epidemic and needs to be handled and managed separately from adult HIV. The adolescents can be subdivided into student, slum and street youth; street adolescents being most vulnerable to HIV/AIDS. Among various risk factors and situations for adolescents contracting HIV virus are adolescent sex workers, child trafficking, child labor, migrant population, childhood sexual abuse, coercive sex with an older person and biologic (immature reproductive tract) as well as psychological vulnerability. The most common mode of transmission is heterosexual, yet increasing number of prenatally infected children are entering adolescence. This is due to bimodal progression (rapid and slow progresses) among the vertically infected children.

Clinically, the HIV infected adolescents present as physically stunted individuals, with delayed puberty and adrenarche. Mental illness and substance abuse are important co-morbidities. The disclosure and declaration of HIV status to self and family is challenging and guilt in sexually infected adolescents and tendency to blame parents if vertically affected need special consideration and proper counseling. Serodiscordance of the twins and difference in disease

progression of seroconcordant twins are added causes of emotional trauma. Treatment related issues revolve around the when and what of initiation of ART; the choice of anti-retroviral and their dosages; issues related to long term ADRs; sense of disinhibition following ART commencement; adherence and resistance.

### **The Concept of Voluntary Counseling Testing (VCT)**

Publicly funded HIV antibody counseling and testing service were initiated in USA in March 1985 to provide an alternative to the donation of blood as a means for 25 high-risk persons to determine their HIV status. At that time, little was known about the prevalence and natural history of HIV infection. Counseling was considered as an essential adjunct to HIV testing. The counseling addressed the accuracy and consequence of test and was designed to help persons interpret the meaning of positive and negative results. HIV counseling was based on the recognition that learning HIV status may be difficult for certain clients (U.S. Department of Health & Human Service, 2008)

In 1987, with increased understanding about the scope and severity of the HIV epidemic and the predictive value of positive test, HIV counseling and testing were expanded. Persons seeking care for sexually transmitted infections, family planning, childbirth, or substance abuse were counseled and tested in an attempt to reduce their risk for HIV transmission. "The primary public health purposes of counseling and testing are to help uninfected individuals initiate and sustain behavioral changes that reduce their risk of becoming infected and to assist infected individuals in avoiding infecting others" (U.S. Department of Health & Human Service, 2008)

According to Maria, (2009) the growing awareness of HIV infection and AIDS and the recent availability of antiretroviral therapy (ART), the scope of and reasons for Voluntary Counseling and HIV Testing have broadened. Furthermore, Maria, (2009) defined VCT as the process by

which an individual undergoes counseling to enable her/him to make an informed decision about being tested for HIV, assess their personal risk for HIV and develop a risk reduction strategy. Similarly, Family Health International, (2010) stated that, Voluntary counseling and testing (VCT) for HIV is an essential link between HIV prevention and HIV care and support. VCT promotes and sustains behavior change, and links with interventions to prevent mother-to-child transmission (PMTCT), prevent sexually transmitted infections (STIs), and prevent as well as treat tuberculosis (TB) and other opportunistic infections (OIs). VCT also facilitates early referral to comprehensive clinical and community-based prevention, care and support services, including access to antiretroviral therapy (ART). VCT improves quality of life and may play a pivotal role in reducing stigma.

HIV voluntary Counseling and testing (VCT) have been shown to have a role in both HIV prevention and, for people with HIV infection, as an entry point for care. VCT provides people with an opportunity to learn and accept their HIV status in a confidential environment with counseling and referral for ongoing emotional support and medical care. People who have been tested seropositive can benefit from earlier appropriate medical care and interventions to treat and or prevent HIV-associated illnesses. Pregnant women who are aware of their seropositive status can prevent transmission to their infants (WHO, 2012).

Knowledge of HIV aerostats can also help people to make decisions to protect themselves and their sexual partners from infection. A recent study has indicated that VCT may be a relatively cost effective intervention for the prevention of HIV transmission (UNAIDS, 2010). VCT is an effective secondary prevention tool for people living with HIV/AIDS (Solomon, et al., 2008). These researchers also found it more effective in the prevention of HIV/AIDS amongst HIV-positive people than HIV-negative individuals, especially when it targets both partners.

Therefore, VCT services are essential components of HIV prevention and care programs. However, initially, many people were reluctant to be tested if care and treatment was not offered (Stringer, et al., 2006). The social conceptualization and representation of HIV and HIV testing also have influence on HIV test uptake rates. For example, the association of HIV with immediate death and discrimination, belief that a person is outside the category of risk, lack of awareness or knowledge about rates in one's community, fear of being labeled and stigmatized by the significant others, perception of the consequences of living with HIV, user friendliness of testing sites, symptom driven health seeking, lack of knowledge about available treatment are some factors that have been alleged to deter people from HIV testing (MOHSS,2006).

Voluntary counseling and testing (VCT) was introduced in the early 1990s in most countries as strategies to curb the spread of HIV/AIDS. VCT aims to provide care, support and treatment to people already living with HIV (UNAIDS/WHO; 2007; UNAIDS/WHO, 2009) It allows people to learn their HIV status and be counseled about its implications (UNAIDS/WHO 2009).

HIV voluntary counseling and testing (VCT) programs have demonstrated their ability to increase safe sexual behavior and use of care and support services among adults. Counseling, both before and after the test, and a risk reduction plan are the key features that distinguish VCT from other HIV testing services. VCT has become a widely advocated HIV/AIDS prevention strategy among adults. Most clients of VCT services are in their mid- to late twenties (Coates et al. 2006; Allen, et al., 2007). Sixty percent of all new HIV infections in sub-Saharan Africa, however, occur among young people between the ages of 10 to 24 (UNAIDS, 2008)

In general VCT can be considered as an entry point to prevention and care, Medical care, for prevention of mother to child transmission of HIV infection (PMCTC), for ongoing emotional and spiritual care and social support (UNAIDS, 2000). Hence, the need for expanding VCT

service and stimulating its utilization is outlined as a priority 28 intervention area and as an entry point for HIV prevention, through creating more personal awareness, and care (NAC, 2009).

However, Counseling services have been slow to gain acceptance in many countries, especially where HIV is highly stigmatized and access to services and support for HIV infected individuals is limited. Indeed, HIV testing has often been used as a diagnostic tool to confirm symptomatic AIDS. But a number of studies attest to the value of counseling and voluntary HIV testing in largely healthy populations. These services have been shown to contribute to an increase in safe behavior at the individual level, and are likely also to reduce the ignorance, fear and stigma associated with HIV infection in the population at large (UNAIDS, 2009) Survey results show that youth have a strong interest in knowing about their HIV status. More than 75 percent of untested youth in Kenya and about 90 percent in Uganda indicates that they would like to be tested in the future. Furthermore, of those youth who have already had an HIV test, a similarly large majority (74 percent in Kenya, 84 percent in Uganda) indicates that they intend to repeat the test (Veronica, 2007).

VCT gives access to the prevention, treatment and management of HIV related illnesses, and can also lead to changes in behavior (Bagga, 2008).

### **Benefits of HIV Counseling and Testing**

Knowledge of HIV status helps to reduce the risk of transmitting the virus to others, Individual or couple-based counseling helps to identify and reduce risky behaviors; counseling also helps to give information about HIV transmission process, ways individual or couple can adopt HIV prevention strategies. Counseling gives Access to correct misconceptions and education on correctly and consistently using condoms and abstinence. HIV preventive counseling brings Linkages to HIV care and treatment. Linkages to other relevant services, such as sexually



transmitted infection treatment, family planning, and prevention of mother-to-child transmission programs, Planning for the future UNAIDS and WHO, (2008).

### **The Process of Counseling and Testing**

HIV counseling has been defined as a confidential dialogue between a client and a care provider aimed at enabling the client to cope with stress and to take personal decisions related to HIV/AIDS (WHO, 2009)

If testing is appropriate, your counselor or doctor should, describe the test and how it is done, Explain AIDS and the ways HIV infection is spread, Discuss ways to prevent the spread of HIV, explain the confidentiality of the test results, Discuss the meaning of possible test results, Ask what impact client think the test result will have on them, Address the question of whom you might tell about your result and Discuss the importance of telling your sex and/or drug-using partner(s) if the result indicates HIV infection.

### **Voluntary Counseling and Testing In Nigeria**

The first HIV/AIDS hotline began on the fourteenth of February, 2000 with a private line managed by youth empowerment foundation, based on the best practices documented from this service, NACA and Celtel (formally V-mobile) expanded the services to a toll free HIV/AIDS and SRH hotline in 2005. Four toll free lines were provided by the telecommunication company to serve each region in the country. Youth empowerment foundation (Lagos); Education as a vaccine against AIDS in Nigeria (Kano) and ASCOPANY (Cross River) were selected to manage the hotlines. ([www.evanigeria.Org](http://www.evanigeria.Org))

The goal of the hotline service is to increase access to accurate and reliable HIV/AIDS and SRH information counseling for the general public. The lines and equipment were installed and full operation of the service began in June, 2005 (NACA, 2012). HIV counseling and testing (HCT)

has been identified as a critical intervention tool in HIV prevention and care strategies. HCT provides an opportunity for one to know his/her status after receiving enough information to make the decision. A number of studies (Allen, et, al, 2007) have shown that HCT has been useful in facilitating and sustaining behavior change.

However, it has been observed that HCT has been observed that the utilization of HCT services in conventional health care setting has been limited. This is especially the case for hard to reach targets such as young people (especially out- of -school youth), migrant fishermen and farmers, nomadic, long distant truck drivers, and street based commercial sex workers. The use of HCT services by young people has also been limited, primarily due to the issues around lack of confidentiality, cost of services and unfriendly attitudes of clinical staff (UNFPA, 2006)

HIV counseling and testing is crucial in reducing HIV transmission in those who test negative and in those who test positive by promoting the appropriate contraception and the practice of safer sex, early management of opportunistic infections and STI, referral to support groups and acceptance of status (FHI, 2007). VCT is a gateway to prevention and care (WHO/UNAIDS 2009), and is a critical first step in identifying people who are HIV positive, so as to provide them with HIV treatment, care and support services (Van Dyk,2007).

Veronica (2007) asserted that, in subscribing to the principal that knowing one's HIV/AIDS status is the first step towards combating the pandemic, Iyobeke (2007) took an HIV/AIDS test at the AIDS consultancy center at the Pretoria campus as part of the center's know your status campaign that ran from 31st July to 4th August, 2006. He encouraged all University staff and students to follow his example. According to Iyobeka, (2007) "HIV testing has role in both HIV prevention and, for those infected.

## **Knowledge of Students on VCT Services**

Twenty-five years into the HIV epidemic, more than 80 percent of people living with HIV in low- and middle-income countries do not know they are HIV positive. (UNAIDS and WHO, 2008) VCT has encouraged some people to change their lifestyle and has increased their knowledge about the risk and the consequences of their choices. There was a decrease in the rates of unprotected sex among men and women who participated in VCT in Kenya, Tanzania and Trinidad (UNAIDS/WHO 2008; Voluntary HIV 1 counseling and testing Efficacy study Group, 2007). This study examined a random sample of 3120 individuals and 586 couples. The study reported a decrease in unprotected sexual behavior with both steady and casual partners following a VCT intervention programme.

A study in Nigeria found that the use of VCT services by young people led to an increase in the use of condoms and a decrease in the prevalence of sexually transmitted infections Boswe&Baggaley, (2008). Knowing one's HIV status also provides essential information that will enable both HIV positive and HIV negative persons to plan for their future and that of their family. VCT can help to connect clients to services such as hospice care, legal services and support for orphans and vulnerable children, as well as 33 antiretroviral treatment (WHO/UNAIDS 2003). VCT also help HIV negative people make informed choices when engaging in sexual intercourse, such as having a single partner or using a condom.

A national survey by the Reproductive Health Research Unit (2007) in partnership with love life reported that youth people have knowledge about HIV/AIDS and ways to avoid being infected. More than two thirds of the youth in South Africa were reported to have changed their sexual behavior because of awareness of HIV/AIDS, and increased condom usage (Reproductive Health

Research Unit, 2006). However, there was a concern that the majority of young people, including those infected with HIV, underestimate their risk for contracting the disease.

Among Nigerian youth, studies point to the fact that awareness of HIV/AIDS has not translated to behavioral change. For example, Adedimeji (2008) observes a 100 percent HIV/AIDS awareness rate among undergraduates in a Nigerian University, yet only five percent of his respondents reported using condoms during casual sexual intercourse with persons they were meeting for the first time. This observation becomes more worrisome when situated within the social practice of possession of multiple sexual partners among the youth in the universities. In one of the states in which our study took place, an earlier study reported that 77 percent of the study sample had initiated sex, and among them 27 percent had multiple sexual partners Omoregie, (2010). Anugwom (2013) has similarly noted, with disappointment, that as much as 40 percent of his respondents who were also undergraduates did not care to protect themselves against being infected with HIV virus during sexual encounters. Indeed, Anugwom observes condoms were used more for the purpose of avoiding pregnancies, and sexually transmitted infections (other than HIV) than for the purposes of avoiding HIV infection.

However, detailed explorations of why awareness has not matched behavioral change remains to be conducted. Why do educated youth who are supposed to know and to champion the cause of HIV/AIDS education and enlightenment turn out to ignore the message? Could this attitude be related to their self-perception of risk of getting infected with the disease, since they already are aware that the disease exists? (Adedimeji,2008; Anugwom, 2007). How do they perceive their susceptibility to being infected with the virus? What are the contextual social and economic factors that shape their adoption of behavioral change vis-à-vis their self-perception of exposure to the infection? How do they perceive and practice HIV testing (voluntary counseling and

testing) in view of their self-perception of risk of infection? What contextual factors are important in mediating their attitude and practice of care seeking for HIV testing against the backdrop of their self-perception of risk of infection?

In terms of HIV counseling, which is an important aspect of VCT, Nkosi, (2011) reports that adult black women living with HIV/AIDS perceive HIV/AIDS counseling to be beneficial? It provides a safe space in which people can receive emotional support and share their fears and concerns. HIV/AIDS counseling also gives people knowledge about HIV/AIDS and educates them on a healthy lifestyle (Nkosi, 2011).

According to Cornelissen, (2008) the umbrella organization for tertiary education in South Africa, Higher Education South Africa, reported that students have knowledge about the cause and modes of transmission of HIV/AIDS, and further pointed to an abundance of international research on HIV/AIDS at higher education on knowledge, attitudes and practice (KAP) amongst students. Additional studies were undertaken by researchers across institutions to determine the KAP of students regarding, HIV/AIDS, However, Cornelissen, (2008) cited a paucity of research on testing the perceptions of different role players in HIV, and particularly the youth. Uys, (2008) highlights the act of 35 researches on the perceptions, attitudes and awareness of undergraduate students at tertiary institutions. This is a cause for concern, as fresh from high school and away from the care and support of parents; these young people have a need for independence and are venturing into the unknown work seeking experience, yet are often without the wisdom to make wise lifestyle decisions.

Ibe, (2009) also examined the knowledge, attitude and prevention practices of 285 first year students of Port Harcourt in Nigeria. He administered structured questionnaires with the assistance of two trained interviewers. The findings indicate partial knowledge of the definitions

of HIV/AIDS, modes of transmission, prevention and cure. Furthermore, Ibe,(2009) observed that there is strong need of HIV/AIDS prevention at tertiary level through education, counseling and testing, also recommends that HIV testing with pre and post counseling be subsidized or made free for youths.

In addition to the above findings, the following points, highlighted by Uys, (2008) also supported the choice of young people, and particularly students, as the focus of this study. Students are generally knowledgeable about HIV/AIDS and know how to protect themselves, although students know that the use of condoms could protect them from Contracting HIV/AIDS, sexually active students tend to have a negative attitude towards them. Students experience peer pressure to engage in sexual activities and Students tend to engage in casual sex especially when under the influence of alcohol. Also Students tend to believe that they are not vulnerable of contracting HIV/AIDS.

According to Uys, (2008) there is abundance of knowledge among students at tertiary institutions about HIV/AIDS and how it is transmitted. Although students know how to protect themselves against HIV/AIDS, they still put themselves at risk because they experience pressure from their peers to use alcohol and to engage in sexual activities. Despite these dilemmas, some students accept responsibility for their lives and for protecting themselves against HIV/AIDS by finding out their HIV status, aim of this study was to access these students and specifically those who have gone for voluntary counseling and testing, to describe and understand their experiences.

In similar study on perception of High school students towards voluntary HIV counseling and testing, using Health Belief model in Butajira, Abebe&Mitikie, (2009), reported that the majority of students have heard about VCT and revealed willingness to undergo VCT. Willingness for VCT was affected by age, education and previous sexual experience. High perceived

susceptibility and high perceived barrier were associated with low willingness to undergo VCT. On the other hand, students with high perceived benefits revealed better willingness to undergo VCT.

Njagi and Macharaj, (2008) conducted a study on perceptions of VCT among students at tertiary institution in Kwazuhina. A survey questionnaire with open and closed ended questions was used to gather information. The findings indicate a high knowledge of VCT services among students, with peers serving as the main source of information. Other students reported hearing about VCT in the media. Those students who use VCT perceived it as helpful because they were treated with respect and had enough time to ask questions. Students were satisfied with the way the counselors answered their questions. The students who were not satisfied with VCT were more concerned about a lack of confidentiality, especially when they made appointments, and were concerned about lack of privacy in the waiting room. Students also feared being recognized by other students, which may result in them being discriminated against and stigmatized. It is a concern that only 14% of the sample of 200 students had undergone VCT, which supports other researchers' concerns that VCT is underutilized.

### **Attitudes towards testing for HIV among adolescents**

According to Alemu (2008) VHCT is an important tool that allows young people to evaluate their behavior and the consequences of that behavior. However, adolescents do not usually use the VHCT services for fear of being stigmatized. Deacon, Stephney and Prosalendis (2014) argue that HIV testing may be perceived as a waste of time by adolescents hence they may not use the service.

## **Utilization of Voluntary Counseling and Testing (VCT) Services by secondary school students**

Studies in both developed and developing countries have found that VCT for HIV/AIDS can be an effective intervention in the fight against the disease. When treatment is available, VCT can serve as an important entry point into the medical system, directing individuals to the appropriate resources for management of HIV/AIDS and its opportunistic infections UNAIDS, (2007). Even in the absence of treatment options, VCT can provide an opportunity for learning one's sero-status in order to plan for the future or to give peace of mind (Sweat, et al., 2007; Van de Perre, (2008). Voluntary counseling and testing interactions can also serve as important conduits of health information and promotion, encouraging changes in risky behaviors for those not infected and modifications in behavior for discordant couples and those already infected Allen, et al.(2007) However, have also shown that substantial barriers exist which inhibit the uptake of VCT. For many people, the motivation to use VCT is low because, correctly or incorrectly, they do not view themselves as being at risk for HIV/AIDS,

Importantly, the perceived benefits of VCT may also be low when treatment is not readily available or is unaffordable, as has been the case in much of the afflicted areas of Africa (Baggaley, et al., 2006; Voluntary HIV-1 Counseling and Testing Efficacy Study Group, 2008) 38 stigma surrounding HIV/AIDS and people living with HIV/AIDS serves as an additional barrier, affecting the acceptability of testing Kipp, et al., (2006) and the extent of social support (Stein, &Nyamathi, 2008). Many people fear the psychosocial consequences of testing positive for HIV/AIDS, particularly when it may lead to loss of social status, to discrimination (Brown, et al., 2009; Buwalda, Parker&Aggleton, 2010; UNAIDS, 2010), to domestic violence or even to abandonment (Maman et al., 2008).



Many studies have examined even lamented the lack of access and poor quality of VCT services in developing countries, noting that testing has often been done primarily through antenatal services rather than general health services (UNAIDS, 2006). Studies in India (Abraham, et al., 2008), South Africa Viljoen, et al., (2008) and the Democratic Republic of Congo Denolf, et al., (2009) have documented the shortcomings of available VCT services and the likely effects on uptake of VCT services. Often the quality of interactions between clients and counselors particularly inappropriate confidentiality safeguards has limited the acceptability of VCT and reduced the likelihood that People will return for results (Coovadia, 2008). Few of the available studies, however, have sought to quantify these effects on rates of utilization of VCT services.

Other studies have highlighted lack of access to testing services with trained counselors and to treatment for HIV-infected persons. One study noted inhibiting factors such as shortages of counselors, long lines, lack of privacy and lack of follow-up support following diagnosis (van Dyk and van Dyk,( 2007). Other researchers have highlighted the level of training and availability of counselors (Coovadia, 2008).

The availability of testing and counseling services is very uneven, and only a small proportion of people living in developing countries know their status. In most resource-constrained settings with high HIV prevalence, investment in testing and 39 counseling services is inadequate, medical and laboratory infrastructures remain insufficient, and trained staffs are scarce. Furthermore, in areas where testing and counseling services are available, the uptake of these services has remained low, because of widespread denial, stigma and discrimination. Until recently, many people believed there were few benefits to knowing their serostatus. This is now changing, due to improved access to antiretroviral drugs for treatment and for use in preventing mother-to child transmission of HIV. Demand for HIV testing and counseling services is now

increasing in many places. The provision of these services will need to be scaled up dramatically in the future in order to reach the goals for prevention and care that have been set at the 2001 United Nations General Assembly Special Session on HIV/AIDS.

The number of sites providing HIV counseling and testing (HCT) has been on the increase. As at December 2008, there were 908 functional HCT sites across the country (Nigeria) providing counseling and testing services compared with 864 at the end of 2007 (NACA, 2009). Closely linked to this is an increased expressed desire to get an HIV testing; 72% of respondents in the 2007 National HIV/AIDS and Reproductive Health Survey (NARHS) expressed a desire to get tested. This is much higher than 43% reported in the 2006 NARHS survey. The total number of people who were counseled, tested and received their results also rose from 2,350,000 in December, 2007 to 3,371,220 at the end of 2008 (NACA, 2009). Although the number of functional sites providing HCT has increased remarkably over the years, it is still grossly inadequate to meet the needs of the Nigerian populace.

Most services are still facility based and mostly located at the tertiary and secondary facility levels; there is poor access to services especially at the community and hard to reach areas and insufficient targeting of HCT to most-at-risk peoples (MARPs), it is also important to note that many Nigerians are unaware of where they can access VCT services. The result of NARHS shows that there had been very little change in the proportion of Nigerians who knew where HCT can be obtained: from 54.2% for men and 43.2% for women in 2003 to 55.7% for men and 48.9% for women in 2007 (NRR, 2008)

The uptake of HIV VCT is still low among the Nigerian population. Although the proportion of people who had tested had doubled between 2003 and 2007, as reported by NARHS, the overall figure is still very low. The proportion of people tested increased from 6.6% to 14.4% for

females, and from 7.7% to 14.7% for males. The very low figure in terms of the proportions of Nigerians who had ever tested for HIV contrasts sharply with the spirit of the policy where a target of ensuring that "By 2010, at least 50% of Nigerians have ready access to quality voluntary confidential counseling and testing services". The achievement also falls far below the universal access target of reaching at least 80% of sexually active adults with VCT services (NACA, 2009).

In related studies, several studies have shown that young people are generally not motivated to attend VCT services and that there is a range of barriers ranging from 41 availability of services, worries about confidentiality in accurate risk perceptions, fear of being stigmatized and perceptions of the consequences of living with HIV (East African Journal of public health VO.5 No.2 2008), and Students from lay private schools were more likely to have used VCT services than their peers from other schools. In mission schools talking about sex is taboo since premarital sex is forbidden by Christianity, so we would expect a very low rate of VCT utilization among the students because anyone going for VCT is considered sexually active (Haddison, 2011).

Sarah, et al. (2007) revealed that respondents who had one or two sexual partners had low self-perception of risk of getting infected with HIV virus, despite the fact that they might later change the partners. This low self-perception of risk is also associated with the tendency to ignore safer sex (condom use) as a risk-reduction measure, and with the tendency not to seek VCT services. Respondents who had multiple sexual partners (more than two) had high self-perception of risk of HIV infection. But this neither led them to adopt risk-reduction measures against HIV infection nor increase their tendency to seek VCT services. Therefore, self-perception as a single factor is not enough to utilize VCT services. Economic and financial constraints, gender issues,

fear of stigmatization and discrimination are also important factors and may actually attenuate any effects of self-perception on seeking VCT services.

Nkhochi, (2006) explored the experience of prisoners in Atteridgeville of HIV/AIDS pre-and post-test counseling. The findings of the study are that undergoing on HIV/AIDS test without pre-and post-test counseling leaves clients feeling psychologically distressed. The study recommends therefore that pre-and post-test counseling be administered to every individual reporting for an HIV test.

Diedericks, (2007) explored and described the perceptions of voluntary counseling and testing among first year students at the University of Port Elizabeth. The findings reveal that students would use VCT for testing, HIV information, counseling, education and skills to protect themselves and others. Further, many students would use VCT services on campus for convenience and because it is free, although others indicated that they would not use campus-based VCT services because they perceive confidentiality, professionalism, hygiene and trustworthiness to be compromised in a campus setting. Generally, the students perceived VCT to be an important prevention strategy and confirmed VCT that could cause students to change their risky sexual behavior.

Van Dyk and Van Dyk, (2007) found that 33% of their participants (40% black and 19% white) preferred going to an unknown clinic for VCT because they did not trust health workers to be discreet, because of confidentiality reasons, and for fear of prejudice and rejection. A disturbing finding was that 79% of previously tested subjects did not receive any form of counseling. Counseling was generally experienced as positive and clients expected counselors to be empathetic, discreet, non-judgmental, supportive and directive Van Dyk & Van Dyk, (2007).

## **Relationship between Knowledge and Utilization of VCT Services**

It is known that among the general population, adolescents and youth are most vulnerable because it is within this age group that high-risk behaviors are initiated (Banerjee & Baer, 2006). In Nigeria, the undergraduate period is a time when such high-risk behaviors are escalated, given that most of the undergraduates are within the youth age group or slightly older who are sexually more active than the general population (Anugwom, 2007). According to the Federal Ministry of Health (2001b), young people (to which most undergraduates belong) have the highest rate of HIV infection (8.1 percent in 1999). However, the prevalence rate of HIV infection specifically among undergraduates in Nigeria remains unknown. The paucity of studies (data) on this is also evident in the case of perceptions of this group of people to own susceptibility to the risk of HIV infection in relation to their sexual practices (sexual risk behavior) and in relation to seeking and utilization of voluntary counseling and testing services. Volitional sexual behavior is of paramount importance in the transmission of HIV virus. Therefore, how a person views own vulnerability to getting infected with the virus is crucial in adopting sexual behavior that will minimize the vulnerability (Ward, et al., 2010; cited in Anugwom, (2013). It may also affect his seeking to know his HIV status through HIV testing. Knowledge of whether or not one is infected may in turn help to strengthen risk averse or risk-reduction behavior. Indeed, it has been argued that this becomes more meaningful and more effective when people know their HIV status. Following this, voluntary counseling and testing has been defined as the process by which an individual undergoes confidential counseling to make informed choice about knowing his or her HIV status and to take appropriate action (UNFPA, 2006). In developed countries like Britain, such services have begun to attract utilization by target groups (McGarrigle, Et al, 2006). Among Nigerian youth, studies point to the fact that awareness of HIV/AIDS has not translated

to behavioral change. For example, Adedimeji, (2008) observes a 100 percent HIV/AIDS awareness rate among undergraduates in a Nigerian University, yet only five percent of his respondents reported using condoms during casual sexual intercourse with persons they were meeting for the first time. This observation becomes more worrisome when situated within the social practice of possession of multiple sexual partners among the youth in the universities.

Sarah, et al. (2007) conducted a study to investigate the perceptions of Nigerian undergraduates of own exposure to infection with HIV virus on the basis of their sexual behaviour; the relationship between their self-perception of exposure to HIV infection and behavioural risk-reduction on the one hand; and the relationship between self-perception of exposure to HIV infection and seeking voluntary counseling and testing (VCT) services. In one of the states in which the study took place, an earlier study reported that 77 percent of the study sample had initiated sex, and among them 27 percent had multiple sexual partners Omoregie, (2010). Anugwom (2013) has similarly noted, with disappointment, that as much as 40 percent of his respondents who were also 45 undergraduates did not care to protect themselves against being infected with HIV virus during sexual encounters. Indeed, Anugwom (2013) observes condoms were used more for the purpose of avoiding pregnancies, and sexually transmitted infections (other than HIV) than for the purposes of avoiding HIV infection. However, detailed explorations of why awareness has not matched behavioral change remains to be conducted. Why do educated youth who are supposed to know and to champion the cause of HIV/AIDS education and enlightenment turn out to ignore the message? Could this attitude be related to their self-perception of risk of getting infected with the disease, since they already are aware that the disease exists? (Adedimeji, 2008; Anugwom, 2013) How do they perceive their susceptibility to being infected with the virus? What are the contextual social and economic factors that shape

their adoption of behavioral change vis-à-vis their self- perception of exposure to the infection? How do they perceive and practice HIV testing (voluntary counseling and testing) in view of their self-perception of risk of infection? What contextual factors are important in mediating their attitude and practice of care seeking for HIV testing against the backdrop of their self-perception of risk of infection? These questions were explored through qualitative methodological approach so as to provide an understanding of the lapses in the translation of awareness into positive behavioral change, which is important for the success of any interventions, approaches, policies and programmes geared towards HIV/AIDS prevention and control in Nigeria and other developing countries.

## **Theoretical Review**

### **Health Belief Model (HBM)**

The Health Belief Model consists of variables that interrelate; these variable are, perceived susceptibility, perceived seriousness, perceived threat, perceived benefits, perceived barriers and cue to action have each been given their own brief explanation.

**Perceived Susceptibility:** The belief that one is at risk of an illness is subjective. Risk or susceptibility is one of the powerful perceptions in prompting people to adopt healthier behaviors. Personal To one extreme is an individual who is in full denial of any risk while the other an individual who feels danger is certain. The area between contains those who admit the statistical possibility of contracting an illness, but do not fully believe they will (Rosenstock, 1966,).

**Perceived Seriousness.** The perception of the consequences of a negative health condition is also subjective. Beliefs of an illness causing pain, debilitation, social stigma or death are examples of seriousness perceived.

**Perceived Benefits of Taking Action:** Deciding on a course of action is shaped by the options accessible to the individual and the belief in their effectiveness. Action is thus dependent on having at least one course of action to prevent an illness from occurring while believing it will produce acceptable results.

**Barriers of Taking Action.** Despite a belief being established that a particular course of action may reduce a health threat, indecision may still take place. If readiness is low and negative aspects of the course of action are viewed as high, barriers are constructed preventing action.

**Cues to Action:** A stimulus that can trigger (Rosenstock, 1966) appropriate health behavior. This may be internal such as physical discomfort, or external such as a message communicating the seriousness of a disease. The external is most relevant to communications as it often relies on media and interpersonal interaction

### **Application of theory to the present study**

**Perceived susceptibility ;** Personal risk or susceptibility is one of the powerful perception in prompting people to adopt healthier behaviors, the greater the likelihood of engaging in behaviors to decrease risk, This is what prompts adolescents to use condom, total abstinence in effort to decrease susceptibility to HIV infections, it is only logical that when adolescence believe they are at risk for HIV/AIDS disease, they will be more likely to do something to prevent the disease from occurring. Unfortunately, the opposite also occurs, when adolescent believe they are not at risk or have low risk of susceptibility, unhealthy behaviors tends to result.

**Perceived seriousness:** perceived seriousness speaks to the adolescent's belief about the seriousness or severity of HIV/AIDS. The perception of seriousness is often based on knowledge or medical information.



**Perceived threat:** this occurs when the perception of susceptibility is combined with seriousness, it results in perceived threat, when perception of threat is to a serious disease for which there is a real risk, behaviors often change.

**Perceived benefits:** play an important role in the adoption of secondary prevention behavior, such as voluntary screening for HIV, when adolescent believes there is benefit in adopting these behaviors.

**perceived barriers:** this is an individual's own evaluation of the obstacles in the way of him or her adopting a new behavior, for all the constructs, perceived barrier are the most significant in determining behavior change, in order for a new behavior to be adopted, a person needs need to believe the benefits of new behavior outweigh the consequences of continuing with the old behavior.

**Cues to action:** cue to action is events, people or things that move people to change their behavior. Example adolescents adopting good behaviors.

## **Empirical Review**

### **Empirical Studies on Knowledge Attitude and Utilization of VCT**

Lwelamira, Sarwatt and Masumbuko (2012) Knowledge and Practices Related to HIV/AIDS Infection among Youths in Mining Areas of Central Tanzania: A Case of Londoni and Winza Mining Areas, This study was carried out in 2 mining areas of Central Tanzania. This was a cross-sectional study that involved a random sample 202 youths aged between 15-24 years with equal number of respondents from each mining area. Data were analyzed for descriptive statistics using Statistical Package for Social Sciences (SPSS) version 16. The software was also used for running Binary Multiple Logistic Regression Analysis for identification of factors associated with high risk sexual behaviors among youths in a study population. Results of this study indicated

that although majority of youths were aware of HIV/AIDS, however, a considerable proportion of them (41%) lacked a comprehensive knowledge on the infection. Results of the present study also indicate risky sexual behaviors among youths in a study population existed at substantial rate. On overall, based on sexual experience (If ever had sex), number of sexual partner and condom use in last 12months before survey, as well as marital/ union status, nearly one-third of total respondents (32%), a considerable proportion, were engaged in high risk sexual behaviors and hence vulnerable to HIV infection. Chances (Odds) for engaging in high risk sexual behaviors by youths increased significantly with lack of comprehensive knowledge on HIV/AIDS. The Likelihood also increased significantly with main activity in mining area being mining (OR =3.21; 95% CI, 1.93-5.37), bar/hotel maid (OR = 4.18; 95% CI, 3.07-5.70) and just roaming (no occupation) (OR =2.30; 95% CI, 1.43-3.67); increased significantly with having close friends that are sexually active (OR = 1.71, 95%CI, 1.31-2.25), if use alcohol (OR = 2.80; 95% CI, 1.50-5.26) and if ever received money or material gift inexchange for sex in last 12 prior to survey (i.e., engagement in transactional sex) (OR = 4.67; 95% CI, 3.29-6.62).Based on these findings recommendations to control the spread of the infection among youths in the study population have been indicated.

Oyo-ita, et..al, (2015) conducted a study to determine knowledge of HIV/AIDS among secondary school adolescents in Calabar óNigeria Three secondary schools were selected, The total number of the students in the 3 schools was 3713. Sample 600, using a systematic random sampling method from each class from JSS1. Results of the study showed that about 181 (31.2%) of the adolescents did not know the etiological agents of HIV/AIDS. Majority, 522 (90%) knew HIV/AIDS was transmitted through sexual intercourse. Majority, 519 (89.5%) did not know the features of AIDS. Only a few, 281(48.4%) of the adolescents knew that avoidance

of sex, keeping one sexual partner, 15 (2.6%), use of condom 101 (17.4%) and screening blood before transfusion, 31 (5.3%) could prevent HIV/AIDS transmission. Mass media was the main source of information on HIV/AIDS to these adolescents. About 191, (32.9%) of them believed HIV/AIDS cannot be prevented; 228 (39.3%) felt HIV/AIDS is common among the uneducated; 127 (21.9%) thought it is not common in Nigeria and 143 (24.7%) believed it is not common among the youths. The study concluded that although awareness on HIV/AIDS is high among Secondary School adolescents in Calabar, the knowledge of the disease is still poor. Mass media as a Conclusion: Although awareness on HIV/AIDS is high among Secondary School. Mass media as a source of information does not allow in-depth knowledge of the disease. Parents, teachers, as well as Health workers should be more involved in educating the youth on this dreaded disease.

Wagbatsoma and Okojie .(2014) in a study Knowledge of HIV/AIDS and sexual practices among adolescents in Benin City, Nigeria. A cross sectional study to determine the knowledge of HIV/AIDS and sexual practices of adolescents was undertaken in Benin City, Nigeria. Benin City the capital of Edo State, Nigeria, has 40 governments owned secondary schools comprising 6 boys, 10 girls, and 24 mixed. Out of these 3 schools were randomly selected for survey. The sample size for the survey was 920 while the total population for selected schools was 1692 giving a sampling ratio of 1:2. Using the systematic sampling method and class register as sampling frame every other child was selected for the study. Result of the study shows that an overwhelming majority of the adolescents were aware of HIV/AIDS but only 16.2% knew the cause of the disease. The submission that kissing, living with infected persons and sharing their utensils could lead to infection was an indication of ignorance. Sexual intercourse was the predominant route of transmission mentioned by 60.0% while multiple sexual partners were

prevalent among age group 13-15 years. Playing with sharps, frequent clean head shave with unsterilized instruments in the barbing saloon and promiscuity were some of the activities that adolescents were involved in that could lead to HIV/AIDS infection. In conclusion, the knowledge of the study population was poor and correlates with their reckless sexual practices. Prevention is the best option to the disease. Better informed youths on HIV/AIDS will enhance the principle of prevention

Solomon, Woldaregay, Girmay, and Desalegn (2014) Perception of High School Students on risk for acquiring HIV and utilization of Voluntary Counseling and Testing (VCT) service for HIV in Debre-berhan Town, Ethiopia: a quantitative cross-sectional study, A cross-sectional study was carried out from November 2010 up to January 2011 among secondary school students at Debre-berhan Town. Perception risk and VCT use were considered as dependent variables. A stratified random sampling technique was used to recruit study participants by taking schools as strata. Semi-structured self-administered questionnaire was used to collect the necessary data. Data was entered and analyzed using SPSS version 17.0. P-value < 0.05 was considered as statistically significant. The study concluded that some students were engaged in risky sexual behavior even though they had heard about HIV/AIDS. The perception of risk for acquisition of HIV infection and utilization of VCT were low. Thus, education on topic of HIV/AIDS through integrating as part of school curriculum and encouraging the existing health institutions to provide youth-friendly sexual counseling services including VCT for HIV are strongly recommended.

Vuyelwa, et al., (2012) studied on perceptions towards HIV and AIDS, condom use and voluntary counseling and testing (VCT) amongst students at a previously disadvantaged South African tertiary institution. The study focuses on risk behavior, stigmatization, social perceptions, voluntary counseling and HIV testing (VCT) amongst a sample of four hundred

students at a rural tertiary institution in South Africa. Statistics were used to calculate descriptive statistics from the quantitative data and thematic content analysis was used to analyze qualitative data. The mean age of students is 22.85 years and the standard deviation (SD) = 2.08. Overall the findings indicate that students have knowledge about condom use, risky sexual behaviors and VCT but this does not always translate into positive sexual behaviors. For instance, thirty-seven percent (37%) of the sample had little or no intention of using a condom. The results point towards the spread of the pandemic as a noteworthy percentage of participants indulge in high risk sexual behaviors and display negative attitudes towards voluntary counseling and testing (VCT), condom use and people living with HIV and AIDS.

Sarah, et al., (2007) conducted a research "Does self-perception of risk of HIV infection make the youth to reduce risky behavior and seek voluntary counseling and testing services? A case study of Nigerian youth. In a population-based qualitative study, in-depth interviews were conducted among 90 undergraduates in three Nigerian universities. In each university, three focus group discussions were facilitated for males only, females only, and for both males and females (mixed). Results show that students with low self-perception of HIV infection felt they did not have a need for behavioral change or to do HIV testing. Those with high self-perception were not inclined to reduce risky behavior or to seek voluntary counseling and testing. The conclusion is that self-perception of risk as a single factor is not enough to seek HIV testing.

Bounbouly, Harun-Or-Rashid, Hideki and Junichi (2013) investigate Knowledge, attitudes and practices regarding HIV/AIDS among male high school students in Lao People's Democratic Republic, findings show Positive attitudes towards HIV/AIDS were observed among 55.7% of respondents. Nearly half of the surveyed students (45.3%) said that they would be willing to continue studying in a school with HIV-positive friends, and 124 (41.3%) said they would

continue attending a school with HIV-positive teachers. More than three-quarters of students mentioned television and radio as major sources of information on HIV/AIDS. The study concluded that despite adequate knowledge about HIV/AIDS among the school students, misconceptions about routes of transmission were found. Negative attitudes to HIV/AIDS and risky practices were also present. Educational programmes with specific interventions are recommended to increase KAPs and to prevent new HIV infections among students in Lao PDR.

Mayak(2015) quantitative descriptive study was conducted to describe the knowledge, attitudes and practices of adolescents on voluntary counseling and testing (VCT). The purpose was to identify and make recommendations concerning the role of high school teachers in promoting VCT. A total of 124 students were sampled. However, 24 learners withdrew from participating. A total of 100 senior secondary school participants participated in the final study. Data were collected by means of a structured questionnaire. The findings of the study revealed that 59% of the adolescents are aware of VCT services shows negative attitude towards VCT due to fear of positive results is a barrier to utilizing the service, participants s . A strong recommendation was that education sessions on the subject for HIV are included in the school curriculum and testing centers should be created in high schools. The study concluded that there is a need to enhance dissemination of VCT information among the youth and to create youth friendly VCT school health services.

Eposi, et al(2012) evaluate the use of voluntary counseling and testing (VCT) services for HIV by high school students in the Tiko health district (THD), Cameroon. A cross sectional descriptive, analytical study was conducted using a pre-established questionnaire among high school students in the Tiko health district where a multi stage sampling method was used. A total of 474 students were included in the study. Result of the findings shows that among them, 350

(73.8%) had heard about VCT, 136 (27.8%) had undergone VCT and 329 (69.4%) were willing to undergo VCT. The use of VCT services was positively associated with age ( $p < 0.001$ ), sex ( $p < 0.001$ ), school ( $p < 0.001$ ), sexual activity ( $p = 0.001$ ), attitude ( $p = 0.001$ ) towards and knowledge of VCT ( $p < 0.001$ ). Knowledge of VCT among the students was high but the use of VCT services was low. The study concluded that Knowledge of HIV and VCT among the students was high and they had a positive attitude towards VCT, however, the use of VCT services was low. VCT attendance was influenced by age, sex, school, sexual activity, attitude towards and knowledge of VCT. Study therefore recommends that sensitization campaigns on HIV should continue with emphasis being laid on VCT and free HIV screening in secondary schools in the Tiko Health District of Cameroon.

Adenike, Adebimpe, & Olugbenga (2009) conducted a study on determine sexual risk factors among adolescents in secondary schools in urban areas of Osogbo in South western Nigeria. A descriptive cross sectional study was done among 521 public secondary school students in Osogbo, Southwestern Nigeria, using multistage sampling technique and semi-structured administered questionnaire. Data were analyzed using the SPSS software package version 15. Results from the findings shows that, Appreciable numbers (31.5%) of the respondents have had sexual intercourse (the mean age of sexual debut being 15.2+1 yr). Some of them (14.6%) had had more than one sexual partners, 17 (3.3%) had visited commercial sex workers before, 33 (6.3%) had been raped previously while 25 (4.8%) had been treated for STIs symptoms in the past. Most respondents were aware of common modes of transmission of the HIV virus. Less than half (32.8%) of the respondents were prepared to be screened for HIV infection. The study concluded that many adolescents studied were sexually active, and taking a lot of risky sexual

behaviors that could facilitate transmission of HIV. Advocacy programme that will make adequate information about sexual health available to the adolescents needs to be intensified.

Aras, Semin, Gunay, Orcin and Ozan (2007), conducted a study, which evaluated sexual attitudes and behaviors and also determined the predictors of sexual initiation among adolescents. Data used for the study were collected with the aid of questionnaires administered on 861 senior high school students in their classrooms. Results obtained from the study indicated among other things that the rates of having sexual intercourse and the mean age at first sexual intercourse among males were similar to developed countries; the use of condom at first intercourse was low; the youth fail at school because majority of both boys and girls smoke cigarette and their smoking habits are associated with the desire to have sexual intercourse. The researchers concluded that the findings of the study might be helpful in producing effective solutions for improving education and preventive health care in Turkey. The findings of this study simply point to the fact that a major avenue by which people contract HIV/AIDS is through unprotected sexual intercourse; and that smoking has the potential power to make a person desirous of sexual intercourse, as the individual's mind set becomes negatively altered.

MacPhail, Pettifor, Coates, and Rees, (2008). In a study, impact of HIV voluntary counseling and testing (VCT) on adolescents was conducted in South Africa in February 2008. Focus group discussions were held with adolescents and parents in two South African townships to establish the perceptions of and needs for VCT among young people. The study showed that adolescents who had limited experience of VCT were afraid of knowing their HIV status and felt that testing was only for symptomatic individuals. The study also reported that South African youths felt that they would disclose their HIV status to family members whom they felt would be most supportive: because they were afraid of stigma and discrimination that may emanate from the



community. The study recommended that VCT services should be youth friendly. This above study (by MacPhail, Pettifor, Coates, and Rees, 2008) actually addresses major areas of what appears to be integral and key point of emphasis in the learning content of HIV/AIDS education in the secondary school i.e.voluntary counseling and testing (VCT), stigma and discrimination and support from family members. It is pertinent to note that if the teacher does not clarify issues surrounding these key issues, adolescents

Alemayehu, (2008) conducted a study on knowledge, attitude, and practice of voluntary counseling and testing for HIV among university students, tigray, northern Ethiopia. in mekelle, tigray, Ethiopia with a view of suggesting measures for increased up takes in university students. Institution based cross-sectional study design was used. Respondents were selected by simple random sampling method. A total of 425 students were included. The data was collected from April 1-10, 2008 by trained health workers using a self-administered structured questionnaire which was adopted from behavioral survey surveillance (BSS). A total of 413 students participated (with the response rate of 97%). in which 145 (35.1%) accounted for females. their age ranged from 18-30, with the median age of 20. majority 145(35.1%) of the respondents preferred the VCT service to be given in youth clubs followed by government institutions 105(25.4%).the female respondents were found to have a significant association to accept VCT for HIV with the  $OR=1.95(1.27,2.99)$ . in this study females were more knowledgeable and willing to VCT for HIV than that of the males. still cost of VCT matters, in which the respondents prefer to be tested at youth clubs and government hospitals. therefore, both sexes should have to be empowered to accept VCT for HIV through peer initiated VCT service

Haruna (2014) in a study aims at investigating knowledge and utilization of voluntary counseling testing (VCT) services on the prevention of HIV/AIDS among students of tertiary institutions of

Bauchi state. The study adopted an ex-post facto design using a multistage sampling method; stratified sampling technique was used to divide the tertiary institution into four strata and one school from each stratum was drawn using random sampling. The result revealed that majority of students, have knowledge on VCT services and are utilizing VCT services; there are no significant difference between male and female in their knowledge of VCT services among respondents; the result indicated no significant difference between male and female in their utilization of VCT services among respondents; significant difference existed on knowledge and utilization among students of different tertiary institution; and knowledge of VCT services influences the utilization of VCT services among respondents. Based on these findings it was recommended that VCT centers should be cited in educational institutions for proximity to the people. Both sexes should have to be encouraged to accept VCT for HIV through peer initiated VCT services at all levels of care including in universities; to intensify health education to convince the remaining minority who are still skeptical or ignorant of the benefits of VCT. Since knowledge of VCT influenced the utilization of VCT services among the respondents. Health personnel should intensify enlighten campaigns on the benefits of VCT utilization.

Iliyasu, Abubakar, Kabir, and Aliyu, (2009) conducted a research on knowledge of HIV/AIDS and attitude towards voluntary counseling and testing among adult in a rural community northern Nigeria. A pretested questionnaire was administered on a cross-section of 210 adults in danbare village, northern Nigeria. Information about knowledge of HIV/AIDS and attitudes toward VCT was elicited among respondents. The majority of respondents (59%) did not know the causative agent of AIDS; however, knowledge of route of disease transmission was high, with 71% and 64% of study participants mentioning sexual activity and unscreened blood transfusion, respectively, as possible transmission routes. Respondents listed avoidance of premarital sex, outlawing

prostitution, condom use and screening of blood before transfusion as protective measures. overall, 58 (27.6%), 80 (38.1%) and 72 (34.3%) of the respondents had good, fair and poor knowledge of HIV/Aids, respectively. after adjusting for confounders, female gender and formal education remained significant predictors of HIV/AIDS knowledge. reasons for rejection of VCT included fear of stigma, marital disharmony, and incurable nature of the disease and cost of treatment. formal education, female gender and HIV knowledge significantly predicted positive attitude toward VCT for HIV/AIDS among the study population. More than half of the respondents had adequate knowledge of HIV/AIDSs, and the majority were willing to have VCT. However, misconceptions, fear, gaps in knowledge and limited access to VCT remain prevalent. Findings suggest the need to provide health education and scale up VCT services in northern Nigeria by targeting the efforts of international and local development partners to underserved rural areas.

Ikechebelu, Udigwe, andimoh, (2013) carried out a study on knowledge, attitude and practice of voluntary counseling and testing (VCT) for HIV/AIDS among undergraduates in a polytechnic in southeast, A cross sectional study using a multistage sampling method to enroll was used. A structured questionnaire was administered to the 260 students with response rate of 70%. only 115 (63.2%) of the students were aware of VCT with 68 (59.1%) having heard of it at least one year prior to the study. mass media and churches were the highest sources of information on VCT most of the students did not know where VCT services could be obtained and knowledge of what VCT entails was also low. however, 127 (69.8%) 48 students approved the necessity of counseling prior to testing and 117 (64.3%) were ready to take a positive result in good fate. at least one out of every four students (54 of 182) had been sexually active within three months preceding the study only 48 (26.4%) students had taken an HIV test at one time or the other

before the study. majority (62.5%) of those who had been tested went for the screening just to know their HIV status. premarital testing (18.8%) was the second commonest reason for taken an HIV test. majority of the respondents (74.2%) were willing to go for VCT. among those who were not willing to go for VCT the commonest reason given was that they were certain they were not infected. this study highlights the need to step up efforts to increase the students' awareness of VCT, deepen their knowledge and create the right attitude towards VCT through the mass media and religious bodies. teaching on HIV/AIDS and VCT should also be incorporated into the school curriculum.

Naseem, Shahid, and Shireen, (2008) conducted a study to identify the factors that affect the accessibility and acceptability of voluntary counseling and testing (VCT) services among high risk groups for HIV in nwfppakistan. A cross sectional study was conducted. A total of 153 participants were interviewed from high risk group by convenient sampling. The high risk group included commercial sex workers and injection drug users. Information was also gathered from in49 charges of VCT centers. The data were collected in two phases, in the first phase data were collected in peshawar while in the second phase data were collected in abbotabad. out of 153 respondents 102 (67%) were interviewed in peshawar while 51 (33%) respondents were interviewed in Abbotabad. a total of 153 respondents were interviewed, that included commercial sex workers (123) and injection drug users (30). mostly the participants were young with a mean age of  $24 \pm 8.8$  years. as far as transmission of HIV was concerned 57% reported that HIV was transmitted through sexual contact, 09% said it was transmitted by contaminated instruments and syringes and around 11% reported its transmission by eating with persons having HIV/AIDS while 04% said it was transmitted by hugging/kissing. the level of knowledge about VCT was very low and about 27% of the participants had heard about VCT center. only a

small number i.e.16 out of 153 participants visited VCT centers. the study concluded that there is lack of awareness among high risk group regarding VCT and those who have heard about VCT (27%) only a few had visited the VCT center. the awareness campaign about VCT should target communities in general and high risk group in particular.

Iliyasu, et al., (2008) carried out a research on awareness and attitude of antenatal clients towards HIV voluntary counseling and testing in Aminu Kano teaching hospital, Kano, Nigeria. The study assessed pregnant women's knowledge of HIV/AIDS, awareness and attitudes towards voluntary counseling and testing (VCT) in a teaching hospital in northern Nigeria. A pre-tested structured interview questionnaire was administered on across-section of 210 antenatal clients in Aminu Kano teaching hospital, Nigeria. All respondents were aware of HIV/AIDS. Fifty seven percent had good knowledge, 32% had fair knowledge and the remaining 11% had poor knowledge of the infection. Most respondents were aware of VCT through health workers, mass media and friends. similarly, most respondents (81.0%) approved of VCT, 13.0% disapproved of it and the remaining (6%) was undecided. the main reasons for disapproval were; fear of stigmatization, isolation and effect on marriage security. those that had tertiary level of education were three times more likely to accept VCT compared to those with lower levels of education (o.r=3.2, 95% confidence interval =1.3-8.0). although the awareness of VCT for HIV was quite high with most antenatal clients harboring positive attitudes towards it, there is a need to intensify health education to convince the remaining minority who are still skeptical or ignorant of the benefits of VCT.

Bwambale, et al., (2008) worked on voluntary HIV counseling and testing among men in rural western. To determine the prevalence and factors associated with VCT use among men in Bukonzo west health sub-district, Kasese district. a population-based cross-sectional study

employing both quantitative and qualitative techniques of data collection was conducted between January and April 2008.using cluster sampling, 780 men aged 18 years and above, residing in Bukonzo west health sub-district, were sampled from 38 randomly selected clusters. Data was collected on VCT use and independent variables. Focus group discussions (4) and key informant interviews (10) were also conducted. Binary logistic regression was performed to determine the predictors of VCT use among men. Overall VCT use among men was 23.3% (95% ci 17.2-29.4). Forty six percent (95% ci 40.8-51.2) had pre-test counseling and 25.9% (95%ci 19.9-31.9) had HIV testing. Of those who tested, 96% returned for post-test counseling and received HIV results. VCT use was higher among men aged 35 years and below (or = 2.69, 95%ci 1.77-4.07), the non-subsistence farmers (or = 2.37, 5195%ci 2.37), the couple testing (or = 2.37, 95%ci 1.02-8.83) and men with intention to disclose HIV test results to sexual partners (or = 1.64, 95%ci 1.04-2.60). The major barriers to VCT use among men were poor utilizationof VCT services due to poor access, stigma and confidentiality of services. VCT use among men in Bukonzo west, kasese district was low. in order to increase VCT use among men, the VCT Programme needs to address HIV stigma and improve access and confidentiality of VCT services. Among themore promising interventions are the use of routine counseling and testing for HIV of patients seeking health care in health units, home based VCT programs, and mainstreaming of HIV counseling and testing services in community developmentprograms.

Ekanem and gbadegesin, (2014) carried out a study on voluntary counseling and testing (VCT) for human immunodeficiency virus: a study on acceptability by Nigerian women attending antenatal clinics. This study was carried out among 345 pregnant women attending antenatal clinics at two health facilities in Lagos, Nigeria. It was undertaken to determine their knowledge and acceptability of HIV voluntary counseling and testing in pregnancy as a strategy for the

prevention of mother-to-child transmission (PMTCT) of HIV. Data were collected on issues relating to mother-to-child transmission of HIV, willingness to go for voluntary counseling and testing, actions to be taken if a pregnant woman was found to be HIV positive including infant feeding options. Majority of the women (89.9%) had good knowledge of the modes of HIV transmission; however, knowledge of specific aspects of PMTCT was poor. close to half of the women (41.7%) were not aware of the association between breast milk and HIV transmission. almost all the women (96.1%) were willing to undergo HIV testing in pregnancy particularly if it would assist preventing transmission of HIV to their babies; but only few would undergo the test if the result would be shared with relatives. many of the women would still prefer breastfeeding even if they were found to be HIV positive. awareness of anti-retroviral drugs among the study group was very poor. as the country is about to embark on its PMTCT programme, there is need to increase the level of knowledge, acceptability and adoption of VCT and other PMTCT strategies among potential beneficiaries. Innovative information and education techniques need to be developed to provide HIV positive mothers with knowledge and skills that can enable them to make informed choices about infant feeding options and other forms of care.

Jjinling, et al (2009) studied on knowledge, attitudes and practices (KAP) of voluntary HIV counseling and testing (VCT) among rural migrants was conducted in shanghai, china. An anonymous questionnaire was administered face-to-face. among 2,690 participants, 78% reported having had lifetime sexual intercourse with 41.3% of singles reporting sexual intercourse, 9.2% having had multiple sex partners in the past year, only 19% of the participants always using condoms whereas 61.6% did not use in their sexual acts in the past month, 80% knew HIV infection was diagnosed through a blood test, 46.5% had heard of VCT ever before, but only 3.5% felt that they were likely to be HIV-infected now or in the future and only 62

(2.3%) had ever had HIV testing with 19 of them getting tested at a VCT site. gender, working venue, multiple sex partnerships and knowledge of VCT were independently correlated with having had HIV testing. this study suggests that a much greater effort is needed to promote safer sex and to improve VCT knowledge and services among rural migrants particularly those who are engaging in risky behaviors.

Comfort, Daniyam, Patricia & Emmanuel, (2010) conducted a research on 'acceptability of voluntary counseling and testing among medical students in JOS, Nigeria, Self-administered Questionnaires were distributed to clinical medical students of the University of Jos in a cross-sectional study. Out of a total of 368 students surveyed, 178 (50.7%) have had VCT. there was no significant difference between the proportion of males and females who had had VCT previously (48.9% of males and 56.3% of females;  $\chi^2 = 1.65$ , or  $\phi = 0.76$  95% ci: 0.46-1.20;  $p = 0.19$ ). the majority of the respondents (83.1%) would want to have VCT. fear of a positive test result was the main reason given by those who would Be unwilling to be tested. Gender had no effect on the willingness of the subjects to have VCT as 81.8% of males and 87.1% of females were predisposed to it (  $\chi^2 = 1.95$ ; or  $\phi = 0.63$ , 95% ci: 0.31-1.26). VCT acceptability was similar among sexually active and inactive respondents (80.2% and 80.2% respectively;  $\chi^2 = 0.018$ ,  $p = 0.99$ ). Awareness of VCT services and acceptability of VCT among medical students is high. These students can be role models for the optimization of VCT services.

Sukari, (2007) studied on 'barriers and attitudes towards HIV voluntary counseling and testing (VCT) among secondary school pupils of sengerema in mwanza. A cross-sectional study was done in sengerema district, mwanza august 2006. A total of 400 secondary school students from the two schools sengerema district, mwanza from august to September 2006 were included in the



study. by using simple random sampling technique, two secondary schools (sima and tuitange) were selected and enrolled in the study. After a verbal consent from each interviewee as well as observing confidentiality to the information data was collected using a pre tested swahili questionnaire. Dataanalysis was done using EPI INFO 2002. A total of 400 students from the two secondary schools were interviewed. Out of the 400 students 54% were females. The majority (95.8%) of 58 these students knew that VCT is necessary and a large number (33.8%) of them gave a reason to get HIV education as a reason for HIV services. only a small number (4.2%) of the students thought that VCT is not necessary with (47.8%) said it to be against the religious teachings; a large proportion (65.8%) of the students knew VCT sites in sengerema district but only a few (24.3%) of them ever used available VCT services. Of those who ever used VCT services 32.7% were just interested in knowing their HIV status and to get HIV education and only a small number (6.2%) of students used VCT services because they were pressurized by their spouses. for those who never used VCT services (41.8%) said they feared being labeled as HIV positive and 34.9% said these services were not meant for students. it was also observed in this study that VCT services were more accepted among female students than male students. from the findings it is concluded that a large number of students knew that VCT use is necessary and the acceptance of VCT among the students is influenced by age where younger students were more willing to use VCT services than older students. the use of VCT services is positively correlated with the level of education and that though a large number of students knew that VCT services are necessary only a small number of students use VCT services. it is recommended that much more effort should be emphasized on encouraging young people to use VCT services.

Abebe and Mitikie, (2009) conducted a research on the perception of high school students towards voluntary HIV counseling and testing, using health belief model in Butajira. A cross-sectional descriptive study was conducted in January 2006, among Butajira senior secondary school students where a multi-stage sampling method was used. About ninety-seven percent of the students had heard about VCT services but less than one-fifth of them had undergone VCT. Eighty-two percent of the students were willing to undergo VCT. It was shown that willingness to VCT was significantly associated with perceived susceptibility [AOR=0.37(0.28, 0.89)], perceived barrier [AOR= 0.45 (0.23, 0.89)] and perceived benefit [AOR=1.79 (1.44, 2.49)]. The majority of students had heard about VCT and revealed willingness to undergo VCT. High perceived susceptibility and barriers were associated with low willingness to undergo VCT. On the other hand, students with high perceived benefits showed better willingness to undergo VCT. It is recommended that messages on VCT give emphasis on personal susceptibility to HIV/AIDS and benefits of VCT.

Onipede, (2009) carried out a study on the change in sexual behavior among undergraduates in Lagos metropolis, Nigeria: the role of voluntary counseling and testing. This study examines the likelihood of VCT reducing risky sexual behavior among undergraduates in Lagos metropolis. A total of 625 undergraduates in the metropolis were interviewed in 2008. A multistage sampling technique was adopted. Data analysis indicates that 26.1% of males and 28.9% of females ever visited a VCT center. About 5.3% of male respondents and 5.2% of females reported positive HIV status. The average number of heterosexual partners before visit to VCT center among the respondents was 3.17 and declined to 2.27 (males) and 2.36 and declined to 1.63 females) after visit to VCT centers among females. T-test analysis shows that the differences are statistically significant ( $p=0.000$ ). The proportion of male respondents who engaged in frequent sex also

declined from 35.8% to 24.1% (males) and from 25% to 24.7% among females, after visiting VCT centers. Thus VCT is capable of reducing risky sexual behavior among young people.

Tenibiaje, and Dele (2011) conducted a study on voluntary counseling and testing as a panacea to HIV/AIDS epidemic in Nigeria. There has been series of reports on panacea to HIV/AIDS epidemic in Africa and Nigeria in particular but no solution to HIV/AIDS. The acquisition of knowledge and accessibility to information is essentially relevant to voluntary counseling and testing in any developing country. The study focused on Nigeria youths on knowledge and information on HIV voluntary counseling and testing is seen as a panacea to the spread of HIV. The research, adopted a descriptive survey method and the instrument for the collection of data was a 19-item questionnaire. The sample comprised 357 youths that correctly filled and returned the questionnaire. Two research questions were raised and two research hypotheses were formulated and tested. 61 data collected were subjected to t-test statistical analysis. All the hypotheses were tested at 0.05 level of significance. The finding showed that there was a significant difference in the knowledge of HIV voluntary counseling and testing of HIV/AIDS by gender, age and religion. It was concluded that information and counseling will increase knowledge of voluntary counseling and testing (VCT) in youths. Recommendation were made that counselors should organize group counseling sessions and workshops on how to make youths to be aware of the importance of voluntary counseling and testing.

### **Summary of Literature Review**

Literature on knowledge, attitude and use of voluntary counseling and testing among Adolescents was reviewed under the concept of HIV/AIDS, attitude towards HIV/AIDS, voluntary counseling and testing and epidemiology of HIV among the adolescents. It was therefore clear from the literature review that many studies involving HIV/AIDS among

Adolescents were conducted without limit to particular area. Various factors were revealed to be important in improving the adolescent's sexual behaviors and uptake of voluntary counseling and testing services. Many authors suggested numerous ways to improve the adolescent's behavior in order to eradicate HIV/AIDS in the country.

HIV/AIDS is a global crises, a challenge to human life and dignity with ability to erode social and economic development. It has great influence on stability, life expectancy and economic development. It is a major public health problem with Sub-Saharan Africa severely affected by the epidemic. HIV has the potential of hindering the realization of the millennium development goals and its spread promotes poverty, and has unleashed immense suffering on different countries and communities worldwide.

Health belief model (Rosenstock) was used to discuss knowledge, attitude and use of VCT and was applied to the present study. The focus has been placed on prevention and treatment program as solutions to Controlling the disease. VCT aims to provide care, support and treatment to people already living with HIV. It allows people to learn their HIV status and be counseled about its implications. VCT also represents a mechanism for referral into care, treatment and support.

Empirical study was also done on knowledge, attitude, perception of being at risk and use of VCT among nurses in China, South Africa, Ethiopian, Tanzania, Cameroon and Nigeria to mention a few. The reviewed literature has shown that an overwhelming majority of the adolescents were aware of HIV/AIDS but only few of the adolescents knew the exact cause, correct way of transmission, perception of risk of acquisition and utilizations of VCT is low. This study is unique from those reviewed in terms of the scope (area covered), the instrument used, method and sample used, population and method used in analyzing and presentation of the data.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

This chapter presents the research design, area of the study, population of the study, sample size and sampling technique, Instrument for data collection, validity of the instruments, reliability of the instrument, ethical consideration, method of data collection and method of data analysis.

#### **Research design**

The present study will employ a quantitative, descriptive cross sectional survey design. The quantitative approach provided a method to collect numerical data for analysis and reporting. Haber and Lobiondo-Wood (2006) are of the view that the main purpose of scientific research is to explore the association of variables in an effort to gain a better understanding of the phenomena under study.

A quantitative descriptive cross-sectional survey design was chosen for this study so that the current status of the research variables could be assessed at one point in time. The study aims at producing information that would provide answers to questions as to whether there are knowledge and attitude gaps about HIV and VCT utilization, as well as attitude towards risks for acquiring HIV by adolescents in senior secondary schools.

#### **Area of the Study**

The area of the study is Enugu North local government area located in Enugu Urban. The study will be carried out in the selected government secondary schools in Enugu North. These schools are Government Secondary school Abakaliki Road opposite Shoprite and Day Senior Secondary School independent layout.

Government Secondary school Abakiliki Road and Day Senior Secondary School independent layout are government schools located in Enugu Urban. Both schools are located in Enugu North Local Government.

Enugu State is one of the States in the Eastern part of Nigeria. The State shares borders with Abia State and Imo State to the South, Ebonyi State to the East, Benue State to the Northeast, Kogi State to the Northwest and Anambra State to the West. Enugu State consists of 17 Local Government Areas and 305 secondary schools, (annual school census report 2014).

The study is expected to last from September to November.



**Map of Enugu State**

## Population for study

The population of the study consists of all the adolescent male and female students from SS1 to SS3 in the two selected Senior Secondary Schools in Enugu North Local Government Area namely, Government Secondary School Abakaliki Road and Day Senior Secondary School independent layout. The total number of the senior secondary school students in the two Schools from SS1-SS3 is 1358. They are distributed to the schools as shown in the table 1 below.

**Table1: Populations of students in the 2 secondary school**

S/ N	School	Population	SS1		SS2		SS3		Total				
			M	F	M	F	M	F	M	F			
1	Day senior secondary school, independent layout	270	154	116	138	77	61	50	29	21	458	260	198
2	Government Senior Secondary School Abakaliki Road	450	205	245	360	160	200	90	40	50	900	405	495
<b>Total</b>											<b>1358</b>		

## Sample

The sample for the study was drawn from the population of 1358 Senior secondary school students, using a finite population formula of kerjcie and morgan (1970), the sample size was determined viz:

$$S = \frac{Z^2 NP(1-P)}{Z^2(N-1) + X^2 P(1-P)} \text{ (kerjcie and morgan 1970)}$$

Where

S= required sample size

Z= the table value of Z-variate at 95% confidence interval (1.96)

N=Total population size

P= the population proportion (assumed to be 0.04 since this would provide the maximum sample size)

D= The degree of accuracy expressed as proportion (0.05)

$$S = \frac{1.96^2 \cdot 1358 \cdot 0.50(1-0.50)}{(0.04)^2(1357-1) + 1.96^2 \cdot 0.5(1-0.50)}$$

$$S = 416$$

A sample size of 416 government secondary schools students in the two selected schools and who met the inclusion criteria was used for the study.

## Inclusion criteria

ÉStudents in senior secondary school from SS1 to SS3.

ÉAge 15-24 years because this age group's knowledge and attitudes are believed to be under continuous change.

ÉMixed Government owned senior secondary schools.

- Willingness to participate in the study.
- Availability at the time of data collection.



- Has attained menarche.
- Respondents who are physically and mentally stable

### **Sampling procedures**

Stratified proportionate was used to select the sample for the study.

Purposive was used to select the Local Government Area and the two (2) Government senior secondary schools. Stratified proportionate simple procedure was used to select students from each class according to the number of students and also according to gender in each class.

**Table 2: Distribution of sample size of each schools using proportionate sampling, according to the population size of two selected schools**

	<b>Total population</b>	<b>Sample</b>	<b>Percentage</b>
<b>from SS1-SS3</b>			
Government secondary school	900	276	66.4%
Day senior Secondary school	458	140	33.6%
<b>Total</b>	<b>1358</b>	<b>416</b>	<b>100%</b>

The population was stratified into sex and grade in the two schools, and the sample of each strata is shown below. Stratified proportionate was used to select students from each class according to the number of students and also according to gender in each class.

**Table 3: showing the population and sample size for each school by gender**

	Day senior secondary school			Government secondary school			
	SS1	SS2	SS3	SS1	SS2	SS3	
Male	47	24	9	63	49	12	404
Female	35	19	7	75	61	15	212
<b>Total</b>	<b>82</b>	<b>42</b>	<b>16</b>	<b>138</b>	<b>110</b>	<b>27</b>	<b>416</b>

### **Instrument for data collection**

The instrument for data collection was a researcher developed questionnaire. The items were generated based on the research objectives and hypotheses and guided by the literature review.

The questionnaire consists of two sections: A and B. Section A had (7) items to obtain information on demographics data of respondents, Section B was structured to obtain information on the knowledge, attitude and use of VCT among senior secondary students. Both open and closed questions ended were constructed to elicit responses from the respondents.

Section B has a total of 31 questions organized in four (4) subscales. The first subscale measures knowledge of HIV/AIDS in adolescents comprising (6) items, the second subscale measuring perceptions of risk factors toward HIV/AIDS comprising (5) items, the third subscale measures attitude towards use of VCT comprising (6) item and was presented on a likert type scale ranging from strongly agree (4) to strongly disagree (1) and the four subscale measures use of VCT among senior secondary contained (14) items, making it total of (38) items generated.

### **Validity of the instrument**

Face and content validity of the research instrument was done by the researcher's supervisor and a senior lecturer in the department of nursing for the necessary correction and approval. The corrections, suggestions and input guided the structuring of the final copy of the instrument.

### **Reliability of the instrument**

Pilot testing was conducted to establish the reliability of the instrument. 41 copies of the questionnaire were administered to SS1-SS3 students in Federal Government College in Enugu Urban. It was a single administration and data generated were analyzed using Cronbach correlation coefficient with 0.78 was obtained and this shows that the instrument is strongly reliable for data collection.

### **Ethical consideration**

An application letter for ethical approval was written to the Health Research and Ethical Committee of the University of Nigeria Teaching Hospital (UNTH), Ituku Ozalla, Enugu, through the Head of Department of Nursing Sciences UNEC. The following documents were attached; a copy of the proposal, a consent form, letter of identification and a copy of the instrument for data collection. Ethical approval was given and ethical clearance obtained.

Thereafter approval for research also obtained from Ministry of Education Enugu State, further approval and permission was obtained from the respective principal from each school authority presenting the letter of introduction from the Head, Department of Nursing, University of Nigeria, Enugu Campus,

Before administration of the questionnaires, oral consent was obtained from the class teachers and the students, the purpose of the study and the contents of the questionnaire explained to the respondents. The principle of anonymity and confidentiality was maintained throughout the study.

### **Procedure for Data collection**

The Ethical clearance and approval from the Ministry of Education was used to seek administrative permission to administer the questionnaire from the respective principal of each

school. The researcher was assisted by four (4) research assistants who were trained on the purpose of the study; questionnaire was administered on the spot in the class respectively, selection of subject after clarification of the questionnaire was done. The respondents were given full information about the instrument before administration, this to ensure their most appropriate response to the questionnaire. Data was retrieved on the spot from the students who met the inclusion criteria. Data collection lasted for 3 weeks.

### **Method of Data Analysis**

Descriptive statistics including frequencies and percentages, and standard deviation were used to analyze data on demographic characteristics and data generated for the objectives. Inferential statistics (T-test, and Chi-Square(x), were used to test the hypotheses generated for the study at 0.05 level of significance. Means and standard deviation were used to analyze data on attitudes towards use of VCT, while frequencies and percentages were used to analyze data on knowledge, perceptions towards risk and use of VCT scales respectively. Data was analyzed using IBM, Statistical Package for Social Sciences (SPSS) version 20.

## **CHAPTER FOUR**

### **PRESENTATION OF RESULTS**

In this chapter, the results obtained from data analysis with their interpretations were presented using tables according to research objectives and hypotheses. Out of the four hundred and sixteen (416) copies of questionnaire distributed, three hundred and ninety six (396) returned were properly filled and valid for data analysis giving return rate of 97. %. The mean age of the respondents and standard deviation is  $15.8 \pm 3.3$  years. To realize the objectives set for this study; the data were analysed item by item using descriptive statistics.

#### **Demographic Characteristics of Students**

Descriptive statistics involving frequencies and their percentages were used to analyse data on demographic profiles of the students. The results of the analysis were presented in Table 1 below.

**Table 1: Demographic distribution of the students****N=396**

<b>S/N</b>	<b>Item</b>	<b>Frequency</b>	<b>Percentage %</b>
<b>1</b>	<b>Age Group</b>		
A	<15years	169	42.7%
B	15 ó 19years	220	55.6%
C	20 ó 24years	4	1.0%
D	>24years	3	0.8%
	<b>Mean age</b>	<b>15.8(SD=3.3)yrs</b>	
<b>2</b>	<b>Gender</b>		
A	Male	198	50.0%
B	Female	198	50.0%
<b>3</b>	<b>Class</b>		
A	SS1	188	47.5%
B	SS2	139	35.1%
C	SS3	69	17.4%
<b>4</b>	<b>School</b>		
<b>5</b>	<b>Religion</b>		
A	Christianity	386	97.5%
B	Islam	9	2.3%
C	African Traditional Religion	1	0.3%
<b>6</b>	<b>Marital status</b>		
A	Married	5	1.3%
B	Single	387	97.7%
C	Divorced	3	0.8%
D	Separated	1	0.3%
<b>7</b>	<b>Ethnicity</b>		
A	Enugu	280	70.7%
B	Anambra	27	6.8%
C	Imo	29	7.3%
D	Abia	23	5.8%
	Ebonyi	18	4.5%
	Others (Cross-River, Delta, Edo, Benue)	19	4.8%

The result on Table 1 above shows the demographic characteristics of the respondents in the study. The result shows that the age of the respondents in this study ranges from <15->24 years with the mean age and standard deviation of the students being 15.8 and 3.3 respectively. Majority of them 220 (55.6%) and 169 (42.7%) were in age group of 15-19 years and less than 15 years respectively, while age 20-24 years and above 24 years 4 (1.0%) and 3 (0.8%)

respectively. Their gender showed that equal number of them 198 (50.0%) were male and female. As regard to their class, 188 (47.5%) of them were in SS1, 139 (35.1%) of them were in SS2, while 69 (17.4%) of them were in SS3. In their religion, almost all of them 386 (97.5%) belonged to Christianity religion, while 9 (2.3%) of them belongs to Islam, and only 1 (0.3%) of them were of African Traditional Religion. The marital status of the students showed that majority of them 387 (97.7%) were single, while only 5 (1.3%) of them were married, 3 (0.8%) were divorced and 1 (0.3%) were separated. Their ethnicity showed that 280 (70.7%) of them were from Enugu, 27 (6.8%) of them were from Anambra, 29 (7.3%) of them were from Imo, 23 (5.8%) of them were from Abia, 18 (4.8%) of them were from Ebonyi, while 19 (4.8%) of them were from other states which include Cross-River, Delta, Edo, and Benue.

**Objective 1: To assess the knowledge of HIV/AIDS among adolescents.**

This objective was achieved using items 8-13 in the questionnaire and results of the analysis were presented in Table 2 below, Descriptive statistics involving frequencies and their percentages were used to analyse data generated.

For categorising the respondents according to those who have poor knowledge and good knowledge, items 10-13 were marked and scored. Out of the total score of 4, a score less than 3 is referred to as "Poor knowledge", while a score of 3 and 4 is referred to as "Good knowledge".

**Table 2: Respondents knowledge of HIV/AIDS among adolescents****n=396**

<b>S/N</b>	<b>Item</b>	<b>Frequency</b>	<b>Percentage%</b>
<b>8</b>	<b>Have you heard about HIV/AIDS?</b>		
A	Yes	392	99.0%
B	No	4	1.0%
<b>9</b>	<b>If yes, from where did you get your information about HIV/AIDS?</b>		
A	School	300	76.5%
B	Health professionals	33	8.4%
C	Media	28	7.1%
D	Reading materials	28	7.1%
E	Others	3	0.8%
<b>10</b>	<b>Which ways of transmission is the most common cause of HIV infection in our country?</b>		
A	Use of contaminated materials	221	56.4%
B	Kissing transmits HIV	75	19.1%
C	Insect bite transmits HIV	36	9.2%
D	Condom use protects from HIV	33	8.4%
E	Abstinence protects from HIV	27	6.9%
<b>11</b>	<b>Do you think HIV/AIDS has any cure?</b>		
A	Yes	107	27.3%
B	No	285	72.7%
<b>12</b>	<b>Which classes of people is mostly exposed to HIV/AIDS infection?</b>		
A	Youths	298	76.0%
B	Sexually active people	79	20.2%
C	Old adults	13	3.3%
D	Mothers	2	0.5%
<b>13</b>	<b>Which prevention method(s) do you think is most relevant for young people to adopt?</b>		
A	Abstinence	191	47.8%
B	Condom use	96	24.5%
C	Having one sexual partner	58	14.8%
D	Avoid use of contaminated materials	38	9.7%
E	Having multiple partners	9	2.3%
	<b>Knowledge about HIV/AIDS</b>		
	Poor knowledge	259	66.1%
	Good knowledge	133	33.9%

The result on Table 2 shows that almost all the adolescents 392 (99.0%) had heard about HIV/AIDS except only 4 (1.0%) of them that claimed they have not heard about it. From among the 392 adolescents that have heard about HIV/AIDS, majority 300 (76.5%) of them got the



information in the school, 33 (8.4%) of them got it from health professionals, 28 (7.1%) of them got it from media and reading material each, while 3 (0.8%) of them got it from other source not specified by the respondents. As regards to the knowledge on ways of transmission of HIV that is the most common cause of infection in our country, majority 221 (56.4%) of them said use of contaminated materials, while 75 (19.1%) others said kissing transmits HIV, 36 (9.2%) of respondents said insect bit transmits HIV, 33 (8.4%) said condom use protect from HIV, and 27 (6.9%) said abstinence protects from HIV. On the cure of HIV/AIDS, majority of the adolescent students 285 (72.7%) said it has no cure, while 107 (27.3%) of them said it has cure. The classes of people that are mostly exposed to HIV/AIDS infection commonly known by adolescent students were youths 298 (76.0%). Only 79 (20.2%) of them said that sexually active people was the class of people that is mostly exposed to HIV/AIDS infection. Most of the adolescent students 191 (47.8%) knew that the prevention that is most relevant for young people to adopt is abstinence, while 96 (24.5%) of them said condom use, 58 (14.8%) of them said having one sexual partner, 38 (9.7%) of them said avoid use of contaminated materials, and 9 (2.3%) of them said having multiple partners. The general knowledge about HIV/AIDS by the adolescent students showed that majority 259 (66.1%) of them had poor knowledge about HIV/AIDS, while only 133 (33.9%) of them had good knowledge about HIV/AIDS.

**Objective 2: To determine the adolescents' perception towards risk of acquiring HIV/AIDS.**

This objective was realized using items 14-18 in the questionnaire and the data generated to realize this objective was subjected to descriptive analysis using frequency and percentages. The data were analysed item by item and the frequency and percentages for each of the items on this subscale and the result was presented on table 3.

**Table 3: Respondents perceptions towards risk of acquiring HIV/AIDS n=396**

<b>S/N</b>	<b>Perception towards Risk of acquiring HIV/AIDS</b>	<b>Frequency</b>	<b>Percentage%</b>
<b>14</b>	<b>Are you always afraid of being infected with HIV?</b>		
A	Yes	329	83.9%
B	No	63	16.1%
<b>15</b>	<b>How do you rate your personal risk of being infected with HIV at the moment?</b>		
A	Very high	100	25.5%
B	High	38	9.7%
C	Moderate	115	29.3%
D	Low	44	11.2%
E	Very low	95	24.2%
<b>16</b>	<b>Reason for being at risk</b>		
A	Injury with contaminated materials	168	42.9%
B	Had sex with HIV positive person	108	27.6%
C	Had sex without condom	97	24.7%
D	Had sex with prostitute	19	4.8%
<b>17</b>	<b>Reason for not being at risk</b>		
A	Use condom always	147	37.5%
B	Faithful to one partner	114	29.1%
C	Never had sex	107	27.3%
D	Had not used contaminated materials before	24	6.1%
<b>18</b>	<b>How do you rate your sexual behaviour</b>		
A	Very high	37	9.4%
B	High	35	8.9%
C	Moderate	154	39.3%
D	Low	49	12.5%
E	Very low	119	29.8%

Result on Table 3 above shows the adolescents' perception towards risk of acquiring HIV/AIDS. Majority of them 329 (83.9%) were afraid of being infected with HIV/AIDS, while only 63 (16.1%) of them were not afraid of being infected. On the rating of their personal risk of being infected with HIV at the moment, 100 (25.5%) of them rated themselves very high, 38 (9.7%) rated themselves high, 115 (29.3%) rated themselves moderate, 44 (11.2%) rated themselves low, while 95 (24.2%) rated themselves very low. The reason of being at risk showed that majority of them 168 (42.9%) had injury with contaminated materials, 108 (27.6%) of them had sex with HIV positive person, 97 (24.7%) of them had sex without condom, while 19 (4.8%) of them had sex with prostitutes. The reason for not being at risk showed that majority of them 147(37.5%) used condom always, 114 (29.1%) of them were faithful to one partner, 107 (27.3%) of them never had sex, while 24 (6.1%) of them had not used contaminated materials before. On the rating of their sexual behaviour, 37 (9.4%) of them rated themselves very high, 35 (8.9%) rated themselves high, 154 (39.3%) rated themselves moderate, 154 (11.2%) rated themselves low, while 119 (29.8%) rated themselves very low.

**Objective 3: To determine adolescents' attitude towards use of VCT services.**

The objectives were achieved using item 19-24 and the data generated was subjected to descriptive analysis using means and standard deviation. The data were analysed item by item and the means and standard deviation for each of the items on this subscale were presented on table 4.

**Table 4: Respondents attitude towards use of VCT services**

S/N	Items	SA	A	D	SD	Mean	Stdev	Decision
19	Voluntary counselling and testing services make one to know his/her HIV status	261	111	11	9	3.59	0.67	Positive
20	I am not aware of where the test can be done	50	64	162	116	2.88	0.98	positive*
21	I do not visit HIV/AIDS testing centre because of stigma	43	78	181	90	2.81	0.91	positive*
22	I am afraid of other people will know about the result	58	68	151	115	2.82	1.02	positive*
23	I am scared of psychological trauma of a positive result	93	111	93	95	2.48	1.10	negative*
24	Test is expensive	52	45	163	132	2.96	0.99	positive*

\* Negative statement was reversely scored

Result on Table 4 shows that respondents have good attitude toward "Voluntary counselling and testing services make one to know his/her HIV status", "I am not aware of where the test can be done", "I do not visit HIV/AIDS testing centre because of stigma" and "Test is not expensive" (mean score >cut-off point of 2.50). The only item that they have poor attitude was "I am not scared of psychological trauma of a positive result" (mean score <cut-off point of 2.50).

**Table 5: The adolescents' general attitude towards use of VCT services**

Attitude towards use of VCT services	No of Respondents	Percentage
Negative attitude	62	15.8%
Positive attitude	330	84.2%
<b>Total</b>	<b>392</b>	<b>100%</b>

Result on Table 5 showed the adolescents' general attitude towards use of VCT services. Majority of them 330 (84.2%) had good attitude towards use of VCT services i.e. mean score > cut-off point of 2.50, while only 62 (15.8%) of them had poor attitude towards use of VCT services i.e. mean score < cut-off point of 2.50.

**Objective 4: To determine adolescent's use of voluntary counselling and testing services.**

The objective was realized using items 25-33 in the questionnaire and data generated was subjected to descriptive analysis using frequency and percentages. The data were analysed item by item and the frequency and percentages for each of the items on the subscale were presented on table 6

**Table 6: Respondents use of voluntary counselling and testing services, N=396**

S/N	Use of VCT services	Frequency (f)	Percentage (%)
<b>25</b>	<b>Have you ever taken an HIV test at one time or the other?</b>		
A	Yes	99	25.3%
B	No	293	74.7%
<b>26</b>	<b>If no, why?</b>		
A	I am still a virgin	27	9.2%
B	I am not an infected person	25	8.5%
C	I have not had sex before	23	7.8%
D	I have not come in contact with sharp object before	18	6.1%
E	The school authority has not requested for it	11	3.8%
F	I don't have reason to go for it	9	3.1%
G	It is not yet time for me	8	2.7%
<b>27</b>	<b>Do you intend to have VCT for HIV in the future?</b>		
A	Yes	248	63.3%
B	No	144	36.7%
<b>28</b>	<b>Give reason why you would not go for Voluntary Counselling and Testing services even when the site is close to your school</b>		
A	I am afraid of being HIV positive	33	22.9%
B	I know that I don't have HIV	29	20.1%
C	I don't have time for it	25	17.4%
D	People are too many	19	13.2%
E	No reason	11	7.6%
<b>29</b>	<b>Did you voluntarily accept to do HIV test after you have received counselling?</b>		
A	Yes	289	73.7%
B	No	103	26.3%
<b>30</b>	<b>Did you appreciate the VCT services because they are free?</b>		
A	Yes	322	82.1%
B	No	70	17.9%
	<b>Total</b>	<b>392</b>	<b>100%</b>
<b>31</b>	<b>Do you use to go for HIV test whenever you exposed yourself to people you don't know?</b>		
A	Yes	137	34.9%
B	No	255	65.7%
<b>C</b>	<b>If no, give reason?</b>		
I	HIV can only be transmitted through its cause	32	12.5%
li	HIV/AIDS are for those who give themselves for men	27	10.6%

Iii	I don't have sex with them	26	10.2%
Iv	I do not expose myself to people I don't know	19	7.5%
V	I don't associate with them through sex	16	6.3%
Vi	I don't do that because it is against my belief	11	4.3%
<b>32</b>	<b>Do your school's hospital/ clinic have facilities for voluntary counselling and testing services?</b>		
A	Yes	89	22.7%
B	No	303	77.3%
<b>C</b>	<b>If no, give reason?</b>		
I	It has no space	19	6.3%
Ii	No building structure for it	13	4.3%
Iii	I don't know	59	19.5%
<b>33</b>	<b>Do you find it convenient to use voluntary counselling and testing services because it is voluntary?</b>		
A	Yes	383	72.2%
B	No	109	27.8%
<b>C</b>	<b>If no, give reason?</b>		
I	I don't have a partner	19	17.4%
Ii	No response	90	82.6%
<b>34</b>	<b>Are you satisfied with the facilities and manner of personnel conducting the counselling and testing services?</b>		
A	Yes	326	83.2%
B	No	66	16.8%
<b>C</b>	<b>If no, give reason?</b>		
I	No response	66	100%
<b>35</b>	<b>If yes, are you satisfied with the awareness campaign on voluntary counselling and testing services through mass media?</b>		
A	Yes	293	89.9%
B	No	33	10.1%
<b>C</b>	<b>If no, give reason?</b>		
I	No response	33	100%
<b>36</b>	<b>Do you think it is important for you to have partner tested for HIV?</b>		
A	Yes	361	92.1%
B	No	31	7.9%
<b>C</b>	<b>If no, give reason?</b>		
I	No response	31	100%
<b>37</b>	<b>Would you want VCT for HIV to be taught in class for young people like every other general subject?</b>		
A	Yes	364	92.9%
B	No	28	7.1%
<b>C</b>	<b>If no, give reason?</b>		
I	No response	28	100%
Ii	Poor utilization	184	46.9%
Iii	Good utilization	208	53.1%

Result on Table 6 showed that Majority of the adolescent students 239 (74.7%) have never taken any HIV test at one time or the other, except 99 (25.3%) of them. From among the 293 adolescent students who have never taken any HIV test at one time or the other, only few of

them gave the reason and it include 27 (9.2%) of them said they are still a virgin, 25 (8.5%) of them said they are not an infected person, 23 (7.8%) of them said they have not have sex before, 18 (6.1%) of them said they have no come in contact with sharp object before, 11 (3.8%) of them said the school authority has no requested for it, 9 (3.1%) of them said they don't have reason to go for it, while 8 (2.7%) of them said it is not yet time for them. On whether the respondents intend to go for it in the future, majority of them 248 (63.3%) said yes, while 144 (36.7%) of them said no. From among the 144 adolescent students who said they will not have VCT even when the site is close to their school, majority of them 33 (22.9%) of them said they are afraid of being HIV positive, 29 (20.1%) of them said they know they don't have HIV, 25 (17.4%) of them said they don't have time, 19 (13.2%) of them said people are too many, while 11 (7.6%) did not give any reason. On whether the adolescent students voluntarily accept to do HIV test after they have received counselling, majority of them 289 (73.7%) said yes, while 103 (26.3%) of them said no. Majority of the adolescent students 322 (82.1%) said they appreciate the VCT services because they are free, while 70 (17.9%) of them said they did not appreciate it. Majority of the adolescent students 255 (65.7%) do not use to go for HIV test whenever they exposed themselves to people they don't know. The reason given from these 255 adolescent students were that HIV can only be transmitted through its cause 32 (12.5%), HIV/AIDS are for those who give themselves for men 27 (10.6%), I don't have sex with them 26 (10.2%), I do not expose myself to people I do not know 19 (7.5%), I don't associate with them through sex 16 (6.3%), and I don't do that because it is against my belief 11 (4.3%). Majority of them 303 (77.3%) said their school hospital/ clinic do not have facilities for voluntary counselling and testing services and they reason given were that they have no space 19 (6.3%), no building structure for it 13 (4.3%) and I don't know 59 (19.5%). Majority of the adolescent students 383 (72.2%) find it

convenient to use voluntary counselling and testing services because it is voluntary, while 109 (27.8%) of them said they don't find it convenient. The reason given by them were that they don't have partner 19 (17.4%) and 90 (82.6%) of them gave no response. Majority of the adolescent students 326 (83.2%) were satisfied with the facilities and manner of personnel conducting the counselling and testing services, while only 66 (16.8%) of them were not satisfied. The reason for not being satisfied was not given. Out of them 326 adolescent students that were satisfied with the facilities and manner of personnel conducting the counselling and testing services, majority of them 293 (89.9%) were satisfied with the awareness campaign on voluntary counselling and testing services through mass media, while only 33 (10.1%) of them were not satisfied. The reason for not being satisfied was not given. Majority of the adolescent students think it is important for them to have partner tested for HIV, while only 31 (7.9%) of them did not think that way. The reason for that was not given. Majority of the adolescent students 364 (92.9%) want VCT for HIV to be taught in class for young people like every other general subject, while 28 (7.1%) of them did not want it. The reason for that was not given. In general, majority of the adolescent students 208 (53.1%) have good utilization of voluntary counselling and testing services, while 184 (46.9%) of them have poor utilization of voluntary counselling and testing services.

**Objective 5: To establish the relationship between knowledge and utilization of voluntary counselling and testing services among adolescents**

For knowledge about HIV/AIDS, Questions 10 on which ways of transmission is the most common cause of infection in our country with correct answers of 'use of contaminated material'; Question 11 on do you think HIV/AIDS infections has any cure with correct answer of 'No'; Question 12 on which class of people is mostly exposed of HIV/AIDS infection with



correct answer of “Sexually active people” and Question 13 on which prevention method do you think is most relevant for young people to adopt with correct answer of “abstinence” were marked and scored. Out of the total score of 4, a score less than 3 is referred to as “Poor knowledge”, while a score of 3 and 4 is referred to as “Good knowledge”. For utilization of VCT services, a score of yes in 4 out of 7 in questions 25, 27, 29, 30, 31, 33, and 36 which are have you ever taken an HIV test at one time or the other, do you intend to have VCT for HIV in the future, did you voluntarily accept to do HIV test after you have received counselling, did you appreciate the voluntary counselling and testing services because they are free, do you use to go for HIV test whenever you exposed yourself to people you don’t know, do you find it convenient to use voluntary counselling and testing services because it is voluntary and do you think it is important for you to have your partner tested for HIV is referred to as “Poor utilization”, while a score of yes in more than 4 is referred to as “Good utilization”. The scores obtained were used for this objective.

**Table 7: The relationship between knowledge and utilization of voluntary counselling and testing services among adolescents**

Utilization of VCT services	Poor knowledge	Good knowledge	Total
Poor utilization	120(50.8%)	64 (41.0%)	184(46.9%)
Good utilization	116(49.2%)	92 (59.0%)	208(53.1%)
Total	236(100%)	156(100%)	571(100%)

Result on Table 7 shows the relationship between knowledge and utilization of voluntary counselling and testing services among adolescents. Out of the 236 adolescent students that have poor knowledge of HIV/AIDS, 120 (50.8%) of them have poor utilization of the VCT services, while 116 (49.2%) of them have good utilization of VCT services. Also, Out of the 156

adolescent students that have good knowledge of HIV/AIDS, 64 (41.0%) of them have poor utilization of the VCT services, while 92 (59.0%) of them have good utilization of VCT services.

### **Test of hypotheses**

#### **Hypothesis 1: There is no significant difference in the knowledge of HIV/AIDS between male and female students**

To test this hypothesis, the data generated from question 8-13 were subjected to student t- test analysis. The average scores obtained out of the twenty (22) correct answers were used to calculate mean scores and standard deviation for the analysis. The result of the analysis was presented on table 8.

**Table 8: t-test comparison of the mean scores on the knowledge of HIV/AIDS between male and female students n=396**

Sex	N	Mean	Stdev.	T	Df	P-value
Male	197	1.97	1.06	-0.018	390	0.851
Female	195	1.95	1.06			

Hypothesis 1 is rejected since  $P > 0.05$ . This implies that there is no significant difference in the knowledge of HIV/AIDS between male and female students.

#### **Hypothesis 2: There is no significant relationship between adolescent's perceptions towards risk of acquiring HIV/AIDS and use of VCT services.**

To test this hypothesis, the raw scores generated from question 14 in the questionnaire were subjected to chi-square( $\chi^2$ ) analysis at 0.05 probability level. The result was presented on table 9 below.

**Table 9: Result Chi-square ( $\chi^2$ ) on respondent's perceptions towards risk of acquiring HIV/AIDS and use of VCT services**

Utilization of VCT services	Are you always afraid of being infected with HIV/AIDS			$\chi^2$	Df	P-value
	Yes	No	Total			
Poor utilization	151(45.9%)	33 (52.4%)	184(46.9%)	0.893	1	0.345
Good utilization	178(54.1%)	30 (47.6%)	208(53.1%)			
Total	329(100%)	63 (100%)	571(100%)			

Hypothesis 2 is rejected since  $P > 0.05$ . This implies that there is no significant relationship between adolescent's perceptions towards risk of acquiring HIV/AIDS and use of VCT services.

**Hypothesis 3: There is no significant relationship between adolescent's attitude and use of VCT services**

To test this hypothesis, data generated from questions 19-24 on attitudes and questions 25-37 on use of VCT were analysed using Chi-Square ( $\chi^2$ ) and the result were presented on table 10 below.

**Table 10: Result of Chi-square ( $\chi^2$ ) on adolescent's attitude and use of VCT services**

Utilization of VCT services	Attitude towards Use of VCT			Df	$\chi^2$	P-value
	Poor Attitude	Good Attitude	Total			
Poor utilization	35 (56.5%)	149(45.2%)	184(46.9%)	1	2.676	0.102
Good utilization	27 (43.5%)	181(54.8%)	208(53.1%)			
Total	62 (100%)	330(100%)	571(100%)			

Hypothesis 3 is rejected since  $P > 0.05$ . This implies that there is no significant relationship between adolescent's attitude and use of VCT services.

**Hypothesis 4: There is no significant gender difference in the utilization of VCT services among adolescents in Senior Secondary Schools in Enugu**

The raw scores generated from questions 25-37 were used to test this hypothesis, and the data generated were analysed using t-test, the result were presented on table 11 below.

**Table 11: T-test comparison of mean scores on gender difference in the utilization of VCT services**

Sex	N	Mean	Stdev.	T	Df	P-value
Male	197	4.46	1.60	0.327	390	0.744
Female	195	4.41	1.55			

Hypothesis 4 is rejected since  $P > 0.05$ . This implies that there is no significant gender difference in the utilization of VCT services among adolescents in Senior Secondary Schools in Enugu.

**Hypothesis 5: There is no significant between knowledge and utilization of voluntary counselling and testing services among adolescents.**

Data generated from questions 8-13 for knowledge and questions 25-37 on use of VCT were analysed using Chi-Square(x), the result were presented on table 10 below.

**Table 12: result of Chi-square (X) between knowledge and utilization of voluntary counselling and testing services among adolescents**

Utilization of VCT services	Poor knowledge	Good knowledge	Total	$\chi^2$	df	P-value
Poor utilization	128(49.4%)	56 (42.1%)	184(46.9%)	1.888	1	0.169
Good utilization	131(50.6%)	77 (57.9%)	208(53.1%)			
<b>Total</b>	<b>236(100%)</b>	<b>133(100%)</b>	<b>571(100%)</b>			

Hypothesis 5 is rejected since  $P > 0.05$ . This implies that there is no significant relationship between knowledge and utilization of voluntary counselling and testing services among adolescents.

## Summary of Findings

The mean age of the respondents is  $15.8 \pm 3.3$  years.

- The study revealed that majority of the respondents 259(66.1%) had poor knowledge of HIV/AIDS, while few of the respondents 133(33.9%) had good knowledge about HIV/AIDS,
- Respondents showed high perception towards risk of acquiring HIV/AIDS, this is showed as high numbers of 329 (83.9%) were afraid of being infected with HIV/AIDS.
- Majority of the respondent had good attitude towards use of VCT services 330 (84.2%).
- Majority of the adolescent students 208 (53.1%) has good utilization of voluntary counselling and testing services, while 184 (46.9%) of them has poor utilization of voluntary counselling and testing services.
- Significant relationship ( $p < 0.05$ ) existed between knowledge and utilization of VCT services among students.
- There was no significant difference ( $p > 0.05$ ) in the knowledge of HIV/AIDS between male and female students
- There was no significant relationship between adolescent's perceptions towards risk of acquiring HIV/AIDS and use of VCT services
- There was no significant relationship between adolescent's attitude and use of VCT services.
- There was no significant gender difference in the utilization of VCT services among adolescents in Senior Secondary Schools in Enugu.
- There was no significant relationship between knowledge and utilization of voluntary counselling and testing services among adolescents.



## CHAPTER FIVE

### DISCUSSION OF FINDINGS

This chapter presents discussion of the major findings of the study, implication for nursing, limitation, conclusion, recommendation, suggestion for further studies and summary.

#### **Discussion of major findings**

##### **Adolescent's knowledge of HIV/AIDS**

Findings of the study showed that majority of the respondents have poor knowledge of HIV/AIDS and the major sources of information were from school, health professionals, social media and reading material each. Almost all the respondents were aware of HIV/AIDS 392 (99.0%) except only 4 (1.0%) of them that claimed they have not heard about it. As regards to the ways of transmission that is the most common cause of infection in our country, majority of them said use of contaminated materials, they also believe HIV/AIDS has no cure.

The possible explanation for the way the result came out could be that the adolescents in secondary schools is aware HIV/AIDS, the high awareness can be attributed to the information obtained from school, health professionals and social media, as knowledge differs from simple awareness however, the respondents lack the understanding of knowing that it is sexual active people that are mostly affected, hence the knowledge of the disease is still poor. True knowledge and understanding of HIV/AIDS is necessary condition for behavioural change.

The findings agreed with the work of Lwelamira, Sarwatt and Masumbuko (2012), which indicated that although majority of youths were aware of HIV/AIDS, however, a considerable proportion of them lacked a comprehensive knowledge on the infection. Wagbatsoma and Okojie. (2014) also showed that overwhelming majority of the adolescents was aware of HIV/AIDS but only 16.2% has good knowledge of the disease. Furthermore, Oyo-Ita, ETÍ al,

(2015) showed that majority adolescents did not know the etiological agents of HIV/AIDS. Only a few of the adolescents knew that avoidance of sex, keeping one sexual partner, use of condom could prevent. Study concluded knowledge of the disease is still poor.

### **Adolescents' perception towards risk of acquiring HIV/AIDS**

Finding of the study showed that the respondents showed high perception towards risk of acquiring HIV/AIDS, as majority of respondents were afraid of being infected with HIV/AIDS, while only few of respondents were not afraid of being infected respectively . Among those who perceived themselves at risk, reasons of being at risk showed that majority of them had injury with contaminated materials, had sex with HIV positive person, had sex without condom, and had sex with prostitutes. The most frequently cited reasons by those who did not perceive themselves at risk were that they used condom always, were faithful to one partner, never had sex, and had not used contaminated materials before.

The reasons for such high risk perception could be that the students were afraid due to the use of contaminated materials, had sex with HIV positive person, Also low risk perception among students could be that students may underestimate risks in general because of feeling of invulnerability; and that HIV is highly stigmatized by the community so that accepting the risk leads to the possibility of being isolated there by preventing to believe their own personal risk, students with high perceived benefits revealed better willingness to undergo VCT.

Findings is contrary to Solomon, Woldaregay, Girmay , and Desalegn (2014) who showed low perceptions of risk acquisition among the adolescent



## **Adolescents' attitude towards use of VCT services**

Study revealed that majority of the respondents had good attitude towards use of VCT services while only few of the respondents had poor attitude towards use of VCT services. Respondents shows good decision except on one item which they responded negatively.

The result of this subclass can be attributed to the fact that attitudes are formed from experience which makes an individual to react to things in certain ways, the respondents attitude and behaviour towards use of VCT may be influenced by the awareness of HIV/AIDS, as respondents reported obtained information from school, health professionals and social media.

This findings is in agreement with Bounboul, Harun, Hideki and Junichi (2013)) who reported greater Positive attitudes towards use of VCT were observed among of respondents. Finding is in disagreement Mayak (2015) who revealed poor attitudes of the participants towards VCT services due to the fear of positive results is a barrier to utilizing the service.

## **Adolescent's use of voluntary counselling and testing services**

Finding of this study showed that students of senior secondary schools in Enugu state are utilizing of Voluntary Counselling and testing services as shown by good utilization of VCT services with very few of the respondents that showed Poor utilization. For those who have not taken the test before, who also said they will not have VCT even when the site is close to their school, reasons given was they are afraid of being infected, they don't have HIV, it is against their belief and they don't have time, while few of them said people are too many.

The reasons for utilizations are given as majority of the adolescent students find it convenient to use voluntary counselling and testing services because it is voluntary, they appreciate the VCT services because they are free, they were satisfied with the facilities and manner of personnel conducting the counselling and testing services, they also think it is important for them to have

their partner tested for HIV, as majority of the adolescent students want VCT for HIV to be taught in class for young people like every other general subject .

This agree with the findings of the study conducted by Eposi, et al (2012) who shows that among the respondent that had heard about VCT, 136 (27.8%) had undergone VCT and 329 (69.4%) were willing to undergo VCT. Also these with the findings of the study conducted by Haruna (2014) who revealed that majority of students, have knowledge on VCT services and are utilizing VCT services The finding is closely linked to the report by National HIV/AIDS and Reproductive Health Survey (NARHS 2012) shows that 72% of respondents expressed a desire to get tested.

Findings is contrary to the study by Mayak(2015) who revealed that majority of the adolescents who are aware of VCT services shows negative attitude towards VCT due to fear of positive results is a barrier to utilizing the service. It is also in disagreement with findings of MacPhail, Pettifor, Coates, and Rees, (2008) who showed that adolescents who had limited experience of VCT were afraid of knowing their HIV status and felt that testing was only for symptomatic individuals.

### **Relationship between knowledge and utilization of voluntary counselling and testing services among adolescents**

The results of this study revealed that significant relationship exist between knowledge and utilization of VCT among students. As out of the 236 adolescent students that have poor knowledge of HIV/AIDS, majority of them have poor utilization of the VCT services, while only few of them have good utilization of VCT services. Also, Out of the 156 adolescent students that have good knowledge of HIV/AIDS, majority of them have poor utilization of the VCT services, while only few of them have good utilization of VCT services.

From the above, one can say that students' knowledge of VCT services influence the utilization of VCT services, as those who have poor knowledge demonstrated poor use of VCT while those who has good knowledge also showed good use of the VCT services

Finding is validated by Abebe and mitikie, (2009) who reported that the majority of students have heard about VCT and reveals willingness to undergone VCT. Willingness was affected by Education, age and sexual experience. Similarly, another study conducted by Alemayehu, (2008) has shown that knowledge increased the VCT utilization.

### **Gender differences in students' Knowledge of HIV/AIDS**

Findings in this study revealed that there is no significant difference in the knowledge of HIV/AIDS between male and female students ( $p > 0.05$ ).

Findings in table 8 shows that the male have a mean of 1.97(SD=1.06) while the female is 1.95(SD=1.06). This implies that there is no significant difference in the knowledge of both male and female adolescent towards HIV/AIDS and VCT used.

The result could be attributed to the fact that no matter the sex differences, it has no effect on their knowledge level of the respondent when the right knowledge is inculcated.

The findings are in contrast with that of Alemayehu, (2008) who reported that females were more knowledgeable and willing to accept VCT for HIV than that of the males.

### **Differences in Adolescent's perceptions towards risk of acquiring HIV/AIDS and use of VCT services**

Findings in this study revealed that there was no significant relationship between adolescent's perceptions towards risk of acquiring HIV/AIDS and use of VCT services. This implies that

students' perception of risk of acquiring HIV/AIDS has no influence on their use of VCT and the ability to use VCT has not influenced on their perceived level of being at risk.

This is in line with the findings of Sarah, et al., (2007,) who showed that students with low self-perception of HIV infection felt they did not have a need for behavioral change or to do HIV testing, while those with high self-perception were not inclined to reduce risky behavior or to seek voluntary counseling and testing.

Findings are contrarily to the study by Solomon Woldaregay, Girmay, and Desalegn (2014) who revealed that the perception of being at risk and utilization of VCT were inversely associated. Significant number of students who perceived themselves at low risk for HIV infection had utilized VCT service compared to those who considered themselves to be at higher risk.

### **Relationship between adolescent's attitude and use of VCT services**

Findings from the study revealed that there is no significant relationship between adolescents' attitude and use of VCT services.

Findings in table 10 shows that  $P > 0.05$ . This indicated that respondents' attitudes has no relationship with the use of VCT, both are independent of each other.

This is in disagreement with the study by Alemu (2008) which stated that VHCT is an important tool that allows young people to evaluate their behaviour and the consequences of those behaviours.

### **Gender difference in the utilization of VCT services among adolescents**

Findings of the study showed that there is no significant gender difference in the utilization of VCT services among adolescents in Senior Secondary Schools in Enugu as ( $p > 0.05$ )

Finding in table 11 shows that the male have a mean of 4.46 (SD=1.60) while the female is

4.41(SD=1.55). By mere observation, there is difference but the mean were further tested using t-test; and hypothesis of no significant gender difference in the utilization of VCT services among adolescents was established.

Findings are in disagreement with the study by Sukari, (2007).who observed in a study that VCT services were more accepted among female students than male students.

### **Relationship between Knowledge and utilization of voluntary counselling and testing services among adolescents**

Findings of the hypothesis revealed that there is no significant relationship between knowledge and utilization of VCT among students. Therefore, knowledge of VCT services has no influence on the utilization of VCT services. Hypothesis shows  $P>0.05$ . This implies that there is no significant relationship between knowledge and utilization of voluntary counselling and testing services among adolescents.

Finding in in line with the by Vuyelwa, et al., (2012) who stated that knowledge does not always translate into positive sexual behaviours or use of VCT. Finding is contrarily to the study by Abebe and mitikie, (2009) who reported that the majority of students have heard about VCT and reveals willingness to undergone VCT.

### **Summary of the Study**

The study investigated the knowledge and attitude towards risk for acquiring HIV and voluntary counselling and testing among adolescents in senior secondary schools in Enugu North Local Government Area. The study was designed to:

1. Assess the knowledge of HIV/AIDS among adolescent.
2. Determine adolescent perception towards risk of acquiring HIV/AIDS.
3. Determine adolescentsøattitude towards use of VCT services.

4. Determine adolescent's use of voluntary counselling and testing services.
5. Establish the relationship between knowledge and utilizations of voluntary counselling and testing services among adolescents.

Literature was reviewed under conceptual, theoretical and empirical review, based on the objectives; hypothesis was raised for the study.

Descriptive survey research design was employed and Population of the study was made up of 1358 students from the two selected schools and a sample of 416 was drawn from the study population. Validated questionnaire was administered to the respondents and their responses were analysed with the help of statistical package for social sciences (spss) software version 20, using descriptive statistics (frequencies, percentages, mean, standard deviation and Chi-Square(x), and test of association used to test the generated hypotheses.

The study revealed that majority of the respondents had poor knowledge of HIV/AIDS, while few of the respondents had good knowledge about HIV/AIDS, Irrespective of the awareness of HIV/AIDS; there are gaps in the level of knowledge among the respondents.

Respondents showed high perception towards risk of acquiring HIV/AIDS, this is showed as high numbers of 329 (83.9%) were afraid of being infected with HIV/AIDS. Also Majority of the respondent had good attitude towards use of VCT services 330 (84.2%) i.e. mean score > cut-off point of 2.50.

For use of VCT, Majority of the adolescent students showed good utilization of voluntary counselling and testing services, less than half of them have poor utilization of voluntary counselling and testing services.

Significant relationship existed between knowledge and utilization of VCT services among students, those with good knowledge showed good use of VCT while respondents with poor knowledge showed poor use of VCT services.

There is no significant relationship between adolescents' perceptions towards risk of acquiring HIV/AIDS and use of VCT services

There is no significant relationship between adolescents' attitude and use of VCT services.

There is no significant gender difference in the utilization of VCT services among adolescents in Senior Secondary Schools in Enugu.

There is no significant relationship between knowledge and utilization of voluntary counselling and testing services among adolescents.

### **Implications of the Finding**

From the above findings, it was revealed that senior secondary schools had poor knowledge of HIV/AIDS, Community health nurses has the following responsibilities

1. planning and Implementing Effective School Health Education about AIDS; The Nation's public and private schools have the capacity and responsibility to help assure that young people understand the nature of the AIDS epidemic and the specific actions they can take to prevent HIV infection, especially during their adolescence and young adulthood.
2. The specific scope and content of AIDS education in schools should be locally determined and should be consistent with parental and community values.
3. Preparation of Education Personnel; A team of representatives including the local school board, parent-teachers associations, school administrators, school physicians, school nurses, teachers, educational support personnel, school counsellors, and other relevant school

personnel should receive general training about the nature of the AIDS epidemic and means of controlling its spread so that they can be able to inform their students

4. Detailed information on the importance of voluntary VCT is important so that adolescents will understand and avail themselves the opportunity for routine tests. It will also prevent waste of resources; ensure early detection of HIV disease and treatment with consequent reduction in death rate.

### **Limitations of the Study**

1. Process needed to obtain permission before data collection from the selected schools was discouraging
2. The study population was chosen from government owned secondary-schools only.
3. Only daytime students were included in the study, this might affect the Generalisation for body -schools students.
4. Only literate adolescents participated in the study.
5. The study was carried out in the age range of <15->24years population.

### **Suggestions for further Studies**

1. A similar study should be conducted on out of school adolescents before generalising current finding to all adolescents in Enugu, Nigeria.
2. Assess knowledge, attitude and practices towards VCT services for rural adolescents in Enugu, Nigeria.
3. Further investigating the perceptions of young people towards accessing VCT services from the health facility versus school services



## **Conclusion**

Based on the findings of this study, the following conclusions were drawn:

1. Adolescents in senior secondary schools in Enugu state have poor knowledge of HIV/AIDS and VCT services.
2. Adolescents in senior secondary schools Enugu shows high perception towards risk of acquiring HIV/AIDS
3. Adolescents in senior secondary schools Enugu shows good attitudes towards used of VCT services
4. Adolescent in senior secondary schools Enugu state are utilizing VCT services;
5. Significant relationship existed between knowledge and utilization of VCT services among students
6. There is no significant relationship between adolescent's perceptions towards risk of acquiring HIV/AIDS and use of VCT services

## **Recommendations:**

HIV Based on the findings of the study, the following recommendations were made;

1. should be taught in class for young people like every other general subject in order to improve the knowledge
2. Adolescents should be provided with a VCT service at their schools, with trained peer educators to increase access to the same service for the schoolage population.
3. Adolescents and parental VCT information sharing should be encouraged and strengthened, so that adolescents can learn from their parents without fear
4. Since knowledge of VCT influenced the utilization of VCT among the Respondents. Health personnel should intensify enlighten campaigns on the Benefits of VCT utilization.

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## **APPENDIX 1**

### **Questionnaire**

Department of nursing sciences,  
Faculty of Health Science & Technology,  
University of Nigeria,  
Enugu, Campus.

Dear Respondent

I am a master degree student of the above institution carrying out a research on the topic:  
KNOWLEDGE AND ATTITUDE TOWARDS RISK FOR ACQUIRING HIV AND USE OF  
VOLUNTARY COUNSELLING AND TESTING AMONG ADOLESCENTS IN SENIOR  
SECONDARY SCHOOLS STUDENTS, ENUGU NORTH LOCAL GOVERNMENT AREA.

I therefore, kindly request you to fill all the questions below. I also would like to remind you that your genuine answer is of paramount importance to the outcome of the research and that all the information given by you will be strictly confidential and anonymous and will only be used for the purpose of this research.

Thanks for your co-operation.

**AnyiamIjeoma**

**Researcher.**

**08061637628**

**KNOWLEDGE AND ATTITUDE TOWARDS RISK FOR ACQUIRING HIV AND VCT,  
QUESTIONNAIRE.**

**INSTRUCTION:** Please tick (ç) in the correct spaces or fill the blank spaces.

**Section A:** Socio demographic data

1. Age-----

(a) < 15 years [ ]

(b) 15-19years [ ]

(c) 20 -24 years [ ]

(d) > 24 years [ ]

2. Sex

(a) Male [ ]

(b) Female [ ]

3. Class (grade)

(a) SS1 [ ]

(b) SS2 [ ]

(c) SS3 [ ]

4. Schoolí ..

5. Religion

(a) Christianity [ ]

(b) Islam [ ]

(c) African Traditional Religion [ ]

(d) Othersí í í í í í í í í í ..

6. Marital status

(a) Married [ ]

(b) Single [ ]

(c) Divorced [ ]

(d) Separate [ ]

7. Ethnicity

(a) Enugu [ ]

(b) Anambra [ ]

(C) Imo [ ]

(d) Abia [ ]

(d) Others í í í í ..

**Section B; Knowledge about HIV/AIDS (information,transmission, prevention)**

8. Have you heard about HIV/AIDS?

(a) Yes [ ]

(b) No [ ]

9. If yes, fromwhere did you get your information about HIV/AIDS?

(a) School [ ]

(b) Media [ ]

(c) Health professionals [ ]

(d) Reading material [ ]

(e) Others (specify) í í í í í í í í í í í í í í ..

10. Which ways of transmission is the most common cause of infection in our country?

(a). Insect Bite Transmits HIV. [ ]

- (b). Kissing Transmits HIV. [ ]
- (c). Abstinence Protect From HIV. [ ]
- (d). Condom Use Protects From HIV. [ ]
- (d). Use of Contaminated Material. [ ]

11. Do You Think HIV/AIDS Infection Has Any Cure?

- (a) Yes [ ]
- (b) No [ ]

12. Which class of People is mostly exposed of HIV/AIDS Infection?

- (a) Youths [ ]
- (b) Mothers [ ]
- (c) Fathers [ ]
- (d) Older adults [ ]
- (e) Sexually active people [ ]

13. Which prevention method(s) do you think is most relevant for young people to adopt?

- (a) Abstinence [ ]
- (b) Condom use [ ]
- (c) Having one sexual partner [ ]
- (d) Having multiple partners [ ]
- (e) Avoiding the use of contaminated materials [ ]

### **Section C: Perception towards Risk of Acquiring HIV/AIDS**

14. Are You Always Afraid Of Being Infected With HIV?

- (a) Yes [ ]
- (b) No [ ]



15. How Do You Rate Your Personal Risk Of Being Infected With HIV At The Moment?

(a) Very high [ ]

(b) High [ ]

(c) Moderate [ ]

(d) Low [ ]

(e) Very low [ ]

16. Reason for Being at Risk?

(a) Had sex without condom [ ]

(b) Injury with contaminated material [ ]

(c) Had sex with prostitution [ ]

(d) Had sex with HIV positive person [ ]

17. Reason for Not Being at Risk?

(a) Never had sex [ ]

(b) Use condom always [ ]

(c) Faithful to one partner [ ]

(d) Had not used contaminated materials before [ ]

18. How Do You Rate Your Sexual BEHAVIOR?

(a). Very high [ ]

(b) High [ ]

(c) Moderate [ ]

(b). low [ ]

(d) Very low [ ]

**Section D: Attitude towards use of VCT**

Tick (√) in the column that depicts your choice of response

S/N	Item	Strongly agreed 4	Agreed 3	Disagree 2	Strongly disagree 1
19	Voluntary counseling and testing services make one to know his/her HIV status.				
20	I am not aware of where the test can be done				
21	I do not visit HIV/AIDS testing centers because of stigma				
22	I am afraid other people will know about the result				
23	I am scared of psychological trauma of a positive result				
24	Test is expensive				

**Section E: Utilization of Voluntary Counseling and Testing (VCT) Services**

25. Have you ever taken an HIV Test At One Time or the other?

(a) Yes [ ]

(b) No [ ]

26. If no why?.....

27. Do you intend to have VCT for HIV in the future?

(a) Yes [ ]

(b) No [ ]

28. Give reason(s) why you would not go for voluntary counseling and Testing services even when the site is close to your school  
í í í í í í í í í í í í í í í í

29. Did you voluntarily accept to do HIV test after you have received counseling?

(a) Yes [ ]

(b) No [ ]

30. Did you appreciate the voluntary counseling and testing services because they are free?

(a) Yes [ ]

(b) No [ ]

31. Do you use to go for HIV test whenever you exposed yourself to people you don't know?

(a) Yes [ ]

(b) No [ ]

© If no give reason  
í í

32. Does your school's hospital/clinic have facilities for voluntary counseling and testing services?

(a) Yes [ ]

(b) No [ ]

© If no give other reason  
í í í í í í í í í í í í í í í

33. Do you find it convenient to use voluntary counseling and testing services because it is voluntary?

(a) Yes [ ]

(b) No [ ]

© If no gives reasoní ..

34. Are you satisfied with the facilities and manner of personnel conducting the counseling and testing services?

(a) Yes [ ]

(b) No [ ]

© If no gives reasoní í

35. If yes, are you satisfied with the awareness campaign on voluntary counseling and testing services through mass media?

(a) Yes [ ]

(b) No [ ]

36. Do you think it is important for you to have your partner tested for HIV?

(a) Yes [ ]

(b) No [ ]

© If no gives reasoní í

37. Would you want VCT for HIV to be taught in class for young people like every other general subject?

(a) Yes [ ]

(b) No [ ]

(c) If no gives reasoní í

APPENDIX II



DEPARTMENT OF NURSING SCIENCES  
FACULTY OF HEALTH SCIENCES & TECHNOLOGY  
COLLEGE OF MEDICINE  
UNIVERSITY OF NIGERIA



Phone: 08064854206

Telegrams: Nigersity Enugu.

Your Ref: .....

Our Ref: ..UN/CM/DNS/90.....

Enugu campus  
Enugu State Nigeria  
dnsunec@gmail.com

Date: 9/9/2015

HEAD: ADA C. NWANERI, PHD, RNE, RN, RM, FWACN

TO WHOM IT MAY CONCERN

LETTER OF IDENTIFICATION

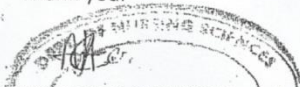
RE: ANYIAM I. COMA-O

REG. NO: PG/MSC/14/69041

This is to certify that the bearer of this letter is a student of Department of Nursing Sciences, Faculty of Health Sciences and Technology, College of Medicine, University of Nigeria, Enugu Campus.

Kindly allow him/her to carry out Research in your Department.

Thank you.

  
DR. ADA C. NWANERI  
HEAD OF DEPARTMENT

Correspondence: Department of Nursing Sciences, University of Nigeria Enugu Campus  
Email: ada.nwaneri@unn.edu.ng, adabenn@yahoo.com

## APPENXIX III

# UNIVERSITY OF NIGERIA TEACHING HOSPITAL ITUKU - OZALLA, P. M. B. 01129, ENUGU

TEL: 024 - 252022, 252573, 252172, 2552134, FAX: 042 - 252665

E-mail: cdunth@infoweb.abs.net  
cmdunth2011@yahoo.com

Chief Sir Dr. C. J. UDEOGU, FICS  
Specialist Surgeon, Endoscopist  
Chairman UNTH Management Board

Barr. S. IKE NKUME,  
LL.B(Hons); BL; MPA; B.Ed(Pol.Sc.);AHAN  
Ag. Director of Administration/Secretary  
UNTH Management Board



Dr. C. C. AMAH, MBBS, FWACS, FICS, FIAM, FNIM, FCE  
Chief Medical Director

Dr. (MRS) ANNE C. NDU, MBBS, FWACP, MPH  
Chairman Medical Advisory Committee

Our Ref: UNTH/CSA/329/OL.5

Date: 20<sup>th</sup> October, 2015.

**NHREC/05/01/2008B-FWA00002458-1RB00002323**

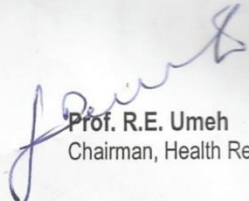
### ETHICAL CLEARANCE CERTIFICATE

**TOPIC:** KNOWLEDGE AND ATTITUDE TOWARDS RISK FOR ACQUIRING HIV AND USE OF VOLUNTARY COUNSELLING AND TESTING AMONG ADOLESCENTS IN SENIOR SECONDARY SCHOOLS IN ENUGU NORTH LOCAL GOVERNMENT AREA, ENUGU.

**BY:** ANYIAM IJEOMA ONYINYECHI.

**FOR** A DISSERTATION FOR A MASTERS DEGREE IN NURSING SCIENCES OF THE DEPARTMENT OF NURSING SCIENCES, FACULTY OF HEALTH SCIENCES AND TECHNOLOGY, UNIVERSITY OF NIGERIA.

This research project on the above topic was reviewed and approved by the University of Nigeria Teaching Hospital Health Research Ethics Committee. This certificate is valid for **one year** from date of issue. Please note that the Committee Reserves the Right to monitor the Conduct of the study at any time for strict Compliance to the Protocol.

  
Prof. R.E. Umeh  
Chairman, Health Research Ethics Committee

Date: 21/10/15

#### **APPENDIX IV**

Department of Nursing Science,  
Faculty of Health Science & Technology,  
University of Nigeria,  
Enugu campus,  
20<sup>th</sup> September, 2015.

The Honorable Commissioner,  
Ministry of Education,  
Enugu State.  
Dear Sir,

#### **APPLICATION FOR ETHICAL APPROVAL TO COLLECT DATA WITHIN SCHOOLS IN ENUGU NORTH LOCAL GOVERNMENT**

I am a postgraduate student of the above named institution with the registration number PG/MSC/14/69041. Carrying out a research study titled "Knowledge and attitude towards risk for acquiring HIV and use of voluntary counseling and testing among adolescents in senior secondary schools students, Enugu north local government area". The research is a prerequisite for the award of masters of Science in Community Health Nursing.

The target population comprises students from senior secondary schools SS1-SS3 in two selected schools in the local government area, namely Government Senior Secondary school Abakiliki Road and Day Senior Secondary schools independent layout.

Attached with application is a copy of my research instrument, ethical clearance from ethical and Health committee and relevant means of identification.

I will be grateful if my application is given a kind consideration.

Thanks

Yours faithfully

AnyiamIjeoma .O.