

**KNOWLEDGE, ATTITUDES AND PRACTICES TOWARDS VOLUNTARY
HIV COUNSELLING AND TESTING AMONG ADOLESCENTS OF A
SENIOR HIGH SCHOOL IN NIGERIA**

by

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DECLARATION

I declare that **KNOWLEDGE, ATTITUDES AND PRACTICES TOWARDS VOLUNTARY HIV COUNSELLING AND TESTING AMONG ADOLESCENTS OF A SENIOR HIGH SCHOOL IN NIGERIA** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete reference and that this work has not been submitted before for any other degree at any other institution.



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ABSTRACT

Voluntary counselling and testing (VCT) for HIV is a vital tool in HIV prevention and care, available information indicates low uptake among Nigerian adolescents despite effort at combating the scourge of HIV/AIDS. A cross sectional quantitative descriptive study was conducted to describe the knowledge, understand the attitudes and practices of VCT among adolescents of senior high school in Nigeria with the aim of informing VCT services and policies. A systematic random sampling of 100 adolescents was done and data collected by means of structured self-administered questionnaires. The study revealed inadequate knowledge on VCT among the study participants which is probably responsible for their poor VCT uptake. Free VCT services and availability of VCT services within the school are factors that could motivate VCT uptake among the students. There is need to enhance dissemination of VCT information among youth and create youth-friendly VCT services to increase VCT uptake among adolescents.

KEY TERMS

Adolescent, attitude, knowledge, practice, student, VC

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List of abbreviations and acronyms

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Clinic
ART	Anti-retroviral Therapy
CDC	Centres for disease Control and Prevention
FMOH	Federal Ministry of Health
FME	Federal Ministry of Education
HBM	Health Belief Model
HCT	HIV Counselling and Testing
HIV	Human Immunodeficiency Virus
KAP	Knowledge, Attitude and Practice
NACA	National Action Committee on AIDS
NDoH	National Department of Health
NPC	National Population Commission
SSS	Senior Secondary School
UNAIDS	Joint United Nations HIV & AIDS Programme
UNGASS	United Nations General Assembly Special Session on HIV/AIDS
UNICEF	United Nations Children's Fund
UNODC	United Nations Office on Drugs and Crime
VCT	Voluntary Counselling and Testing
WHO	World Health Organization
NARHS	National HIV/AIDS and Reproductive Health Survey

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CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

The knowledge of Human Immunodeficiency Virus (HIV) status of an individual is critical in the prevention and treatment of the virus. It helps the individual to make informed decision, assess personal risk for HIV and further develop risk reduction strategy (World Health Organization (WHO) 2010a:1). In turn, this leads to behaviour change and consequently contributes to the reduction in HIV transmission. It is for this reason that voluntary HIV counselling and testing (VCT) has been identified to be one of the interventions to control HIV epidemic. VCT provides access to continuum of prevention, treatment, care and support in HIV/AIDS management (National Department of Health (NDoH) 2010:1).

Reduction in the rate of new HIV infection is a global priority that is particularly relevant to Nigeria, a country located in the West Africa where over 4.2% of people aged 15-24 years are estimated to be HIV positive (United Nations General Assembly Special Session (UNGASS) 2010:34). Reported risky sexual behaviour and early onset of intercourse among adolescents often predispose them to teenage pregnancy, HIV and sexually transmitted diseases (STIs) (NDoH 2010:45). The fact that youths have a burden of this disease is worrisome in a country where young people constitute majority (over 58%) of the population (United Nations Office on Drugs and Crime (UNODC) 2007; National Population Commission (NPC) 2006:12).

Despite the scale up of preventive messages on HIV in Nigeria, available statistics showed that prevalence among youth only dropped from 4.3% in 2005 to 4.2% in 2008 (UNGASS 2010:82). Low uptake of VCT generally among Nigerians has also been reported (Iliyasu, Abubakar, Kabir & Aliyu 2006:1917; Joseph 2010:310). The concern of high incidence of this disease among young people in Nigeria underscores the need to examine the knowledge of preventive strategy such as VCT in early adolescence.

A quantitative research was therefore conducted to determine the level of knowledge, understand the attitudes and practices of VCT among adolescents of a senior high school in Nigeria.

1.2 RESEARCH PROBLEM

Nigeria being one of the most populous countries in the world makes a small increase in HIV/AIDS prevalence represent a significant share of the global HIV/AIDS. A report by United Nations General Assembly Special Session (2010:28-37) revealed that Nigeria has the second highest number of people living with HIV in the world after South Africa, it is estimated that 2.9 million Nigerians (4.6%) are living with the virus, which means Nigeria contribute 9% to the global HIV burden. According to this report, youth is an important risk group in HIV epidemic in Nigeria (UNGASS 2010:40). The National HIV/AIDS and Reproductive Health Survey (NARHS) conducted in 2007 buttressed this fact, as it revealed that youth (ages 15-24 years) had prevalence of 2.4% which was about 67% of the national HIV prevalence of 3.6% in the survey. Risky sexual behaviour often makes adolescents susceptible to STI. Presence of a STI has been shown to increase the risk of HIV infection in any single sexual intercourse by 2-10 times (or even more), depending on the nature and severity of the STI (Wilson, Naidoo, Bekker, Cotton & Maartens 2005:9). Despite the scale up of preventive messages on HIV in Nigeria, there has been no huge reduction in the transmission of the virus as the same report (UNGASS 2010:34) showed that the percentage increased to 4.2% in 2008. Reduction in prevalence of 0.1% was achieved between a period of four years (UNGASS 2010:82), this indicates an insignificant decrease in the rate of new infection of which VCT play a pivotal role.

The VCT is one of the important priority interventions to curb HIV/AIDS. It is a process whereby an individual undergoes counselling in order to make an informed decision about being tested for HIV, assess personal risk for HIV and further develop risk reduction strategy (WHOa 2010:1). Early diagnosis of HIV infection through VCT leads to risky behaviour change and facilitates medical interventions, thus contributing to the reduction in transmission of the infection to other people (Center for Disease Control (CDC) 2007). Meanwhile, global coverage of VCT programmes remains low; especially in countries with highest HIV/AIDS burden (WHOa 2010:1). In most part of Sub-

Saharan Africa, fewer than one in 10 people know their HIV status (Matovu & Makumbi 2007:1315).

In Nigeria the motivation to undergo VCT is still low in spite of various VCT interventions by the government and non-governmental organisations (Iliyasu, Abubakar, Kabir & Aliyu 2006:1917; Joseph 2010:310). According to the National HIV/AIDS and Reproductive Health Survey (NARHS) conducted in 2007, VCT coverage in Nigeria is about 11.7% among age group 15-49 years despite the fact that 78% of the population are willing to be tested (UNGASS 2010:39). Joseph (2010:309) examined youth's attitudes towards VCT and found that 66.7% of the respondents had not tested for HIV. This is similar to the findings of Ikechebelu, Udigwe, Ikechebelu & Imoh (2006:246) in a study conducted among undergraduates of a tertiary institution in the South-eastern part of Nigeria, where the authors reported high awareness of VCT among the students but poor knowledge of what VCT entails. Out of the 115 participants who were aware of VCT, only 40 of them knew it involves counselling before and after testing. These findings indicated that Nigerian adults are informed about VCT but there are barriers resulting to poor coverage of the service. The threat posed by the level of HIV prevalence among the youth as shown in the statistics above underscores a cause for concern to study issues of HIV testing among this group.

1.2.1 Statement of the research problem

HIV/AIDS is a major health problem affecting all ages in Nigeria but the burden is huge among the youth. Available statistics indicate that about 60% of new HIV infection are in the 15-24years age group which indicate that the majority of the population at risk are youth (NPC 2006:55; Federal Ministry of Health (FMOH) 2006:13; Olugbenga-Bello, Amusan, Oladele & Olaogun 2008:442; National Action Committee on AIDS (NACA) 2005:9). Adolescents face early sexual debut, unprotected sex, sex with multiple sexual partners, high frequency of sex, high risk of sexual coercion and abuse, age differences in relationship, peer pressure and need to belong, which often predisposes them to the risk of HIV infection (NDoH 2010:45). The low uptake of VCT among adolescents is a serious issue that needs to be addressed.

1.3 OBJECTIVES OF THE STUDY

1.3.1 Broad objective

The broad objective of this study was to describe the level of knowledge, understand the attitudes and practices of VCT among adolescent students of senior high school in Nigeria with the aim of informing VCT services and policies in Nigeria.

1.3.2 Specific objectives

The specific objectives of this study were to:

- To assess the knowledge of adolescents in senior high school on VCT.
- Assess attitudes and practices of adolescents in senior high school on VCT.
- Identify factors that influence the students' willingness to utilise the VCT services.

1.3.3 Research questions

The research questions for this study were:

- What is the level of knowledge of VCT among adolescents in senior high school?
- What are the attitudes and practices of the adolescents in senior high school towards VCT?
- What are the barriers to VCT uptake among these students and how can the uptake be improved?

1.4 SIGNIFICANCE OF THE STUDY

Voluntary HIV counselling testing (VCT) is a critical strategy to reduce the rate of new HIV infections. Getting young people to test for HIV is imperative to curb the spread in Nigeria since this population contribute immensely to the epidemic. It is envisaged that, the findings of this study will help health programme planners to review existing

services so as to provide a youth-friendly services and environment whereby high school students can comfortably be at ease to undergo VCT. Knowledge generated will help health training institutions to incorporate the findings of this study in their training curriculum, so that better pre and post-test counselling approaches could be adopted by the nurses who are majorly counsellors in Nigeria.

1.5 DEFINITION AND OPERATIONALISATION OF THEORETICAL TERMS

The theoretical and operational definitions of the key terms used in this study were defined as follows:

1.5.1 Assessment

Assessment is the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand and can do with their knowledge as a result of their educational experience; the process culminate when assessment result are used to improve subsequent learning (University of Oregon 2011). Assessment in this study refers to gathering information from the respondents to describe what they know about VCT and how the knowledge reflect in their attitudes and practices towards VCT.

1.5.2 Knowledge

The knowledge possessed by a community refers to their understanding of that topic (Kaliyaperumal 2004:7). In this study, knowledge refers to the ability of the students to know what is involved in a VCT process, its importance and where to uptake it.

1.5.3 Attitude

Attitude refers to feelings towards a subject and any preconceived ideas towards it (Kaliyaperumal 2004:7). In this study, attitude refers to thoughts, intention, opinion, feelings and belief of the students about VCT.

1.5.4 Practice

Practice refers to the ways in which knowledge and attitudes are demonstrated through actions (Kaliyaperumal 2004:7). In this study, practice refers the uptake of VCT by these students and issues related to the uptake.

1.5.5 Adolescent

The term adolescent, youth or young people are often used interchangeably in many literatures and the definition differs from country to country. The HIV Counselling and Testing (HCT) guidelines in South Africa refer to those who fall in the 10-24 years age group as young people (NDoH 2010:45). Whereas, the National Youth Policy of Nigeria (Federal Republic of Nigeria (FRN) 2009:18) and National Population Commission (NPC 2006:2) documents in the country, sub-categorised adolescents under the youth and are defined as people between the ages of 12-18 years. Most people in this age group are children in senior secondary school level (FRN 2009:18). The term adolescent will be used to cover the participants of this study who fall between ages 12-18 years.

1.5.6 Student

A student is a learner or someone who attend an educational institution (*Collins English Dictionary* 1991). In this study, the students are senior high school students, also known as Senior Secondary School students (SSS 1-3) in Nigeria.

1.5.7 Voluntary HIV counselling and testing (VCT)

The VCT is a process whereby an individual choose to undergo HIV counselling so that they can make an informed decision whether to be tested for HIV (WHO 2010b:1).

1.6 STRUCTURE OF THE DISSERTATION

Chapter 1: Orientation to the study

Chapter 2: Literature review

Chapter 3: Research design and method

Chapter 4: Analysis and presentation of the research findings

Chapter 5: Discussions, conclusions and recommendations

1.7 CONCLUSION

This chapter provided an overview to the problem of HIV and AIDS among young people in Nigeria, the importance of VCT as an intervention to reduce the burden and its low uptake were also discussed. Objectives and significant of this study were as well discussed. The next chapter will discuss the literature review.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

According to Polit, D, Beck, C, & Hungler, B. (2004:53, 124-139), quantitative studies need to be carried out within the context of prior knowledge; therefore, review of literature is the initial task in quantitative research prior to data collection. Literature review provides readers with the necessary knowledge and information that allow for good understanding of the topic under investigation; it also provides the foundation on which the new knowledge generated by the study will be based.

An extensive review of literature was done on aspects related to Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) as well as voluntary HIV counselling and testing(VCT) in sub-Saharan Africa, Nigeria in particular. Literature on VCT uptake in Nigeria and its potential use in reducing HIV transmission were reviewed. Overview of the burden of HIV/AIDS in sub-Saharan Africa, VCT as a strategy to reduce transmission of HIV/AIDS, rationale for investing in VCT for adolescents, utilisation of VCT globally and in Nigeria as well as expanding VCT services to accommodate adolescents and youths were examined.

2.2 OVERVIEW OF HIV/AIDS BURDEN IN SUB-SAHARAN AFRICA

The Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) has become a major global health problem impacting negatively on human life, dignity, social and economic development (United Nations General Assembly Special Session (UNGASS) 2010:18). The disease is affecting people of all ages, causing premature deaths, depleting both human and capital resources most especially in sub-Saharan Africa, and leaving on its trail ethical, legal and political issues together with economic and human right implications. Sub-Saharan Africa continues to be the region mostly affected by the epidemic, accounting for over two-third (67%) of all people living

with HIV globally and for nearly three quarters (72%) of AIDS-related deaths in 2008 (Joint United Nations HIV & AIDS Programme (UNAIDS) 2009).

2.2.1 HIV/AIDS epidemiology in Nigeria

Nigeria located in the West Africa with an estimated population of about 140 million people (National Population Commission (NPC) 2006) is one of the Sub-Saharan African countries that are plagued with the HIV/AIDS epidemic. In 2007 the adult prevalence of HIV infection in Nigeria was put at between 3.1-3.8% (Joint United Nations HIV & AIDS Programme/World Health Organization (UNAIDS/WHO)2008), the new HIV infection in children was estimated to be 154,920 and about 56,681 HIV positive babies were born in 2010 (National Action Committee on AIDS (NACA) 2011). Although the prevalence appears small, the large population of Nigeria makes this minimal figure to represent a significant proportion of the global epidemic. The greatest burden of the disease occurs in the age group 15-24years which constitute the youth in the country (United Nations Children's Fund (UNICEF) 2009). The estimated adult HIV prevalence in 2007 was 3.1% and the greatest burden occurred in the young age group of between 15 to 24 years (UNICEF 2009). With the revision HIV prevalence in India to less than 3 million people, Nigeria may rank the second in the world after South Africa, which is the only country that has over 5.5 million HIV infected people (UNICEF 2009).

2.2.2 HIV and young people

According to recent global reports on HIV prevention, an estimated 2,500 young people are shown to be newly infected with HIV everyday (UNAIDS 2011). Worldwide, people aged between 15 to 24 years account for 41% of new infection in 2009, an estimated 5 million young people between this age group were living with HIV in the same year; among the 10 to 19 year age group, new data shows that estimated 2 million adolescents (1.8 million-2.4 million) do not know their HIV status (WHO 2011).

In Nigeria, youth aged between 15 to 24 years made up about 67% of the national HIV prevalence of 3.6%, this was revealed in the National HIV/AIDS and Reproductive Health Survey (NARHS) conducted in 2007 (UNGASS 2010:40). The report (UNGASS

2010:34) showed that the percentage increased to 4.2% in 2008. Despite the scale up of preventive messages on HIV in Nigeria, available statistics revealed that prevalence among youth only dropped from 4.3% in 2005 to 4.2% in 2008 (UNGASS 2010:82). The rapid scale up of access to antiretroviral drugs indicates that more young people are living longer with HIV but many are still unaware of their HIV status.

2.3 VOLUNTARY HIV COUNSELLING AND TESTING (VCT) AS A REDUCTION TOOL FOR HIV TRANSMISSION

There are different strategies used to control HIV of which VCT is one, it acts as a link with HIV/AIDS care and support as well as a vital tool for HIV prevention. VCT is the confidential dialog between a person and a care provider aimed at enabling the individual to make a decision to have HIV test or not (Ikechebelu, Udigwe, Ikechebelu & Imoh 2006:246; WHO 2010b:1). It is known for its potential in empowering people through health promotion as well as a way to prevent secondary transmission; the knowledge of HIV status of an individual allows behaviour adjustment with respect to the result.

The knowledge of HIV status is critical in the prevention and treatment of HIV/AIDS because it helps an individual to make an informed decision about getting tested for HIV, assess personal risk for HIV and further develop a risk reduction strategy which leads to behaviour change, subsequently contributing to the reduction of HIV transmission. Early diagnosis of HIV infection through VCT leads to risky behaviour change and facilitates medical interventions, thus contributing to the reduction of transmission of the infection (Center for Disease Control (CDC) 2007). It empowers the individual to reduce the risk of acquiring or transmitting HIV and enhances access to HIV care, treatment and support as well as protection of unborn infant from infection.

Arthur, Nduba, Forsythe, Mutemi-Wangahu, Odhiambo and Gills (2007:501) conducted a prospective cohort study over 2 years in Kenya to explore behavioural change, risk perception, baseline risk behaviour, life events and HIV disclosure among health centre-based VCT clients. The result showed that clients with multiple partners showed a significant reduction of sexual partners at follow-up (16% to 6%; $p < 0.001$) and numbers of sexually transmitted infections decreased significantly (40% to 15%; $p <$

0.001). In another cohort study conducted in Guatemala, Samayoa, Anderson, O'Sullivan, Patricia, Pacheco, Matos, Reyes, Setru and Arathoon (2010:121-126), examined the impact of VCT on self-reported risk behaviour three months after HIV testing, comparing self-reported risk behaviour prior to and three months after HIV testing. From their results, they concluded that VCT resulted in changes in some self-reported risk behaviour such as decrease in the average number of sexual partners, use of alcohol with sex and episode of unprotected sex, though only among HIV positive subjects. In Zimbabwe, an open cohort study conducted over 4 years suggests that behavioural risk reduction does occur among women who received VCT than those who did not regardless of HIV status but greater reduction was observed among those who received HIV positive result (Cremin, Nyamukapa, Sherr, Hallett, Chawira, Cauchemez, Lopman, Garnett & Gregson 2010:71).

Although VCT has been indicated to play a pivotal role in the public health response to HIV epidemic, there has been mixed evidence on its efficacy to actually prevent HIV by some authors. Brown (2010:7-9) argued that those who test negative do not necessarily change behaviour and men in particular do not test. A cohort study on VCT uptake impact on sexual behaviour by Sherr, Lopman, Kakowa, Dube, Chawira, Nyamukapa, Oberzaucher, Cremin, and Gregson (2007:858) found that negative result was associated with increased risk behaviour in terms of partner acquisition. Sherr et al (2007:858) further explained that negative result, especially after risk exposure leads to reinforcement that risk does not have detrimental consequences or enhancing a belief of being impervious to risk. This belief has been referred to as an obstacle of positive behaviour change in some cases, especially when proper counselling is not done or hastily done (NDoH 2010:18-20).

2.4 RATIONALE FOR INVESTING IN VCT FOR ADOLESCENTS

VCT is important for adolescents being an important risk group for HIV infection in Nigeria. The NDoH (2010:45) guideline explained that this group is particularly at risk of HIV infection because they face early sexual debut, unprotected sex, sex with multiple sexual partners, high frequency of sex, high risk of sexual coercion and abuse, age differences in relationship, peer pressure and need to belong. It is common for teenagers in the secondary schools to be sexually active; many girls start sexual

intercourse soon after the onset of puberty. According to the NARHS conducted in 2007, 11.9% of young women and men in Nigeria have had sexual intercourse at less than 15 years (UNGASS 2010:33). Ojikutu (2009:104) also examined sexual health decisions among students of some tertiary institutions in Lagos state, Nigeria. The study showed that the age of sexual debut among the students was as low as 12 years. About 50% of those who had their sexual debut before age 16 years had it before 12 years, and 38% of this group has had sexually transmitted infections (STIs).

In a descriptive study conducted by Adekanle, Adeyemi and Odu (2008:2) involving girls less than 20 years, the majority (67.9%) reported unintended pregnancy. Teenage pregnancy, an indication of low condom use is one of the risky sexual behaviour that makes one susceptible to HIV infection. Wilson, Naidoo, Bekker, Cotton and Maartens (2005:9) explained that the presence of STI has been shown to increase the risk of HIV infection in any single sexual encounter by 2-10 times (or even more), depending on the nature and severity of the STI.

Teenage is the period of transition from childhood to adulthood and this period lays a foundation for important aspect of life which include establishing behavioural patterns, attitudes such as sexual behaviour (NPC 2006:3) and health seeking behaviour. Early adolescence provides an opportunity to intervene in the sexual behaviour of young adults before they become sexually active. The VCT services targeted at adolescents may provide them the opportunity to access counselling, disclosure, negotiating safety, care and support.

2.5 UTILISATION OF VOLUNTARY HIV COUNSELLING AND TESTING (VCT) GLOBALLY AND IN NIGERIA

The global coverage of VCT programmes remains low; especially in countries with the highest HIV/AIDS burden (WHOa 2010:1). Fewer than one in 10 people know their HIV status in most part of Sub-Saharan Africa (Matovu & Makumbi 2007:1315). A cross-sectional study among secondary school students in Ethiopia revealed that 97% of the students have heard about VCT but less than one fifth (18.5%) had used VCT service, the authors cited perceived susceptibility as a major barrier in Ethiopia (Abebe & Mitikie 2009:150), which reflects the amount of information available to them about VCT.

Another study in Zimbabwe revealed that lifetime uptake of VCT is about 11% in a population based cohort study (Sherr et al 2007:853). In the United States of America, only 12.9% of all high school students had ever tested for HIV (CDC 2010). Inadequate knowledge on HIV prevention among adolescents may deprive them of the kind of empowerment VCT gives over HIV transmission.

In Nigeria the motivation to undergo VCT is still low in spite of various VCT interventions (Iliyasu, Abubakar, Kabir & Aliyu 2006:1917). The National HIV/AIDS and Reproductive Health Survey (NARHS) conducted in 2007 showed that coverage was about 11.7% among age group 15-49 years despite that 78% of the population are willing to be tested (UNGASS 2010:39).

Iliyasu et al (2006:1917, 1920) conducted a cross-sectional study among adult Nigerians, their report showed that although more than half (55%) of the participants were aware of VCT and majority (72%) were willing to undergo VCT, almost all (99%) of the participants had never undergone VCT, only about a quarter (26%) of those who were aware of VCT knew where to access the services (Iliyasu et al 2006:1920). This study also revealed that most of the people who claimed to have had VCT did not know what it entails, as none of the respondents including those who said they have gone for VCT previously knew that VCT involves pre-test counselling, testing and post-test counselling. This is similar to the findings of Ikechebelu et al (2006:246) in a study conducted among undergraduates in a tertiary institution in the South-eastern part of Nigeria, where the authors reported high awareness of VCT among the students, but poor knowledge of what VCT entails. Out of the 115 students who were aware of VCT, only 40 of them knew it involves counselling before and after testing.

2.5.1 Factors influencing the utilisation of voluntary HIV counselling and testing services (VCT)

There is no doubt that awareness about VCT is widely spread among the youth as reported by most studies already mentioned. Failure to utilise VCT services often results into missed opportunities for early medical treatment, care, support and prevention need for people. Main factors why people do not utilise VCT services have been identified as personal or service related reasons.

2.5.1.1 Knowledge about VCT

Personal knowledge about VCT is very crucial to the perception of its importance and benefits. The main motivation for HIV testing has been shown to be recent knowledge obtained about HIV (Jereni & Muula 2008:1-6). Iliyasu et al (2006:1917, 1920) showed that poor knowledge about VCT among Nigerians appeared to be a barrier to the uptake of VCT. This is supported by a study conducted among undergraduates in a polytechnic in the South-eastern part of Nigeria, inadequate knowledge of VCT was revealed to have a significant impact on how people access VCT services (Ikechebelu et al 2006:246). The findings of the study conducted by Abebe and Mitikie (2009:150) in Ethiopia found that 96.7% of students had heard about VCT from different sources. These sources include electronic media, peers and at school. Olugbenga-Bello, Amusan, Oladele and Olaogun (2008:446) found that electronic media played a major role as a source of information about VCT in Nigeria, 71.5% of their study respondents were informed about VCT through electronic media.

2.5.1.2 Perceived susceptibility to HIV infection

Perceived risk of HIV infection is another personal reason that has an influence on the willingness to undergo VCT, low perceived risk for HIV infection has been described as the major reason for low VCT uptake among young people (Ma, Detels, Feng, Wu, Shen, Li, Li, Chen, Wang & Liu 2007:S132). Oshi, Ezugwu, Oshi, Dimkpa, Korie and Okperi (2007:200) in their qualitative study among Nigeria youth found that males with multiple sexual partners perceived themselves at risk of HIV and are likely to test for HIV. In Ethiopia, a cross-sectional study among adolescent students revealed that 97% of the students have heard about VCT but less than one fifth (18.5%) had used VCT service, the authors cited perceived susceptibility as a major barrier in Ethiopia (Abebe & Mitikie 2009:150).

2.5.1.3 Socio-cultural factors

Socio-cultural factors are one of the service related reasons that impact greatly on how people utilise VCT services. Amusa, Joel, Anyamela, Okoro, Shobande and Pius

(2004) found that most Lagos-based VCT centres are not youth friendly, staff attitudes were moralistic and assurance of confidentiality cannot be guaranteed. Attitudes of health workers greatly influence how young people voluntarily go for HIV counselling and testing. A VCT service that is not user-friendly may prevent willing individuals from accessing the service. Furthermore, there is concern about the adolescents in a conservative country like Nigeria where it is believed that adolescents ideally should not be exposed to any sexual activity; questions are asked why an adolescent will need to go for VCT. These practices may serve as potential barriers that prevent adolescents from undergoing VCT.

2.5.1.4 Availability and accessibility of VCT services

Availability of VCT centres is also one of the reason affecting uptakes. There are 13 integrated VCT centres in general hospitals and primary health care centres that provide VCT services in Lagos and most of these health institutions cater for referred hospital patients (Family Health International (FHI) 2011). The diversity in needs of adolescents and youths require an appropriate model, service needs to be developed in response to various needs of young people since it has been established that they vulnerable groups when it comes to HIV transmission. Some adolescents in juvenile detention centres who are at risk of HIV may not be able to benefit from the health institution VCT, an appropriate model targeting them is necessary.

2.5.2 Barriers to utilisation of VCT

Many researchers have identified discrimination and stigma as the main reason why young people do not want to utilise VCT services (Weiser, Heisler, Leiter, Percy-deKorte, Tlou, DeMonner, Phaladze, Bangsberg & Lacopino 2006:1018; Iliyasu et al 2006:1920). The fear of positive HIV test, lack of access to testing services, poor health seeking behaviour, fear of stigma and discrimination and lack of access to treatment were identified as barriers by various studies (Weiser et al 2006:1018; Iliyasu et al 2006:1920; UNAIDS 2009:2-5). Alabi, Jimoh and Balogun (2010:141) conducted a study on factors hindering acceptance of HIV/AIDS VCT among youth in Kwara State, Nigeria. The result showed that ignorance cost of VCT, inadequacy of VCT centres,

stigmatisation, parental pressure, cultural belief, inadequate motivation and religious belief were factors affecting the acceptance of VCT.

Iliyasu et al (2006:1920) explored knowledge of HIV/AIDS and attitude towards VCT among adults and found that 72.3% of respondents were willing to be tested and will recommend VCT to friends and relatives. Meanwhile, 99% of the respondents had not gone for VCT, citing doubt about confidentiality of the result, marital disharmony, fear of stigma and discrimination as reason for avoiding it. The findings of a descriptive study by Joseph (2010:309) carried out among youth from 3 states in Nigeria revealed that youth have both positive and negative attitudes towards VCT. The statistics show that majority were aware that VCT was free, but over 60% indicated that they were afraid to be tested for the fear of positive test result. Most (70%) of the participants had never tested for HIV. For fear of stigmatisation, many people who tested positive do not want to declare their status and those who might be negative do not want to undergo the test for the same reason.

2.6 EXPANDING VCT SERVICES TO ACCOMMODATE ADOLESCENTS

It is important to expand VCT as a critical tool in HIV prevention, among adolescents. Some researchers have advocated that VCT alternative delivery model should be implemented to improve VCT uptake. Ikechebelu et al (2006:249) recommended a shift from the current clinic-based VCT approach to a widespread public health VCT approach, where VCT is offered in places such as educational institutions, youth centres, community centres and market. Alemayehu (2010:113) conducted a cross-sectional survey to assess knowledge, attitudes and practices of VCT among university students in Ethiopia, the findings showed that 35.1% preferred VCT to be given at youth clubs, while only 25.4% preferred government institutions. Models such as mobile VCT, routinely-offered VCT and home-based VCT have been recommended as ways of increasing access to VCT uptake (Matovu & Makumbi 2007:1319-1320). A study that explored farmers' knowledge and acceptability of VCT among rural farmers in Benue State Nigeria identified membership of social organisation as a significant determinant of the respondents' willingness to accept VCT (Oboh, Ekpebu and Odeh 2010:85). The authors explained that exposure to social organisation tend to promote acceptability of VCT in the community.

2.7 ASSUMPTIONS UNDERLYING THE STUDY

According to Botes (1995:6), no study is value-free and for this reason researchers must make their assumptions explicit. Assumptions are statements that are taken as true, even though they have not been tested scientifically (Polit & Hungler 1999:10-11, 695). In research, the assumptions are embedded in the philosophical base of the framework or study. These assumptions influence the development and implementation of the research process, and their recognition leads to the development of a more rigorous study (Burns & Grove 2005:146). According to Chinn and Kramer (1999:76), assumptions are not intended to be empirically tested, but are underlying propositions, which can be challenged meta-theoretically. Researchers select certain assumptions from the paradigm perspective in response to their interaction with the research field. In this study, the researcher made meta-theoretical, theoretical and methodological assumptions.

2.7.1 Meta-theoretical assumptions

Meta-theoretical assumptions are not testable and deal with the human being and society (Botes 1995:6). The term “meta-theory” refers to critical reflection on the nature of scientific inquiry. Meta-theoretical assumptions are interrelated sets of concepts, beliefs, commitments and propositions that constitute the study (Henning, Van Rensburg & Smit 2004:15). Their origin is philosophical in nature, and therefore not meant to be tested. Meta-theoretical assumptions denote commitment to the truth of the theories and laws of a particular paradigm (Mouton & Marais 1990:147). This study is based on the Health Belief Model theory.

2.7.1.1 Health Belief Model

Health Belief Model (HBM) was used as the theoretical frame work for the study. Dennill, King and Swanepoel (1999:156) explained that HBM is a conceptual framework that is useful in describing a client’s behaviour in health promotion and disease prevention, the author further states that HBM describes a person’s health behaviour, as an expression of his health belief. The purpose of HBM according to the social psychologists is that it helps to systematically explain and predict preventive health

behaviour with special focus on the relationship between health behaviours, practices and utilisation of health services (Walker 2004:6). The HBM was developed in the 1950s as part of an effort by social psychologists in the United States Public Health Service to explain the lack of public participation in health screening and prevention programs particularly for a free and conveniently located tuberculosis screening project whereby few individuals actually took advantage of these opportunities (FHI 2004:2-3). The HBM was the resulting theory that helped explain this lack of participation in preventive behaviours. It is believed that people will take action either to prevent, screen for or to control ill-health conditions if they consider themselves as susceptible to the condition and believed that the condition would lead to potential serious consequences. According to the model, a person's perceived vulnerability to a condition, perceptions of the severity of the condition, perceptions of the efficacy and benefit of any proposed action will influence the health behaviour adopted towards the disease condition. There were three underlying assumptions made in this study.

The three assumptions that applied in relation to this model were:

- Perceived susceptibility to HIV infection.
- Perceived benefits of VCT.
- Perceived barriers to VCT uptake.

2.7.2 Theoretical assumptions

The core theoretical statement of this study is that today, there are many opportunities for adolescents to participate in HIV preventive behaviours, specifically obtaining voluntary HIV counselling and testing. However, statistics shows that few adolescents actually participate in HIV screening opportunities. The HBM assisted the researcher to better understand why uptake of VCT among students will take place or not. This was made possible through their perceive susceptibility to HIV infection and their perceived benefits of VCT as a vital tool in HIV diagnosis and perceived barrier to VCT uptake.

In this study the theoretical assumptions were:

- Perceived risk of HIV infection will influence the willingness to undergo VCT; if the adolescents perceive themselves as susceptible to HIV infection they will test.
- Perceived benefits of VCT will influence uptake; this was shown in their knowledge of VCT as an important tool to prevent HIV.
- Perceived barriers to VCT uptake in terms of cost, confidentiality, access to VCT centre and stigmatisation. Some of these barriers could influence the willingness to uptake VCT.

2.7.3 Methodological assumption

According to Creswell (1998:7) methodological assumptions can be described as how researcher conceptualise the entire research process, the relationship between the researcher and that which is being researched. The methodological assumption made in this study is stated below.

- It is assumed that using a self-administered questionnaire with structured questions will make respondents answer in a way that reveals their knowledge, attitudes and practices towards VCT without any bias or interference from the researcher.

2.8 CONCLUSION

This chapter presented an overview of HIV/AIDS in Sub-Saharan Africa and explored the burden of HIV among adolescents and factors that predisposes adolescents to the infection in Nigeria. The benefit of VCT as an important HIV preventive tool and utilisation of VCT globally and in Nigeria were discussed. The rationale for expansion of VCT services to accommodate adolescents and youths were also reviewed. The next chapter is on the research methodology used for the study.

CHAPTER 3

RESEARCH DESIGN AND METHOD

3.1 INTRODUCTION

This chapter explained strategies employed to carry out this research. Research design, data gathering technique, data collection procedure, sampling designs, sampling procedure, ethical considerations and the pilot study were explained.

3.2 RESEARCH DESIGN

A research design is described as a plan or blue print of how the researcher intends to conduct the research (Babbie & Mouton 2001:55). Research design is a strategic framework for action that serves as a bridge between research questions and the execution or implementation of the research (Blanche, Durrheim & Painter 2008:34). Research methodology focuses on the process, tools and procedure utilised during the research process (Babbie & Mouton 2001:74-75). For this study, a quantitative approach using non-experimental, descriptive, cross-sectional design was used to determine the knowledge, attitudes and practices of adolescent senior students of a high school towards VCT.

3.2.1 Quantitative approach

A quantitative research is a formal and systematic approach of objective data collection (Blanche et al 2008:91). This method makes aggregating and summarising data easier and open up the possibility of statistical analysis (Babbie 2008:25). The advantage of this approach is that it allows for generalisable findings (Cottrell & McKenzie 2011:7). The researcher considered quantitative approach because it helped to convert data into numeric indices and to employ statistical analysis.

3.2.2 Non-experimental design

A non-experimental design is used when a vast number of characteristics associated with individual are inherent and not subject to experimental control (Polit & Hungler 1999:177). Non-experimental design was appropriate for this study because the researcher planned to describe the phenomenon as they naturally occurred without intervening in anyway. The variables of interest in this study were human knowledge, attitudes and practices which are best collected using non-experimental design. Furthermore, since the researcher had no intention to introduce any intervention to the subjects in this study as it is done in experimental design; non-experimental design was deemed appropriate for this study.

3.2.3 Descriptive design

Descriptive design is used where the researcher intended merely to describe a phenomenon (Bless, Higson-Smith & Kagee 2006:104). In addition, Burns and Grove (2005:232) explained that descriptive design can be used to develop theory, identify problems in current practice, justify current practice, make judgments and determine what others are doing in similar situation; the purpose is to provide a true picture of situations as they naturally happen by observing, describing and documenting. This is a design that aims at describing phenomenon rather than explaining them and could lay foundations for future studies (Polit & Hungler 1999:144).

The purpose of this study was to describe the knowledge, attitudes and practices of adolescents about VCT, the study did not involve prediction of any occurrence or explaining of underlying factors of the variables involved, therefore descriptive design was suitable for this study.

3.2.4 Cross-sectional design

Cross-sectional study describes a study that the researcher conducts in the present to examine that which currently exists (Brink, Van der Walt & Van Rensburg 2006:10). The study was conducted at a point in time among the senior high school students who were selected. The subjects completed one questionnaire each around the same time.

This is known as cross-sectional study unlike longitudinal study whereby subjects are followed up for a long period of time for data collection.

3.3 RESEARCH METHOD

Research methods are the techniques researchers use to structure a study and to gather and analyse information relevant to the question (Polit & Beck 2008:15).

3.3.1 Population

Population can be described as the totality of all subjects that conform to a set of specifications (Polit & Hungler 1999:43). The target population elements in this study were adolescents, the study was conducted among adolescent senior students of community senior high school in Maryland Lagos state, Nigeria. The school is located in an urban community.

3.3.2 Sampling

Sampling is the process of selecting a portion of population that is representative of the entire population (Polit & Hungler 1999:714). The two sampling techniques are probability and non-probability sampling. Probability sampling is used when the likelihood of selecting any one member of the population is known and also used to portray the parameters of the population as a whole (Wysocki 2008:118). On the other hand, non-probability sampling is the selection of sample not based on known probabilities (Araoye 2003:122). Probability sampling was the method used for selection of the samples in this study; this was made possible by the school authority that provided the researcher with the main register containing the lists of the students prior to determination of the sample size by the researcher.

According to Araoye (2003:125), systematic random sampling is a process of selection of subjects whereby following random selection of the first subject, others are systematically selected through a predetermined sampling interval. The researcher used systematic random sampling to select the study samples; this was to ensure that all the students have equal chance of being selected. Blanche et al (2008:135)

explained that systematic random sampling involves calculating a fixed distance (n) between elements and then systematically selecting every n-th element on the list to be included in the sample; it presents an easier and more convenient alternative strategy to simple random sampling which could be very laborious in process.

3.3.3 Sample size determination

A sampling ratio of about 10% is needed for a moderately large population of approximately 10,000 and 30% is required for small population of approximately 1,000 (Blanche et al 2008:134). A total of 100 samples were used, they were drawn from the study population using a systematic random sampling method, this amount constitutes 20% sampling ratio. The school register contain the list of 498 students in alphabetical order, and every 5th (sampling interval) student on the list was selected to participate in the study until 100 samples were reached. None of the selected student declined to participate.

To determine the sample size (100) it was calculated thus:

The study population of the students in the school register was 498 and then 20% sample was selected out of this population.

$20/100 \text{ multiply by } 498 = 99.6 \text{ approximated to } 100$

SS 1 population = 112 students: 22 samples were selected from SS1 from every 5th student in the register.

SS 2 population = 260 students: 52 samples selected

SS 3 population = 126 students: 26 samples selected

Those selected were then given assent and consent letters, all the letters were signed and returned, none of the parent/guardian and the students declined to participate in the study.

3.3.4 Sample

A sample is a small portion of the population that a researcher is studying in a particular site or setting (Burns & Grove 2005:273). A total of 100 students that were selected from the three classes formed the sample size in this study. Using 20% of 498 populations in the opinion of the researcher is a representative of the students from the three senior classes. The Inclusion criteria were students and parent/guardian of students who consent to participate in the study; male and female adolescent between age 12 to 18 years in senior secondary (SSS) 1, 2 and 3 enrolled during the year of data collection. All the 100 students were eligible, had parental consent and gave assent to participate.

3.3.5 Ethical issues related to sampling

3.3.5.1 Sample selection

Researchers are required to treat research participants with fairness and equity during all stages of research; principle of justice applies to the fair selection of research participants (Blanche et al 2008:68; Polit & Beck 2008:173). This principle was applied as there was fair selection of the eligible participants from all the classes in the school, participants were randomly selected from all the classes so as to allow everyone an equal chance of being selected for the sample. Random selection is a process that ensures that every subject in the population has the equal chance of being selected for a sample (Blanche et al 2008:134; Wysocki 2008:118).

3.3.6 Data collection

Data collection refers to the technique employed to gather data. Data collection involves the generation of numeric data to address the research objectives, questions or hypotheses (Burns & Grove 2005:42).

3.3.6.1 *Data collection approach and method*

The researcher considered the use of self-administered structured questionnaire as a quantitative instrument to collect data in this study. The self-administered questionnaire required respondents to answer series of closed ended questions. The method was chosen because the respondents are literate; they are able to read and respond in English language and provide data that can be analysed. Also, considering that respondents in this study are adolescents and may be sensitive in responding to issues around VCT face to face with the researcher. This method allows respondents to respond freely and confidentially. Babbie (2008:286) is of the opinion that, at times it may be appropriate to administer questionnaire to a group of respondents gathered at the same place at the same time. The data were collected in the school premises because the respondents are students in the school. The method is also not as expensive and time consuming as personal interview.

3.3.6.2 *Development and testing of the data collection instrument*

The researcher designed the questionnaire (Annexure D) based on the objectives of the study using literature reviews. Prior to the actual fieldwork, the questionnaire was pretested among 20 adolescents in different high school close by the researcher's office after soliciting for informed consent from their parent through the Principal of the school. The volunteers contributed greatly to the questionnaire as many questions were asked for clarification, which enabled the researcher to reframe the items in the questionnaire for better response. Through the pre-test the column "I don't know" was added to some response options. It took approximately 13 minutes to complete the questionnaire.

3.3.6.3 *Characteristics of the data collection instrument*

The questionnaire (Annexure D) contained series of closed ended questions in English language, formed with simple word that required fixed answers to be selected. It consists of the following sections:

Introductory part: this part provided information about the purpose of the research and assured respondents of the confidentiality of the information provided. It assured the students that class grades will not be affected in any way and no punishment would be received from the teachers if anyone decided not to answer the questions.

Section A: comprised of items asking for biographical information of the respondents.

Section B: contained questions on knowledge of VCT, the items tested the ability of the students to know what is involved in VCT, its process, importance and where to undergo VCT.

Section C: involved items that determined the attitudes of the students towards VCT. It allowed them to indicate their thoughts, opinion, feelings and belief about VCT. This was designed to determine barriers that could influence the utilisation of HIV testing services.

Section D: contained items that reveal the practices VCT among the students; it was designed to show the level of VCT uptake among the respondents, establish factor that could improve uptake.

3.3.6.4 Data collection process

The data collection exercise was undertaken in November 2011 at the school premises. Data were collected during extra curricula activities day as permitted by the Principal. Participants were gathered in the school multipurpose hall with the help of the school counsellor. Before the commencement of data collection, participants were made aware of the meaning of voluntary HIV counselling and testing (VCT), objectives and significance of the study in an interactive manner. Thereafter, the questionnaires were administered to the participating students on the same day by the researcher and one trained research assistant that had been acquainted with the contents of the questionnaire prior to the day of data collection. After the completion of the questionnaires, they were dropped in an envelope provided by the researcher, sealed and taken by the researcher.

3.3.7 Ethical considerations related to data collection

3.3.7.1 *Permission to conduct the study*

Ethical clearance was requested and granted by the University of South Africa Ethics Committee before the study commenced, prior to this, the research proposal and data gathering instrument were submitted for approval. A copy of the approval was attached to the research proposal and a letter seeking permission to conduct the study at the school was sent to the school Principal. The request was granted by the Principal (Annexure C) and the school Counsellor was assigned to be the contact person for the study.

3.3.7.2 *Right to full disclosure*

The school authority, students and their parent/guardian were fully informed about the purpose of the study in the letters sent to them. The content of the letter was read aloud; purpose and procedure of the study were clearly explained to all the students and all enquiries from participants were answered.

3.3.7.3 *Informed consent*

The participants of this study were adolescents; therefore parental consent was obtained from their parents/guardians. Those selected were given assent and consent letters. The copies of consent letters (Annexure A) were sent to parents/guardians of each of the selected student through the student prior to the day of data collection for their signature, giving consent for the child's participation in the study. The researcher liaised with the school counsellor assigned by the Principal to telephonically contact parent to ask if they received consent forms and ask to return them next day if at all possible through the students. The researcher then went back to the school after two days to collect the signed consent and assent forms before the questionnaires were administered. All letters were signed and returned, none of the parent/guardian and the selected students refused to participate in the study.

3.3.7.4 *Autonomy and voluntary participation*

Despite the fact that consent letters were sent to the parents/guardians, the students were also treated as autonomous entity. Assent to participate in the study was obtained from each child, the students were asked to personally sign the assent letter (Annexure B) to agree to participate in the study. The students were told that participation is voluntary and they are free to withdraw at any time if they wish to do so without giving any reasons. They were assured that class grades will not be affected in any way and no one would receive any punishment from teachers for not answering the questions.

3.3.7.5 *Anonymity and confidentiality*

The researcher ensured strict anonymity and confidentiality as names of participants were not mentioned on the data collection instrument but numeric codes were used to identify the questionnaire. Teachers were not present during the exercise; they only helped gather the students in the hall after which they were urged by the researcher to leave. The researcher tried not to ask questions about their sexual belief or activities as only questions related to their knowledge, attitudes and practices of VCT of HIV/AIDS were asked in the questionnaire. The researcher and the research assistant handled the questionnaires during the exercise, after which the questionnaires were only accessible to the researcher and the statistician. No name was recorded on any of them. The students were not known to the researcher and the assistant, as such anonymity was guaranteed as there was no link to any of the student's information. Once the research report has been accepted, the researcher will destroy all raw data.

3.3.7.6 *Risks and benefits*

Guided by Polit and Beck (2008:17) which explained that researcher has the duty to protect the participants and make sure that the benefit outweighs the risk. Babbie and Mouton (2001:522) also states that participant can be psychologically threatened during participation in the research. Participants were not exposed to any physical activity that could cause harm to them, they were told of the benefit of the study and that there were no foreseeable risks associated with participation. However there was provision of debriefing, counselling and additional information. The researcher was available to

answer any question during the data collection and also employed the service of a professional Guidance Counsellor to provide free counselling services to any student who may experience emotional or psychological disturbance as a result of information. This was considered because some of the students may find issues around voluntary HIV counselling and testing in the questionnaire sensitive. No student exhibited or reported any sort of emotional disturbance and the researcher did not receive any call in that respect after the data were collected. The students were enthusiastic about the study as they demonstrated that they were familiar with such exercise.

3.3.8 Data analysis

The statistician in collaboration with the researcher undertook data analysis. Data were captured on a spreadsheet and analysed with EPIINFO Version 3.4.3, which summarised the data into frequencies and percentages. Frequencies and percentages were statistics used for the responses; these are the counts of how many respondents selected a particular response. The frequencies and percentages were illustrated using tables, pie charts and bar charts in the results section.

3.4 VALIDITY OF THE STUDY

3.4.1 Internal validity

This is the ability of a study to measure what it sets out to measure, it refers to the extent to which causal conclusions can be drawn (Araoye 2003:151; Blanche et al 2008:90). Internal validity is important in hypothesis-testing research (UNISA 2011:75). This study is a descriptive research and measures to control internal validity were not addressed.

3.4.2 External validity

This is the generalisability of the study findings from a sample to the reference population; this has implication for subject selection which should be representative of the study population (Araoye 2003:151). As stated in UNISA (2011:76) external validity is particularly important in descriptive design. The rigour which involves the use of

probability random sampling to achieve samples representative of the study population enhanced the external validity of this study.

3.4.3 Content validity

Measures employed to ensure content validity include designing the questionnaire based on literature reviewed. The researcher reviewed literatures related to the topic in order to enhance content validity of the instrument. The draft of the instrument was submitted to the supervisor and to an HIV/AIDS programme manager for the purpose of examining its appropriateness and clarity for the study before the pre-test was carried out. The feedback helped to ensure relevance, appropriateness and adequacy of the items.

3.4.4 Reliability

Reliability refers to the dependability of a measurement instrument; it is the extent to which the instrument yields the same result repeatedly (Blanche et al 2008:152). The ability of the instrument to yield same result when used repeatedly was addressed by the use of self-administered questionnaire in clear and simple words to avoid interference from interviewers who are likely to ask questions differently. Pre-testing the questionnaire among twenty adolescents that were not part of the study helped to make appropriate modification for easy comprehension. The reliability of the study was also enhanced by means of cleaning data using initial frequencies and looking for missing out of range values.

3.5 CONCLUSION

In this chapter, the research methodology which shaped this study was discussed. A quantitative approach using descriptive cross-sectional design was utilised for this study. Research sampling method, data gathering instrument, data collection, data analysis, measure to ensure validity and ethical issues were explained. In the next chapter data analysis, results and description of the research findings will be discussed.

CHAPTER 4

ANALYSIS AND PRESENTATION OF THE RESEARCH FINDINGS

4.1 INTRODUCTION

In this chapter data analysis and findings of the study are presented. The characteristics of the respondents are described, the level of knowledge, attitudes and practices of the respondents towards VCT are also presented. The broad objective of this study was to describe the level of knowledge, understand the attitudes and practices of VCT among high school adolescent students in Nigeria with the aim of informing VCT services and policies in Nigeria. More specifically the objectives were to assess the knowledge of the respondent on VCT, assess their attitudes and practices on VCT and identify factors that influence their willingness to utilise the VCT services. One hundred questionnaires were distributed to the randomly selected respondents.

The use of large sample size in this study was unachievable due to time constraint and financial limitations; the study was conducted only on a small size (100) of the study population (498) who were registered for the academic session during which data was collected. To generalize the result for larger group, the study should have involved more participants; this to some extent might affect the results.

4.2 DATA MANAGEMENT AND ANALYSIS

A total of one hundred questionnaires distributed to the respondents were returned completed. Data cleaning commenced on the field by the researcher ensuring that all the information on the questionnaires had been properly completed, and checked for completeness. The questionnaires were kept in a lockable cupboard by the researcher before data analysis commenced.

The computer programs used for the analysis were Microsoft Excel and EPIINFO Version 3.4.3. Collected data were captured on Excel spread sheet, cleaned by looking

for outliers or invalid values and later imported from Excel into EPI INFO program, that processed the data for analysis. Summary statistics used for the responses to each question are frequencies and percentages; this is the counts of how many respondents selected a particular response. The frequencies and percentages are illustrated by means of tables, pie charts and bar charts in the results.

4.3 RESEARCH RESULTS

4.3.1 Section A: Background characteristics of respondents

This section describes the biographic information of the respondents, variables such as age, gender, class level, tribe, religion and who they live with are described.

4.3.1.1 Age distribution

Table 4.1 presents the age group of respondents in this study, the majority (61.0%; n=61)) of the respondents belong to the age group 15-17 years. Followed by 26% (n=26) which made up of 12-14 years and 13% (n=13) who were 18 years and older.

Table 4.1 Distribution of respondents' age (N=100)

Age	Frequency	Percentage (%)
12-14 years	26	26.0
15-17 years	61	61.0
18 years and older	13	13.0
Total	100	100.0%

4.3.1.2 Class distribution

Table 4.2 shows class distribution of the respondents, among the 100 respondents the majority (52.0%; n=52) were in Senior Secondary 2 (SS2).

Table 4.2 Distribution of respondents' class level (N=100)

Class	Frequency	Percentage (%)
SS1	22	22.0
SS2	52	52.0
SS3	26	26.0
Total	100	100.0%

4.3.1.3 Gender distribution

As shown in table 4.3, gender distribution indicates that most (62.0%; n=62) of the respondents were female, 38 %(n=38) were male.

Table 4.3 Distribution of respondents' gender (N=100)

Gender	Frequency	Percentage (%)
Male	38	38.0
Female	62	62.0
Total	100	100.0%

4.3.1.4 Religion

With regards to what religion respondents practice, the result in table 4.4 shows that majority (59.0%; n=59) were Christians followed by Islam that constitute 40%, only 1 %(n=1) practice traditional religion.

Table 4.4 Distribution of respondents' religion (N=100)

Religion	Frequency	Percentage (%)
Christianity	59	59.0
Islam	40	40.0
Traditionalist	1	1.0
Total	100	100.0%

4.3.1.5 Tribe

The distribution of respondents' tribe is shown in table 4.5. Majority (54.0%; n=54) of the respondents were Yoruba, the Ibo constitute 14%, 8% were Hausa and 23% represent respondents from various other tribes in Nigeria.

Table 4.5 Distribution of respondents' tribes (N=100)

Tribe	Frequency	Percentage (%)
Yoruba	54	54.0
Ibo	14	14.0
Hausa	8	8.0
Others	23	23.0
Missing	1	1.0
Total	100	100.0%

4.3.1.6 Who respondents live with

Data shown in table 4.6 revealed that most (71.0%; n=71) of the respondents live with both parents (i.e. father and mother), 8% live with either brother or sister, few (4%) live with grandparent.

Table 4.6 Distribution of who respondents live with (N=100)

Who respondents live with	Frequency	Percentage (%)
Grandparent	4	4.0
Father and mother	71	71.0
Father alone	7	7.0
Mother alone	9	9.0
Brother/sister	8	8.0
Others	1	1.0
Total	100	100.0%

4.3.2 Section B: Respondents' knowledge of VCT

Understanding the respondents' knowledge about VCT was explored with questions about its awareness, what it entails and where it is offered.

4.3.2.1 Awareness of VCT

Having explained what VCT mean to the participants in an interactive manner before data gathering, they were asked to indicate in the questionnaire if they had heard about it before the day of data collection. As shown in figure 4.1, more than one-third (41%; n=41) of the respondents had never heard of VCT before, the remaining (59%; n=59) had heard about VCT before the day of data collection.

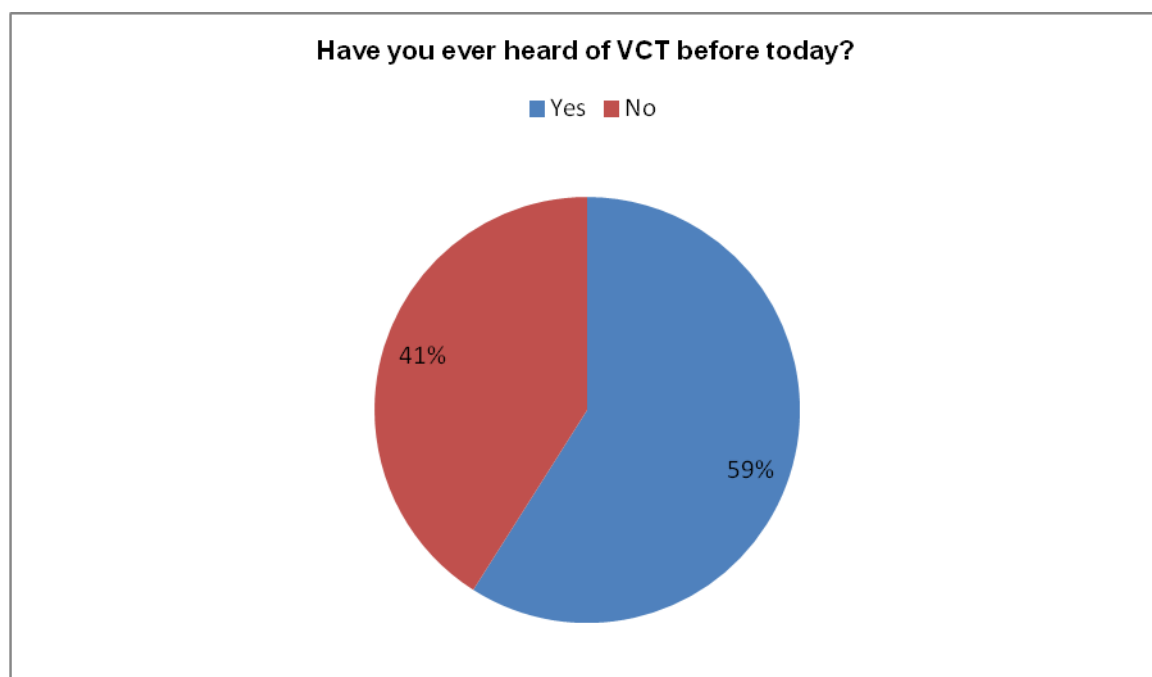


Figure 4.1 Respondents' earlier awareness of VCT (N=100)

4.3.2.2 Sources of VCT information

Mass media was identified as the major source of VCT information dissemination as indicated by those (n=59) with earlier awareness about VCT. Table 4.7 showed that, majority (52.5%; n=31) of the respondents heard about VCT through mass media. Those who learnt about it from their friends constitute 22.0% (n=13), 18.6 % (n=11) heard from health workers, 3.4 % (n=2) got information from the internet and only 1.7% (n=1) heard through teacher.

Table 4.7 Respondents' sources of VCT information (n=59)

VCT information medium	Frequency	Percentage (%)
Mass media	31	52.5
Friends	13	22.0
Health worker	11	18.6
Church/mosque	1	1.7
Internet	2	3.4
Teacher	1	1.7
Total	59	100.0%

4.3.2.3 Perceived benefit of VCT as a preventive tool for HIV

Most (68%; n=68) of the respondents knew VCT is important to prevent HIV, more than a quarter (32%; n=32) lack this knowledge; these are shown in table 4.8.

Table 4.8 Respondents' knowledge of VCT importance to prevent HIV (N=100)

VCT is important to prevent HIV	Frequency	Percentage (%)
Yes	68	68.0
No	5	5.0
I don't know	27	27.0
Total	100	100.0%

4.3.2.4 Knowledge of voluntariness of VCT

To determine if respondent have the knowledge that HIV counselling and testing is voluntary, question about its voluntariness was asked. As shown in figure 4.2, the result found that that half (50%; n=50) of the total respondents knew that it involves individual being tested on their own will, and the other half lack this knowledge (39%; n=50) responded "no" and 11% (n=11) claimed don't know.

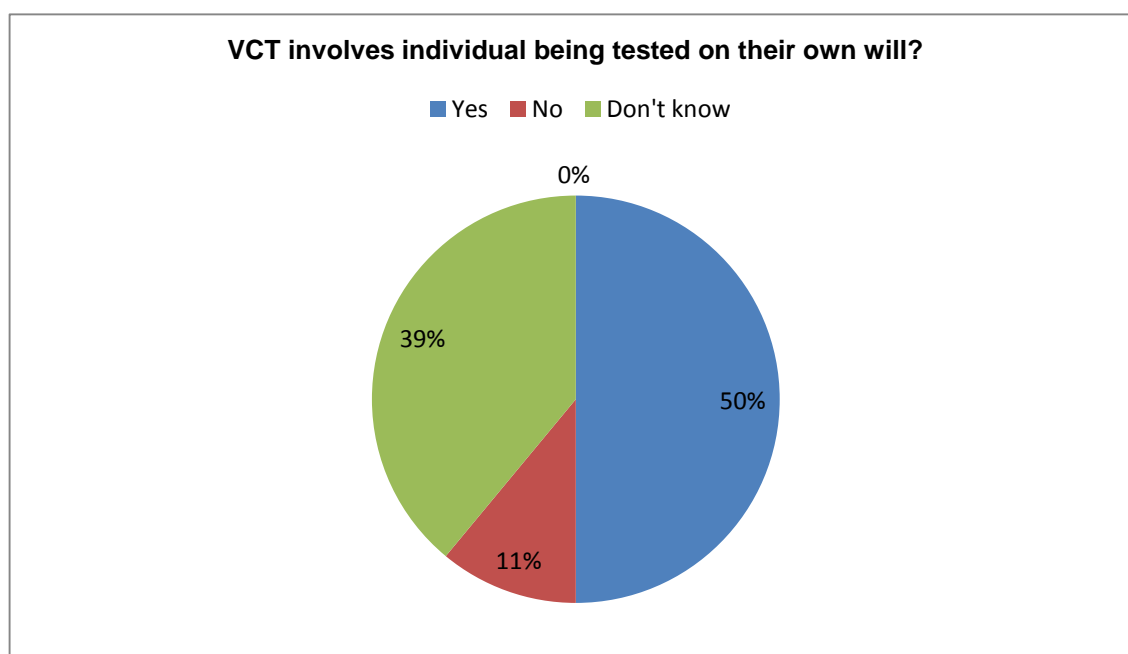


Figure 4.2 Respondents' knowledge of voluntariness of VCT (N=100)

4.3.2.5 Knowledge of VCT process: pre-test counselling, counselling and post-test counselling

The knowledge of the process of VCT was explored and the result showed that less than half (48%; n=48) of the respondents knew that VCT involves pre-test counselling, counselling and post-test counselling, 52% (n=52) lack this knowledge (42%; n=42 indicated "don't know" and 10%; n=10 cited "No").

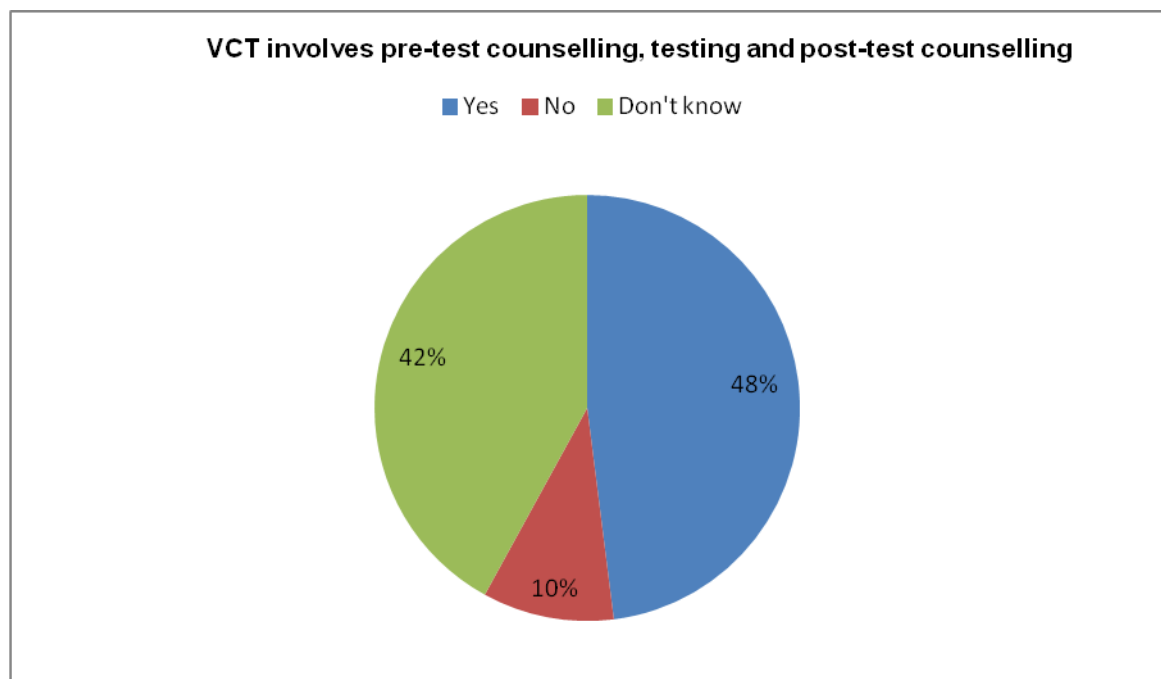


Figure 4.3 Respondents' knowledge of VCT process: pre-test counselling, counselling and post-test counselling (N=100)

4.3.2.6 Knowledge of confidentiality of VCT

As shown in figure 4.4 more than half (55%; n=55) of the respondents knew that VCT involves confidentiality, unexpectedly the rest (45%; n=45) lack the knowledge, 36% (n=36) said "don't know" and 9% (n=9) said "No".

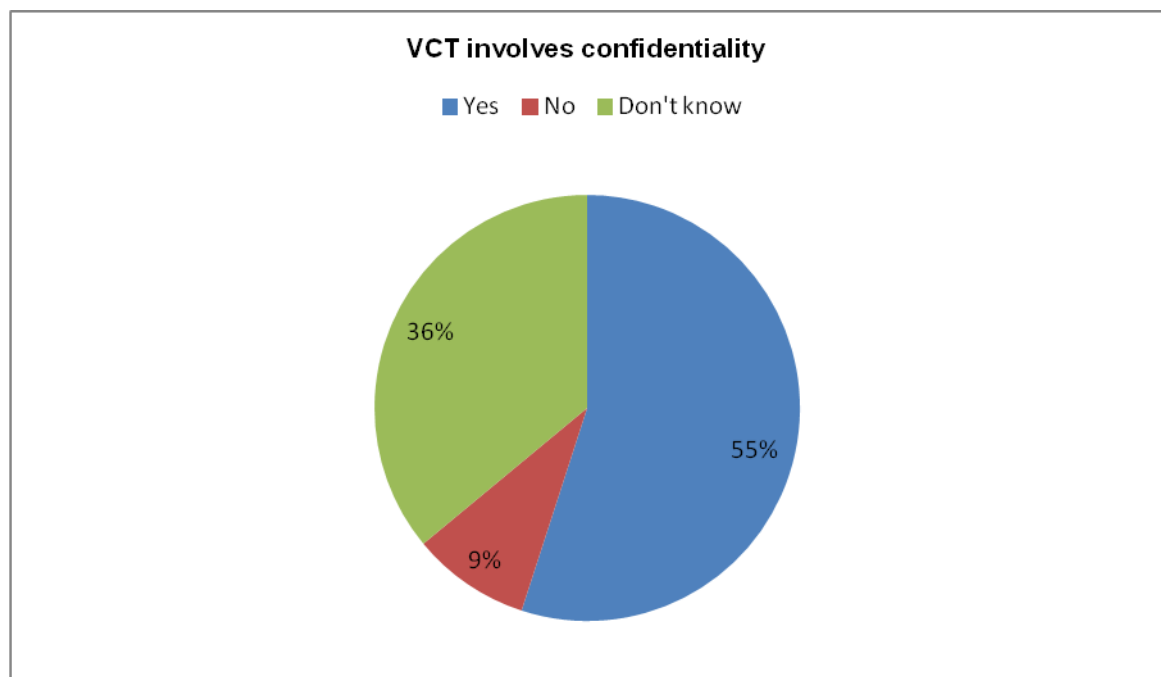


Figure 4.4 Respondents' knowledge of confidentiality in VCT (N=100)

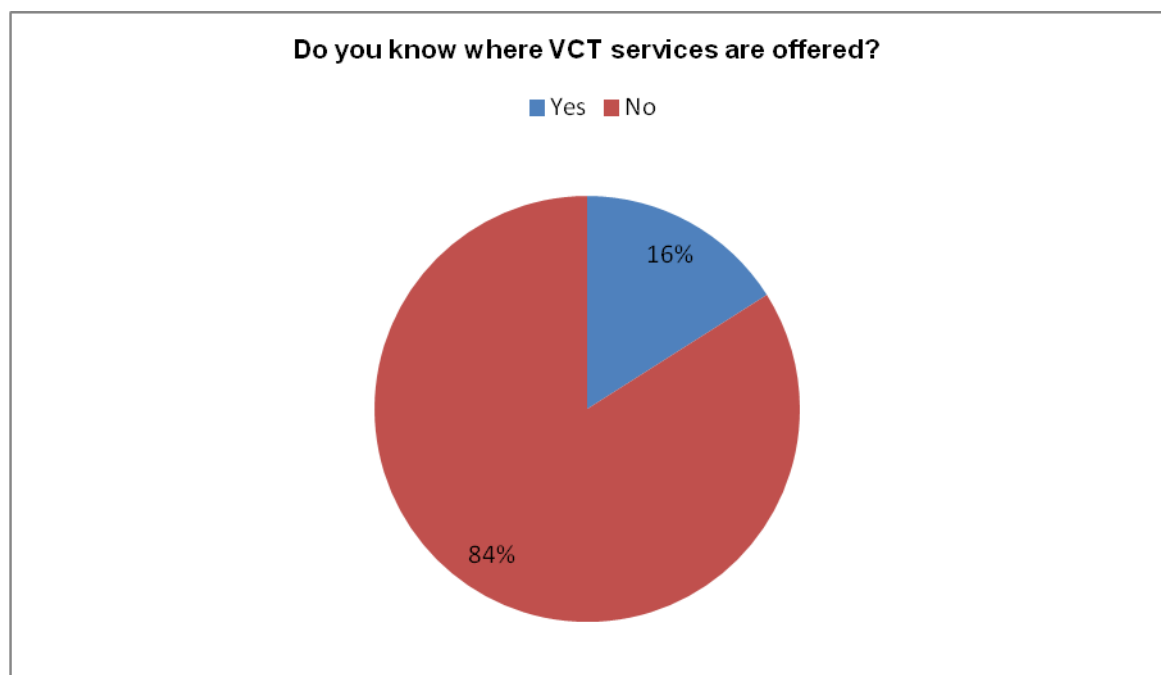


Figure 4.5 Respondents' knowledge of where VCT services are offered (N=100)

4.3.2.7 Knowledge of VCT service centres

As shown in figure 4.5, the majority (84%; n=84) of respondents did not know where VCT services are offered; only 16% (n=16) knew where the service is offered.

4.3.3 Section C: Attitudes of the respondents towards VCT

This part of the questionnaire afforded the respondents to express their opinions, thoughts and feelings about VCT uptake. Support for VCT and motivation to get tested were also explored.

4.3.3.1 Opinions about VCT uptake

Despite the fact that over 40% of the study participants initially claimed they had never heard of VCT, majority (87%; n=87) of them thought that undergoing VCT was necessary, but some (13%; n=13) still thought it was not necessary to undergo VCT; this is shown in figure 4.6 below.

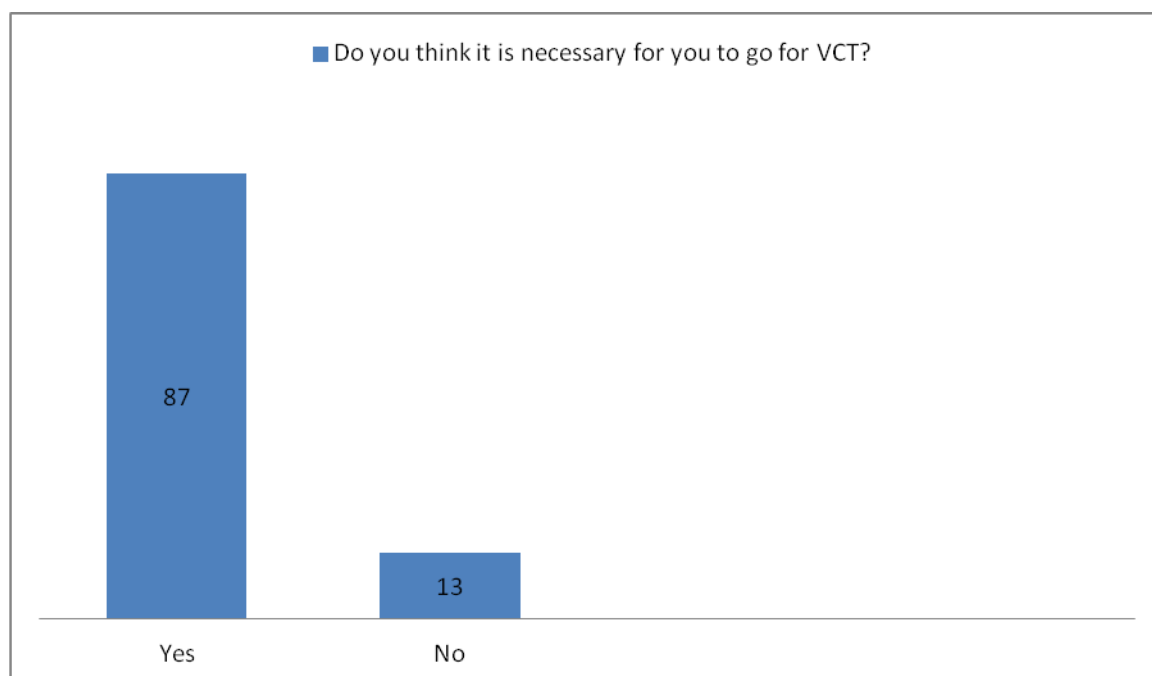


Figure 4.6 Opinions about the necessity of VCT uptake (N=100)

4.3.3.2 Motivating factors for VCT uptake

Those (13%; n=13) respondents that thought it was not necessary for them to undergo VCT gave various reasons that would motivate them to do so. This is shown in table 4.9, to get job in future (n=4), for marriage purposes (n=4), if there is a cure for HIV (n=4) and for overseas opportunity (n=1).

Table 4.9 what will motivate you to go for VCT (n=13)

Motivation to undergo VCT	Frequency
To get job in future	4
Overseas opportunity	1
For marriage purpose	4
During pregnancy	-
If there is a cure for HIV	4
Total	13

4.3.3.3 Support/approval of VCT

To determine respondents' support or approval of VCT, they were asked if they would recommend it to friends and relatives. Majority (89%; n=89) of them agreed to recommend it to friends and relative, few (11%; n=11) reported negative attitude, these were depicted in figure 4.7.

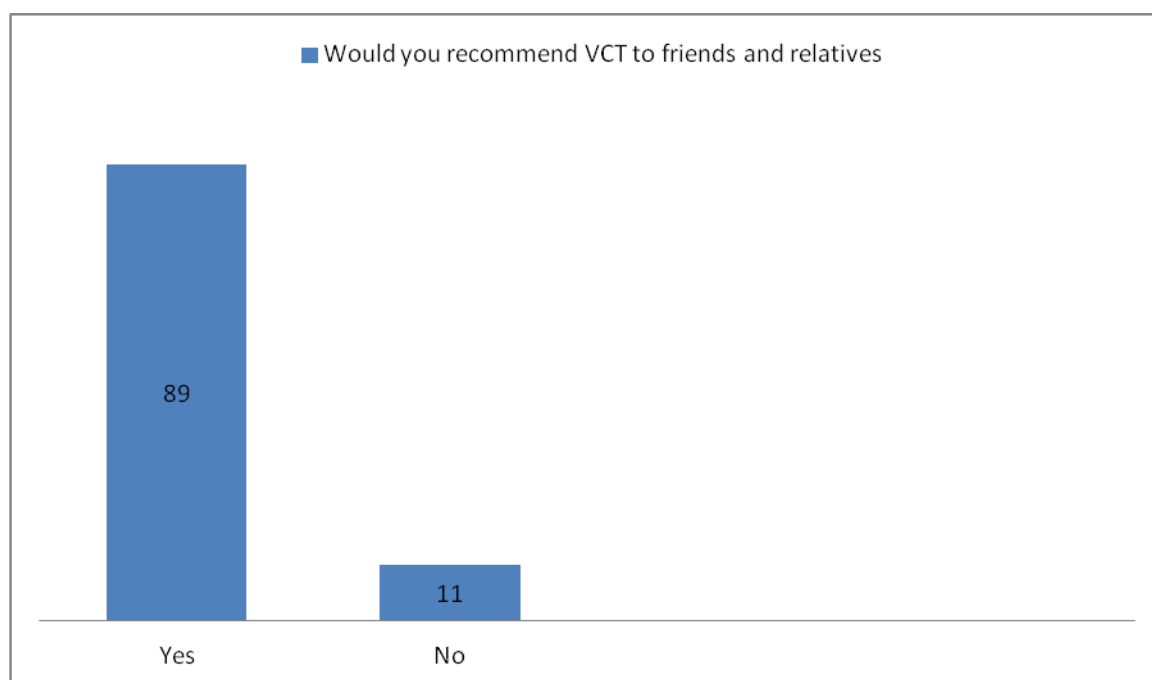


Figure 4.7 Respondents' support/approval of VCT (N=100)

4.3.3.4 Attitudes to possible positive HIV test

As shown in table 4.10, there were different personal views with regards to opinions of respondents if tested positive to HIV. A small proportion, 4% (n=4) said they would commit suicide and none reported would spread the virus to others, majority (82.0%; n=82) reported that they would take it in good fate, in this case “good fate” has to do with the beliefs system of the participants to accept an occurrence believing it to be inevitable and not necessarily take a dangerous action about the occurrence. Some (7%; n=7) said they would disbelieve the result; same proportion gave other various reasons such as “I will pray about it, God will change it to negative”.

Table 4.10 Attitudes to possible positive HIV test (N=100)

What respondents will do if tested positive to HIV	Frequency	Percentage
I will kill myself	4	4.0
Disbelief the result	7	7.0
Spread the virus to others	-	-
I will take it in good fate	82	82.0
Others	7	7.0
Total	100	100%

4.3.3.5 Preference of VCT information and uptake source

The issue around HIV testing is still a sensitive one as shown in the table 4.11, most (59%; n=59) of the respondents prefer to seek information in hospitals and get tested there, very few (2%; n=2) prefer to get their information from family member. Less than ten percent (9%; n=9) prefer youth club at school, some (18%; n=18) indicated private clinic, only 1 % (n=1) indicated a drug store.

Table 4.11 Preference of VCT information and uptake source (N=100)

I will prefer to seek information about VCT and get tested for HIV via?	Frequency	Percentage
Health teacher	10	10.0
Hospital	59	59.0
Private clinic	18	18.0
Youth club at school	9	9.0
Drug store	1	1.0
Family member	2	2.0
others	1	1.0
Total	100	100%

4.3.3.6 Opinion on who should uptake VCT

Respondents were asked for their opinion on who they think should go for VCT, table 4.12 shows the results. It appears that respondents were well informed about the need for people to have HIV test as majority (94%; n=94) felt that everyone needs to undergo VCT, 3 % (n=3) indicated that it for promiscuous people, 2 % (n=2) felt it is for couple in marriage and 1 % (n=1) cited that it is only for sick people. None responded based on gender, pregnancy condition or people in boyfriend/girlfriend relationship.

Table 4.12 Opinion of respondents on who should go for VCT (N=100)

Who should go for VCT	Frequency	Percentage (%)
Only sick people	1	1.0
Everybody	94	94.0
Only female	-	
Only male	-	
Promiscuous people	3	3.0
Pregnant women only	-	-
Couple in marriage	2	2.0
People with boyfriend/girlfriend	-	-
Total	100	100%

4.3.4 Section D: The practices of respondents towards VCT

4.3.4.1 Utilisation of HIV testing services

Figure 4.8 shows that, only 14% (n=14) of the respondents had tested for HIV previously, the rest (86%; n=86) of the respondents indicated they had never tested for HIV before. Of those that had tested before, the reasons that influence their decisions to test was just to know their status (85.7%; n=12) and was not because of their susceptibility to HIV infection, only 14.3 % (n=2) cited sickness as their reasons; this is shown in table 4.13.

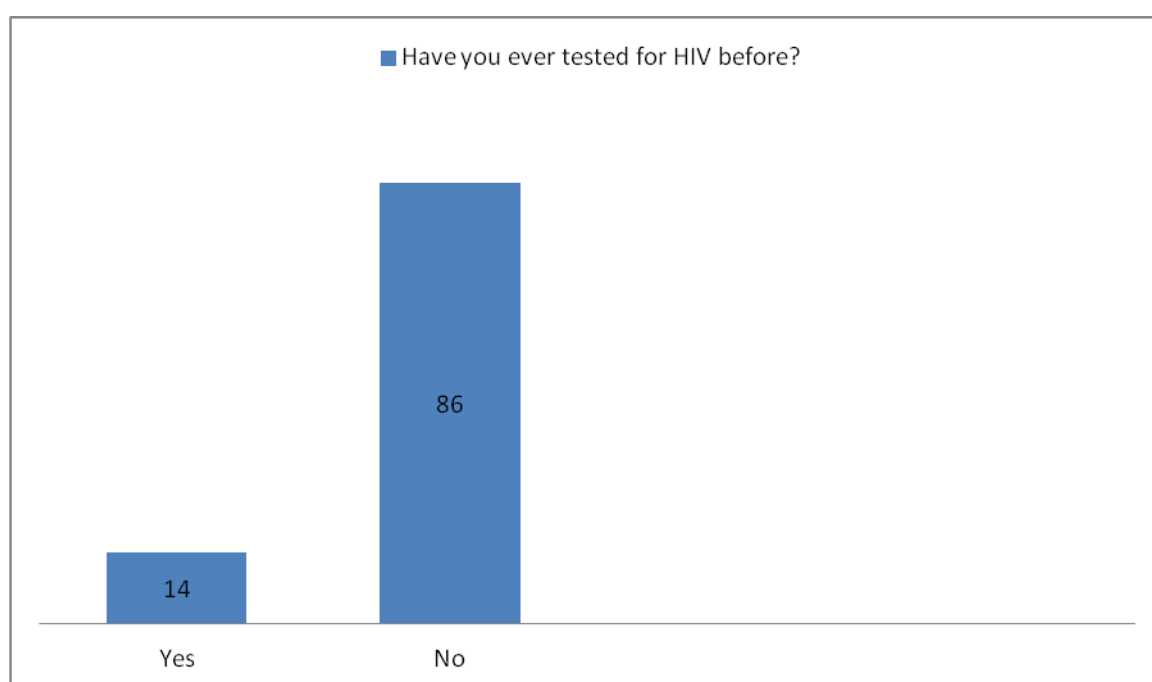


Figure 4.8 Previous utilisation of HIV testing service (N=100)

Table 4.13 Reasons for respondents' decision to test for HIV (n=14)

Reasons for respondents decision to test	Frequency	Percentage (%)
Was sick	2	14.3
Had unprotected sex	-	-
Raped	-	-
Had blood transfusion	-	-
Cut with sharp object	-	-
Just want to know my HIV status	12	85.7
Accompany someone	-	-
Others	-	-
Total	14	100.0%

4.3.4.2 Perceived barriers to utilisation of VCT services

As shown in table 4.14, those that had not tested before were asked for the reasons that prevented them from doing so, majority (45.4%; n=39) felt that they were sure they did not have HIV, 25.5% (n=22) indicated that they did not know where to test, some proportion (11.6%; n=10) feared positive result, 10.5%(n=9) were afraid of stigmatisation. It is obvious that confidentiality is not the main barrier to testing among these adolescents as only 1.2% (n=1) feared other people will know.

Table 4.14 why have you not tested? (n=86)

Reasons for respondents decision not to test	Frequency	Percentage (%)
Scared of positive result	10	11.6
The test is expensive	5	5.8
Afraid of stigmatisation	9	10.5
I don't know where to test	22	25.5
Afraid other people will know	1	1.2
I am sure I don't have HIV	39	45.4
Total	86	100.0%

4.3.4.3 Willingness to test for HIV in school health club

Willingness to accept HIV testing in schools was explored by asking the question if respondents will test supposing the service is available at the school health club. Surprisingly figure 4.9 shows that most (86%; n=86) were willing to test if the service is available in school health club.

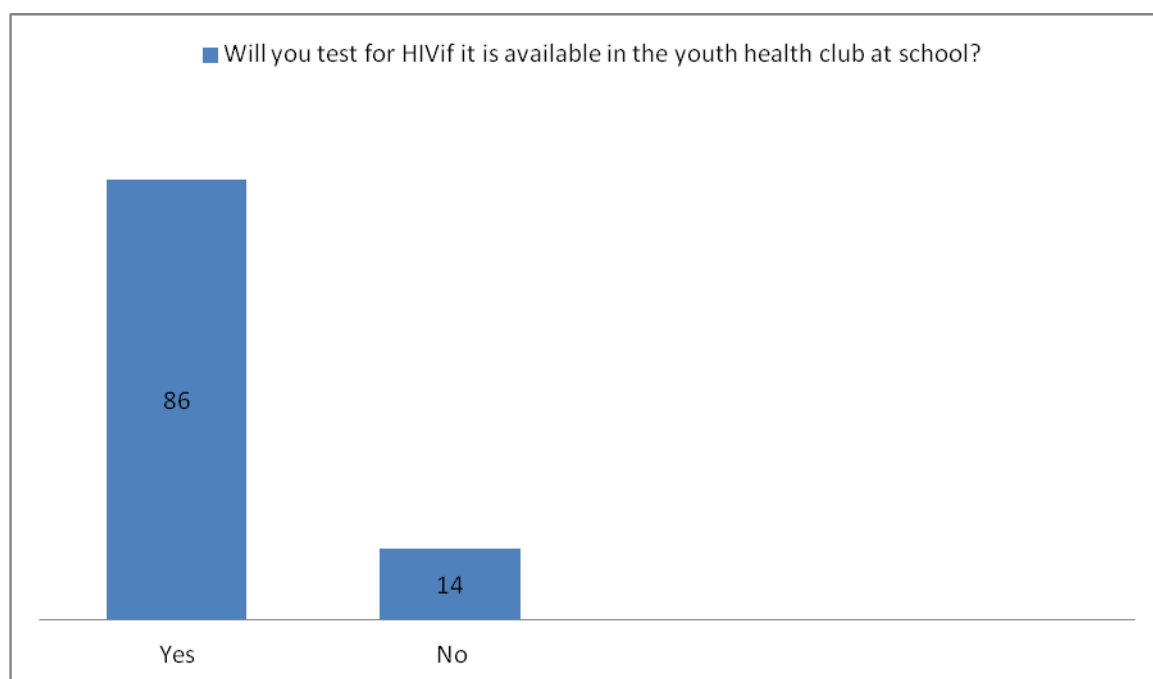


Figure 4.9 HIV testing at school health club (N=100)

4.3.4.4 Utilisation of free VCT services

To know if respondents would be willing to utilise free VCT services, they were asked if they would go for HIV testing if it is free, as shown in figure 4.10, high percentage of the respondents (89%; n=89) indicated that they would go, some proportion (11%; n=11) indicated they would not.

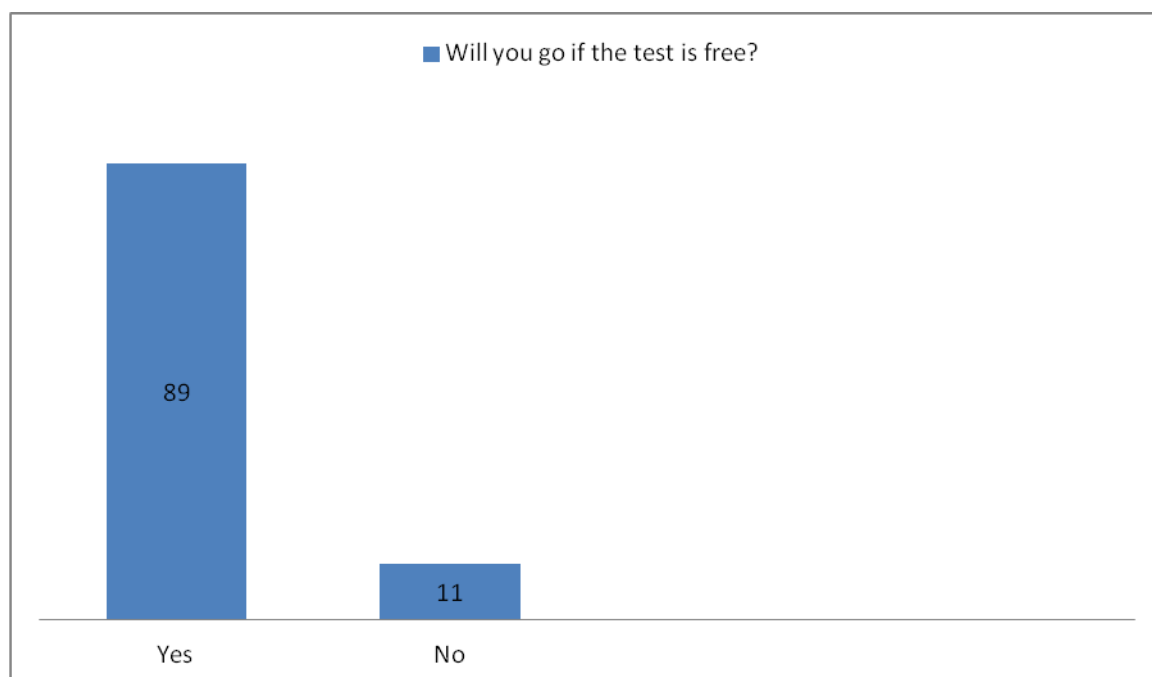


Figure 4.10 Utilisation of free HIV testing (N=100)

4.4 OVERVIEW OF RESEARCH FINDINGS

Majority (61.0%) of the respondents were in the age group 15-17 years, most (62%) of them were female. The assessment of their VCT knowledge showed that 41% of the respondents were not aware of VCT before. Of those that had previous awareness of VCT, mass media was identified as the major (52.5%) source of VCT information. Most (68%) of the respondents knew VCT is important to prevent HIV, 45% did not know about confidentiality of VCT. Though the majority (87%) thought that undergoing VCT is necessary, 84% of them did not know where to get the service. While 4% reported they would commit suicide if test positive to HIV, most (82%) indicated they would take it in good fate.

Although most (94%) of the respondents showed a positive attitude to testing for HIV, they thought that everyone should undergo VCT, in the actual sense only 14% had ever tested and the main motivation for testing was just to know their status (85.7%). Out of the 86 respondents that had not tested before, some perceived barriers to VCT uptake among them were identified, 45.4% indicated that they were sure they did not have HIV, the test is expensive (5.8%), I don't know where the test is done (25.5%), afraid of

positive result (11.6%). Different reasons that would motivate respondents to test for HIV include: if there is a cure (30.8%), future job opportunity (30.8%), for marriage purpose (30.8%).

The majority (86%) showed willingness to test for HIV if present in school health club, also 89% were willing to utilise VCT services if it is free.

4.5 CONCLUSION

In this chapter data was analysed, presented and interpreted in accordance with the four sections of the questionnaire namely background characteristics of respondents, knowledge, attitudes and practices of VCT. Based on the findings of this study conclusions and recommendations were made, these together with the limitation of this study will be discussed in the next chapter.

CHAPTER 5

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The increase in the rate of new HIV infection among young people underscored the need to carry out research on the level of knowledge available to this group of people, and to better understand their attitudes and practices towards VCT. This chapter covers the discussion of the results and interpretation of findings on knowledge attitudes and practices of adolescent senior students of a high school in Nigeria, limitations of the study, conclusions derived from the findings and recommendations.

5.2 DISCUSSIONS OF THE RESEARCH FINDINGS

5.2.1 Background information

The majority (61%) of the students in this study were between the age group 15-17, predominantly female (62%) and more than half (52%) were in SS2. The age group appear to correspond to the ages of students in senior secondary school in Nigeria which is usually between 14-18 years (Federal Republic Of Nigeria 2009:18). The respondents were mostly Christians (59%), and belong to the Yoruba tribe (54%), this was not unexpected as Lagos where the study was conducted is located in the southern part of Nigeria a predominantly Christians region that consists majorly of the Yoruba speaking people.

5.2.2 Knowledge of respondents towards VCT

The results showed that 59% of the students were familiar with VCT, this is similar to an earlier study in Nigeria where more than 55.0% of respondents knew about VCT (Illiyasu et al 2006:1920), but much lower than 70.6% reported among youths in Nigeria in a more recent study (Joseph 2010:306). This is surprising considering the fact that

Lagos is a big city and one expects students there to be well informed about HIV/AIDS and testing for the disease. A study conducted in Ethiopia already reported 96.7% VCT awareness among students (Abebe & Mitike 2006:150). This is an indication that awareness about VCT is yet to reach majority of the adolescent population in Lagos Nigeria.

Mass media was identified as the major source of VCT information as the majority (52.5%) of the respondents in this study heard about VCT through mass media. This is almost similar to the 47% reported among students of a tertiary institution in Nigeria in another study (Ikechebelu et al 2006:246). Olugbenga et al (2008:446) also found that electronic media played a major role as a source of information about VCT in Nigeria as 71.5% of their study respondents were informed about VCT through electronic media. From the results of this study and the literature, it appear that electronic media in the Nigerian society is a good source of dissemination of information on health related issues.

The majority (68%) of the respondents did not know the benefit of VCT as a preventive tool for HIV, half (50%) of them did not know VCT is done voluntarily on willing individuals. Almost half (45%) of the respondents did not know about the confidentiality of VCT, and about 50% of the respondents knew that VCT involves pre-test counselling, counselling and post-test counselling. This findings though unimpressive, appear to be better than an earlier study in Nigeria (Illiyasu 2006:1920) where none of the respondents knew the steps involved in undergoing VCT process (pre-test counselling, testing and post-test counselling). There seem to have been an improvement in VCT knowledge among Nigerians as a recent study in Nigeria by Joseph (2010:308) reported that over 75% of the participants knew about VCT confidentiality.

This high level of ignorance about the benefits of VCT, the process involved in terms of its confidentiality and wrong beliefs that people are forced to test against their will and are detained in the hospital after getting a positive result may serve as barriers that prevent adolescents and youths from testing (UNAIDS 2009:4). In addition, ignorance of these adolescents on the benefits of VCT as a means of prevention of HIV could deprive them of behaviour modification, early treatment and care for HIV/AIDS.

With regards to where to access VCT services, the result shows that, majority (84%) of the respondents did not know where VCT services are offered; this is in sharp contrast to a Burkina Faso study where 73.7% of adolescents knew where to get HIV test (Guiella 2007:2), and the findings from Joseph (2010:308) that reported that about 60% of his study participants knew where to access VCT services. The respondents' ignorance of where to access VCT services is not surprising because most of the VCT centres in Lagos state are located in general hospitals and primary health care centres and most of these health institutions cater for referred hospital patients (FHI 2011). People who are not sick and do not need to visit health institutions may not benefit from VCT services at these centres.

The responses of the participants in the study showed that they have inadequate knowledge of VCT and its roles in HIV prevention and as a gateway to treatment. An appropriate model different from hospitals setting is necessary especially for young people.

5.2.3 Attitudes of the respondents towards VCT

Despite the fact that over 40% of the study participants claimed they had never heard of VCT, the majority (89%) of the respondents agreed they would recommend VCT to friends and relatives, most (87%) of them thought that undergoing VCT was necessary and 94% said that everyone needs to undergo VCT. This proportion is higher than the 49.8% reported by Abebe and Mitike (2006:150) and 81.2% reported in the study by Joseph (2010:308). This is an indication that the students have good attitudes towards VCT by appreciating the need for knowing one's HIV status, although they demonstrated poor attitude towards VCT by the motivating factors that would compel them undergo VCT; employment purposes (30.8%), marriage purposes (30.8%), availability of cure for HIV (30.8%) and for overseas opportunity (7.7%).

Fear of positive result has been reported as one of the barriers that prevent people from testing for HIV (Weiser et al 2006:1018; Iliyasu et al 2006:1920; UNAIDS 2009:2-5), in this study a lower percentage (11.6%) of respondents feared positive result, this is much lower than 61.3% reported earlier in Nigeria (Joseph 2010:308), 45.5% reported

among adolescents in Ethiopia (Abebe & Mitike 2006:150) and in another study conducted in Malawi whereby majority (88.9%) of young people cited fear of positive result as a barrier that prevent them from testing (Mphaya 2006:119). A high proportion (82%) reported that they would take an HIV positive result in good fate, which is also a good indication of their positive attitude towards VCT by accepting the situation; in this case “good fate” has to do with the believe system of the participants to accept an occurrence as inevitable. However, a small proportion (4%) said they would commit suicide if tested HIV positive, but none reported they would spread the virus to others. The 4% above may account for adolescent who have suicidal tendency when faced with difficult situations in life. In a focus group study that examined attitudes towards VCT among adolescents in South Africa, almost half of the respondents who expressed fear of an HIV-positive diagnosis said they would attempt suicide if tested positive (MacPhail, Pettifor, Coates, & Rees 2008:91).

When preference of VCT information and uptake source was examined, it showed that the issue of HIV testing is a sensitive one as most (59%) of the respondents prefer to seek information and get tested in hospitals, very few (2%) prefer to get their information from family member. When asked who they think should be tested for HIV, the respondents failed to identify that young people in sexual relationship need to know their HIV status, it is obvious that these adolescents do not know the implication or importance of knowing their HIV status when in such relationship.

5.2.4 Practices of respondents towards VCT

With regards to utilisation of HIV testing services, the finding in this study concurs with earlier studies (Iyaniwura & Oloyede 2006:28; Joseph 2010:308; Iliyasu et al 2006:1921) in Nigeria that reported low VCT uptakes as only 14% of the respondents had previously tested for HIV. Less than 2% of respondents in a study by Iliyasu et al (2006:1921) had undergone VCT, Iyaniwura and Oloyede (2006:28) reported 11.5% uptake among youth of a local population in Nigeria, and 33% VCT uptake was reported by Joseph (2010:308) among youth in another Nigeria study. The low VCT uptake appears not to be limited to Nigeria as a study in Ethiopia by Abebe and Mitike (2006:150) also revealed low (18.5%) uptake among adolescents. Whereas a higher

level (31.9%) of uptake was reported among adolescents in Tanzania (Assenga 2009:100)

The reasons given by most (85.7%) of those that had tested before was just to know their status and was not because of their susceptibility to HIV infection. This result support the findings of a study in Malawi which also found that most (93.1%) young people that had tested for HIV did so primarily just to know their status (Mphaya 2006:85). This result is different from another Nigerian study by Iyaniwura and Oloyede (2006:28), where about one-fifth (19%) tested just to know their HIV status and others were motivated because of being sick. Although Nigerian youths, especially males with multiple sexual partners perceived themselves at risk of HIV and are likely to test for HIV (Oshi et al 2007:200), about half (45.4%) of the respondents in this study who had never had VCT had not done so because they believed they could not be infected with HIV. This is similar to the finding of Iyaniwura and Oloyede (2006:28) where 47.6% of the respondents also believed they were not susceptible to HIV. Perceived risk of HIV infection has an influence on the willingness to undergo VCT, low perceived risk for HIV infection has been described as the major reason for low VCT uptake among young people (Ma et al 2007:S132). Concerning VCT centres, 25.5% indicated that they did not know where to test which is a cause for concern.

Most (86%) of the respondents are willing to undergo VCT if the service is available in school health club, which is a better acceptance when compared with 35.1% of university students who preferred VCT to be given at youth clubs in Ethiopia (Alemayehu 2010:113). Furthermore, a high percentage of the respondents (89%) indicated they would go for VCT if the services were free of charge; this is supported by findings by Abebe and Mitike (2006:150) in their study where most (84.3%) participants indicated that they would go for free HIV test by, also a similar percentage(80%) was reported by Iyaniwura and Oloyede (2006:28).

5.3 CONCLUSIONS

Awareness about VCT among the participant is not good enough as almost half (41%) of the respondents had no previous awareness of the test that determines the HIV status of an individual before the day of data collection in an urban community in Lagos.

Ignorance of confidentiality and voluntariness of VCT may be the reasons why young people do not test, as many of the students demonstrated this ignorance in their responses. Most adolescents are not getting information on HIV testing via school as one would expect, only one out of all respondents knew about VCT from a teacher.

Perceived benefit of VCT is good, majority of the participants knew VCT is important in the prevention of HIV, but more than a quarter are ignorant that knowing ones HIV status is important to modify behaviour in the prevention of HIV. Regarding attitudes and practices of the students towards VCT, it can be concluded that the practice of VCT uptake is poor. Respondents showed positive attitude to testing, when almost (94%) all of them thought that everyone should undergo VCT and most (82%) of them said they would accept possible positive HIV test.

Ignorance of where to access VCT services may be one of the barriers to its uptake as many are unaware of existence of confidential HIV testing in their vicinity. Future employment, marriage purposes and if there is cure for HIV are potential motivating factors for VCT uptake among adolescents. It could be deduced that VCT issues is still a sensitive issue among these adolescents, this was found when very few indicated they would prefer to seek information about VCT from family members. Availability of VCT services in school health club and free VCT services became the apparent driving factors that would enhance HIV testing among these adolescents.

5.4 RECOMMENDATIONS

As a result of the devastating impact of HIV/AIDS among young people in developing countries such as Nigeria which is often challenged with limited resources for health service delivery, education on VCT is one of the strong strategies to empower young people to curb the spread of HIV/AIDS. Having discovered that low VCT uptake among the students could be related to inadequate knowledge and services available to them. Focus should be on appropriate information dissemination and services. Based on the findings of this study the following recommendations were made to improve knowledge, attitudes and practices of adolescent towards VCT.

- Schools and religious places should contribute largely to disseminating information encouraging HIV testing, they should not shy away from educating people on this topic because most adolescents absorb and follow what they are thought at school and at religious places.
- More electronic mass media campaign on the importance of VCT in the prevention of HIV and its process needs to be put in place. The benefits of VCT as a means of behaviour modification, early treatment and care for HIV/AIDS need to be more emphasised.
- Creating more public awareness targeted particularly at adolescents and youth on where the available VCT centres around them can be found and emphasising personal susceptibility to HIV/AIDS. Including VCT enlightenment videos with presentation and role playing during extra curriculum activities in high schools.
- Making use of celebrities such as musicians and actors to promote the importance of knowing one's HIV status, young people often respond to message from celebrities they adore.
- An appropriate model of VCT services that is client-initiated and youth-friendly need to be put in place and accessible to young people. VCT services should not be limited to health institutions, establishment of HIV testing centres where rapid test can be done should be introduced to high schools.
- Putting policy in place to provide free VCT for adolescents' age 12-19 years in government hospitals.
- There is need to engage health workers to change their attitude and stop being judgemental as this cultural factor is a barrier to utilisation of VCT services by the youth.

5.4.1 Recommendation for further studies

- Comparative study among students of different schools to establish factors that influence VCT knowledge, attitudes and practices in different areas.
- Comparative analytical study among male and female adolescents to find out if there is any causal relationship between gender and attitude and practice towards HIV testing.

- A qualitative research among high school adolescents in Nigeria is needed to improve understanding of factors that influence young people's decisions to go for VCT. Additionally, a population-based qualitative research would be appropriate in Lagos.

5.5 CONTRIBUTIONS OF THE STUDY

This study has revealed that there is gap in what adolescents know about the importance of VCT as an empowering tool to curb the spread of HIV and to prevent being infected, thus, it is imperative to intervene in order to bridge this gap. After the completion of this study, the researcher will submit a proposal to the Ministry of Health, WHO and Ministry of Education in Nigeria with recommendations to produce fliers, organise health talks which focus not only on HIV mode of transmission but also emphasise the need for young people to know their HIV status.

The proposal to the Ministry of health and Ministry of Education will include recommendations on introducing rapid HIV testing to high schools health clubs; it will also recommend putting in place a policy to provide free VCT for adolescents' age 12-19 years in government hospitals. This is important as it will go a long way to reduce the rate at which HIV is spread among youths later in life, if these interventions are put in place during early adolescence.

5.6 LIMITATIONS OF THE STUDY

This study was conducted among adolescents in a high school; therefore caution should be exercised in generalising the findings of this study to other context in Nigeria. The study was conducted only on a small size of the study population registered for the academic session at the time of data gathering. The researcher felt that the sample size used in this study was too small for the purpose of generalising the result to a larger population. Therefore to generalize the result for larger group, the study should have involved more participants.

In addition, due to the sensitive nature of the topic investigated, there might have been certain degree of inaccurate responses provided the adolescents.

5.7 CONCLUDING REMARKS

Knowing that VCT is the entry point to prevention, treatment and care of HIV/AIDS, the importance of empowering young people to access VCT information and services to curb the spread of this disease in Nigeria cannot be overemphasised. As it became apparent from the findings of this study that barriers to VCT uptake found among adolescents who participated could be linked to inadequate knowledge they possess with regards to VCT which is consequently affecting their attitudes and resulting to low VCT uptake. A concentrative effort between educational institutions of all levels, students, religious places and Ministry of Health is needed to improve VCT uptake among young people in Nigeria.

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ANNEXURE A: CONSENT FORM

KNOWLEDGE, ATTITUDES AND PRACTICES OF VOLUNTARY HIV COUNSELLING AND TESTING AMONG ADOLESCENTS OF SENIOR HIGH SCHOOL IN NIGERIA

Dear Parent/Guardian,

My name is Toluwalase Mayaki, a student of University of South Africa (UNISA), Pretoria South Africa. I am currently conducting a research to assess the level of knowledge, attitudes and practices of adolescent high school students on voluntary counselling and testing (VCT) of HIV in Nigeria. This research is in partial fulfilment of the award of Master of Public Health (MPH) at the above named university.

I do not want to collect information from your child in the classroom without being sure that you are informed about the project. I am interested in learning more about thoughts, opinion and feelings of adolescents about health behaviour particularly, voluntary counselling and testing of HIV. Information obtained will be useful for policy makers in the government departments to provide information on the need to plan a successful VCT programme for youths and adolescents in Nigeria.

Participation requires that each child complete a questionnaire which will not bear their names and all information collected will be kept private by me. Please know that participation in this study is voluntary and no opinion will be formed against anyone who decline to participate. If you wish that your child should participate, kindly circle below YES and sign. Circle NO if you do not want your child to participate.

Do you want your child to participate? **YES** _____

Signature of Parent/Guardian

NO

Thank you.

Toluwalase Mayaki

ANNEXURE B: ASSENT FORM

KNOWLEDGE, ATTITUDES AND PRACTICES OF VOLUNTARY HIV COUNSELLING AND TESTING AMONG ADOLESCENTS OF SENIOR HIGH SCHOOL IN NIGERIA

Dear Student,

My name is Toluwalase Mayaki, a student of University of South Africa (UNISA), Pretoria South Africa. I am currently conducting a research to assess the level of knowledge, attitudes and practices of high school adolescent students on voluntary counselling and testing of HIV in Nigeria. This research is in partial fulfilment of the award of Master of Public Health (MPH) at the above named university.

I am interested in learning more about your thoughts, opinion and feelings about health and what you do to stay healthy, particularly voluntary counselling and testing of HIV. Information obtained from you will be useful to improve school health education programme in Nigeria.

Participation requires that you complete a questionnaire which will not bear your name; I will use numbers to identify the questionnaire. Please know that participation in this study is voluntary and no opinion will be formed against you if you are not interested to participate. Kindly circle below YES and sign below If you wish to participate. Circle NO if you do not want to participate.

Do you want to participate? **YES** _____

Signature of student

NO

Thank you.

Toluwalase Mayaki

ANNEXURE C: LETTER OF APPROVAL FROM SCHOOL PRINCIPAL



LAGOS STATE GOVERNMENT
COMMUNITY SENIOR HIGH SCHOOL

Wasimi-Maryland, Ikeja.

P.O.Box 7349 Ikeja, Lagos.
E-mail: commsnrwasimi@yahoo.com



Our Ref:

Date:

Your Ref:

Miss Tolu Mayaki
216 Mushin Road, Itire,
Lagos
Nigeria.
2 – 11- 2011

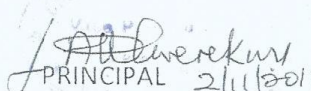
Dear Miss Mayaki,

RE: Approval to conduct research on knowledge, attitudes and practices towards voluntary HIV counseling and testing among adolescents of Senior High School Students in Nigeria.

I would like to convey our approval to conduct the above research in this school.

Best wishes.

Yours faithfully,


PRINCIPAL 2/11/2011
ALABI, A.A. (MRS)

ANNEXURE D: QUESTIONNAIRE

STUDY OF KNOWLEDGE, ATTITUDES AND PRACTICES OF VOLUNTARY HIV COUNSELLING AND TESTING AMONG ADOLESCENTS OF SENIOR HIGH SCHOOL IN NIGERIA

Dear Student

I am interested in learning more about your thoughts, opinion and feelings about health and what you do to stay healthy. Please, do not put your name anywhere on this questionnaire.

Knowledge of Voluntary HIV counselling and testing (VCT) is one of the important strategy to curb the spread of HIV infection which has become a major problem among youths and adolescents. There is need to improve the quality of information available to adolescents on the importance of VCT. By completing this questionnaire, you will be contributing to the body of knowledge available to improve adolescent health education on HIV/AIDS in Nigeria.

None of your answers will be available to anyone at anytime except me and all information you give me will be kept private. Whether or not you answer the questions will not affect your class grades in anyway. If you decide not to participate, you will not receive any punishment from your teachers. However, I really need your help to keep young people in Nigeria healthy by completing this questionnaire. There is no right or wrong answer, please try your best to give honest answer to all the questions as applicable to you.

Thank you for your cooperation.

Toluwalase Mayaki

SECTION A: BACKGROUND INFORMATION

Please tick ✓ or circle the appropriate code that corresponds to your chosen answer. Read all the options before you mark your answer.

Q/no	Questions	Response option	Code
1	What is your gender?	Male.....	1
		Female.....	2
2	What class level are you?	SS 1.....	1
		SS2.....	2
		SS3.....	3
3	What is your age in years?	12-14.....	1
		15-17.....	2
		18 or greater.....	3
4	What is your tribe?	Yoruba	1
		Ibo	2
		Hausa	3
		Others specify.....	4
5	What is your religion?	Christianity.....	1
		Islam.....	2
		Traditionalist.....	3
6	With whom do you live together?	Grandparents.....	1
		Father and mother.....	2
		Father alone.....	3
		Mother alone.....	4
		Brother/sister.....	5
		Others specify.....	6

SECTION B: VCT KNOWLEDGE

Q/no	Questions	Response option	Code
7	Have you ever heard about Voluntary HIV Counselling and testing (VCT) before today? If answer is No, go to question 9	Yes..... No.....	1 2
8	If yes , through which medium?	Electronic Mass media.. Friend..... Health worker..... Church/mosque..... Internet..... Others specify.....	1 2 3 4 5 6
9	VCT involves individual being tested on their own will?	Yes..... No..... Don't know.....	1 2 3
10	VCT is important to prevent HIV?	Yes..... No..... Don't know.....	1 2 3
11	VCT process involves pre-test counselling, testing and post-test counselling?	Yes..... No..... Don't know.....	1 2 3
12	VCT involves confidentiality?	Yes..... No..... Don't know.....	1 2 3
13	Do you know where VCT services are offered?	Yes..... No.....	1 2

SECTION C: VCT ATTITUDES

Q/no	Questions	Response option	Code
14	Do you think it is necessary for you to go for VCT? If answer is Yes, go to question 16. If, No proceed to question 15	Yes No	1 2
15	What reason will motivate you to go for VCT?	To get a job Overseas opportunity For marriage purpose During pregnancy If there is cure for HIV	1 2 3 4 5
16	Would you recommend it to friends and relatives?	Yes No	1 2
17	If I test positive for HIV after going for VCT?	I will kill myself..... Disbelief the result..... Spread the virus to others..... I will take it in good fate..... Other, specify..... 	1 2 3 4 5
18	Who should test for HIV?	Only sick people..... Everybody..... Only female..... Only male..... Only Promiscuous people..... Pregnant women only..... Couple in marriage only..... Only people who have..... Boyfriend/girlfriend.	1 2 3 4 5 6 7 8
19	I will prefer to seek sexual information and get tested through?	Health teacher..... Hospital.....	1 2

	Private clinic.....	3
	School health club.....	4
	Drug store.....	5
	Family member.....	6

SECTION D: VCT PRACTICES

Q/no	Questions	Response option	Code
20	Have you ever tested for HIV before?	Yes.....	1
	If Yes, go to question 21 but if No go to 22	No.....	2
21	Why did you decided to test?	Was sick.....	1
		Had unprotected sex.....	2
		Raped.....	3
		Had blood transfusion.....	4
		Cut with sharp object.....	5
		Just want to know my HIV status.	6
		Accompany someone.....	7
22	Why have you not tested?	Scared of positive result.....	1
		The test is expensive.....	2
		Afraid of stigmatization.....	3
		I don't know where to test.....	4
		Afraid other people will know.....	5
		I am sure, I don't have HIV.....	6
23	Will you test for HIV if it is available in the youth health club at the school?	Yes	1
		No	2
24	Will you go if the test is free?	Yes	1
		No	2

Thank you for completing the questionnaire.

**UNIVERSITY OF SOUTH AFRICA
Health Studies Higher Degrees Committee
(HSHDC)
College of Human Sciences
ETHICAL CLEARANCE CERTIFICATE**

Date of meeting: 14 September 2011

Project No: 4575-562-0

Project Title: Knowledge, attitudes and practices towards voluntary HIV counseling and testing among adolescents of a senior high school in Nigeria.

Researcher: Ms TF Mayaki

Degree: Masters in Public Health

Code: DIS4986

Supervisor: Dr MM Moleki

Qualification: D Litt et Phil

Joint Supervisor: -

DECISION OF COMMITTEE

Approved



Conditionally Approved




Prof E Potgieter

CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE


Prof MC Bezuidenhout

ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES

ANNEXURE F

216, Mushin-Ikere road

Lagos.

11, August 2011.

The Principal

Community Senior High School

Maryland-Lagos.

Nigeria.

RE: Request for permission to conduct research among Community Senior High School students

My name is Toluwalase Mayaki, a student of University of South Africa, Pretoria South Africa. I am currently conducting a research in partial fulfillment of the award of Master of Public Health (MPH) at the above named university.

I am requesting to conduct a research in Community Senior High school. The title of my research is "**Knowledge, attitudes and practices of voluntary HIV counselling and testing among adolescent students of a senior secondary school in Nigeria**". The purpose is to inform health services and policy makers about the need to plan a successful VCT programme for youths and adolescents in Nigeria.

Students will be randomly selected to answer self administered questionnaire relating to VCT knowledge, attitude and practice. No name is required on the questionnaire.

Kindly, let me know if you require additional information to support this request.

Yours faithfully



.....

Mayaki T.F (Ms)