KNOWLEDGE AND ATTITUDE TOWARDS VOLUNTARY COUNSELLING AND TESTING (VCT) SERVICES AMONG ADOLESCENT HIGH SCHOOL STUDENTS IN ADDIS ABABA, ETHIOPIA

by

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DECLARATION

I declare that **KNOWLEDGE AND ATTITUDE TOWARDS VOLUNTARY COUNSELLING AND TESTING (VCT) SERVICES AMONG ADOLESCENT HIGH SCHOOL STUDENTS IN ADDIS ABABA, ETHIOPIA** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

_____ 28 November 2011

ABRAHAM ALEMAYEHU GATTA **DATE**

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ABSTRACT

Voluntary HIV counselling and testing (VHCT) is one of the key strategies in the prevention of HIV in Ethiopia. However, utilization of the VHCT services among adolescents has been reported as low by previous studies. The purpose of this study was to investigate adolescents' knowledge and attitudes towards VHCT services among adolescents attending high school in Addis Ababa, the capital city of Ethiopia. A cross-sectional school-based design using quantitative methods was employed to attain the objectives of the study. Data collection was done using self-administered structured questionnaires among 378 adolescent high school students. Data was analysed using the Statistical Package for Social Sciences (SPSS). The findings revealed that 75.7% of students are aware of the voluntary HIV counselling and testing services; 62.2% use the services and suggested that VHCT services should be located in schools and youth clubs for better access by adolescents. Thirty-two percent of respondents rated themselves at risk of HIV infection and 35.2% were not willing to disclose their HIV positive status to anybody. The findings of the study clearly indicate a need for a more accessible voluntary HIV counselling and testing services for adolescents.

KEY WORDS

Adolescents; AIDS; Ethiopia; HIV; high school students; voluntary HIV counseling and testing.

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CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

HIV counselling and testing has been identified as the key entry point to care, treatment and support services (USAID/Family Health International 2004:1*)*. It is the entry point whereby people learn whether they are infected with HIV or not, and are helped to understand the implications of their HIV status and make informed choices for the future (USAID/Family Health International 2004:3*)*. Voluntary HIV counselling and testing (VHCT) was acknowledged as an efficacious and pivotal strategy for both HIV and AIDS prevention and care (USAID/Family Health International 2004:3*).*

According to UNAIDS (2010:16), nearly 12 million young people, aged 15 to 24 in the world are living with HIV and AIDS, and more than 7,000 young people become infected with HIV every day *(*Boswell & Baggaley 2002:1*)*. Young people have limited access to information and services. In 2008, an estimated 45% of new infections occurred globally among young people aged between 15 and 24 years (UNAIDS 2008:33). In 2010, young girls and young women aged 15-24 years were more vulnerable to HIV infection than older men and women (UNAIDS 2010:10). According to Lyons (2005:3), 60% of these young people are adolescents between 14 and19 years of age.

The majority of adolescents are at risk of HIV infection due to their involvement in unsafe sex *(*Boswell & Baggaley 2002:1*)*. HIV infection from the unsafe injection of drugs, exposure to contaminated blood products or unsterilised skin-piercing procedures also put young people at risk *(*Boswell & Baggaley 2002:1*)*. In 2007, sub-Saharan Africa (SSA) alone had an estimated 1.7 million people who were newly infected with HIV (UNAIDS/WHO 2007:7*)*.

Children and adolescents have a unique vulnerability to HIV infection (FMOH and Federal HAPCO 2007:4*)*. Moreover, adolescents were particularly vulnerable to HIV due to the strong influence of peer pressure and the development of their sexual and social identities that often led to experimentation (FMOH and Federal HAPCO 2007:15*)*. Counselling for safe sexual practices for adolescents is vital before initiation of sexual relations *(*FMOH and Federal HAPCO 2007:15*)*. Adolescent counselling also helps to delay their sexual debut and increases the practice of abstinence (FMOH and Federal HAPCO 2007:16).

1.2 BACKGROUND INFORMATION

Understanding how to prevent transmission is the first step to avoid HIV infection (United Nations 2010b:41). Adolescents and youths understanding of HIV transmission has particular importance for HIV prevention, because in 2008 they accounted for 40% of new HIV infections among adults worldwide (United Nations 2010b:41). The United Nations' report indicated that, in most countries, this age group still lacked comprehensive and correct knowledge of HIV (United Nations 2010b:41). According to the same report, less than one-third of adolescent males and less than one-fifth of adolescent females in developing countries claimed adequate knowledge about HIV (United Nations 2010b:41).

Ethiopia's HIV and AIDS epidemic has been heterogeneous in spread and marked with regional variations. In the last several years, the trend showed that the national level of the HIV epidemic had been stabilised (Ministry of Finance and Economic Development (MoFED) 2010:31). In 2009-2010, the prevalence rate among adults in Ethiopia was estimated to be 2.4%, with an estimated 1.1 million people living with HIV. This prevalence rate is higher than that in most Sub-Saharan countries (MoFED 2010:32). Within the next 10 years, when the current adolescents are adults, this figure might double.

1.3 RESEARCH PROBLEM

The HIV and AIDS epidemics have been witnessed in Ethiopia for the past two decades. The country's adolescents are highly affected, with a prevalence rate of 4.8% (UNICEF 2011:3). Understanding, knowledge, attitudes and service delivery are factors

that influence VHCT. VHCT service utilisation is needed to improve the up-take of services. Utilisation of VHCT services among adolescents and the public is vital because it will facilitate HIV prevention efforts in the country in general and in Addis Ababa city administration in particular.

1.4 RESEARCH PURPOSE

The purpose of the study is to investigate adolescents' knowledge and attitudes towards VHCT services.

1.5 RESEARCH OBJECTIVES

The research objectives of the study are to

- determine adolescents' knowledge of VHCT
- establish adolescents' attitude towards testing for HIV
- determine factors that influence VHCT utilisation

1.6 FOUNDATIONS OF THE STUDY

According to the conceptual framework displayed in figure 1.1, the prevention of HIV infection remains the core strategy for reducing HIV infections. Prevention strategies including VHCT would lower HIV transmission through the acquisition of appropriate knowledge and attitudes, and through the implementation of safe sex practices. According to the Family Health International framework (2004:65, 66) factors which encourage utilisation of VHCT services are, in order most influential, parents, peers, health workers, vis-à-vis knowledge about HIV, risk perception, maturity, etc (Family Health International 2004:66).

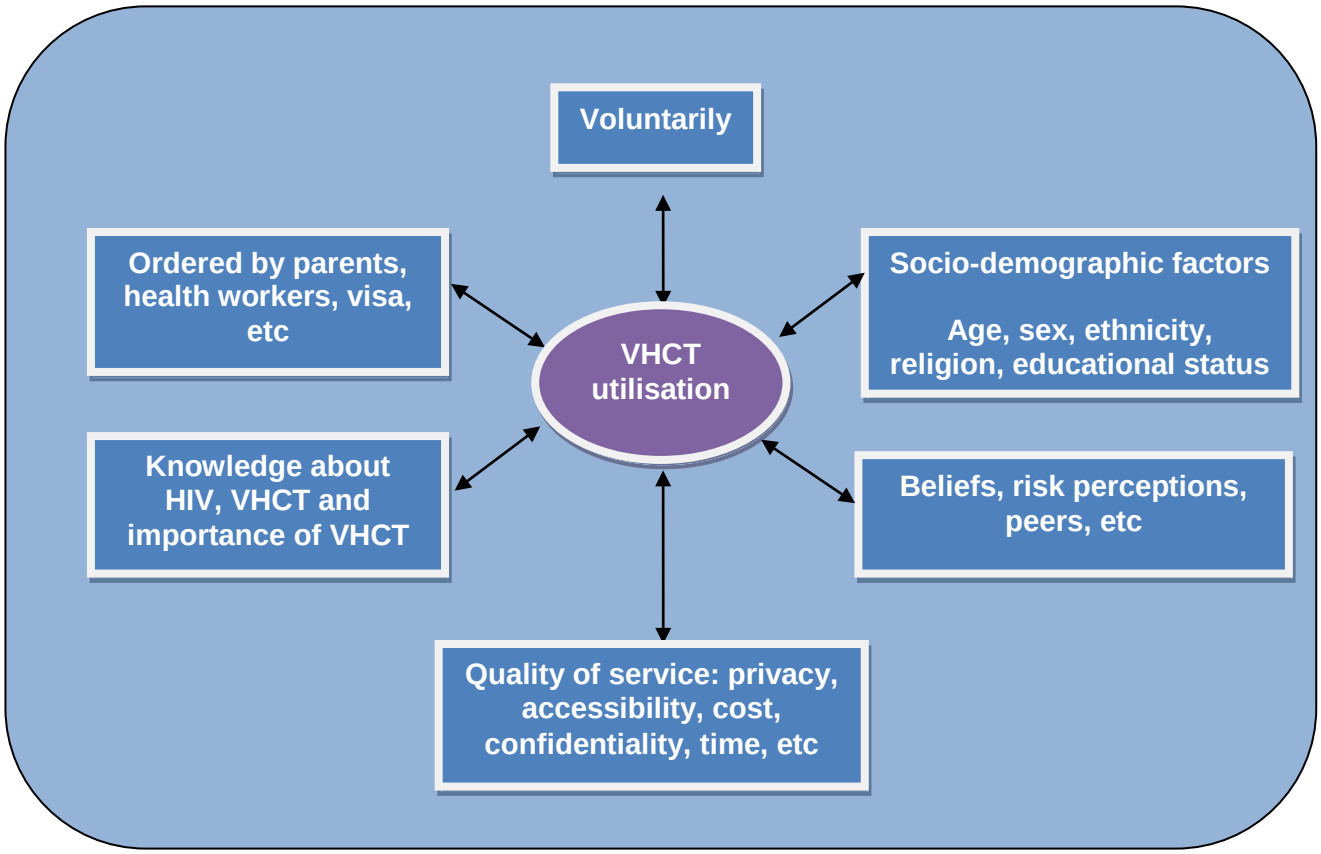

Figure 1.1 Conceptual Framework

Adapted from (USAID/Family Health International 2004:65, 66)

1.7 SIGNIFICANCE OF THE STUDY

This study will provide information about attitudes of high school students towards the utilisation of VHCT services. This information could assist policymakers in improving the VHCT services for adolescents who make up the majority of people affected by the HIV and AIDS pandemic in the world, and especially in Ethiopia.

The results of this study can also serve as a basis for a larger more detailed study on what needs to be done to bridge the gap between knowledge, attitudes and the utilisation of VHCT services.

1.8 ETHICAL CONSIDERATIONS

The ethical protection of respondents was maintained throughout this study. Before the study began, ethical clearance was obtained from Research and Ethics Committee of the Department of Health Studies at the University of South Africa (UNISA) (see annexure A). Institutional consent was obtained from the Addis Ababa City administration after communicating through a formal letter from UNISA (see annexure C).

1.9 RESEARCH METHODOLOGY

1.9.1 Research design

A quantitative descriptive cross-sectional study design was used to investigate knowledge of HIV, attitudes toward VHCT, and factors influencing utilisation of VHCT among high school students in twelve government owned secondary high schools in Addis Ababa, Ethiopia.

1.9.2 Research setting

The study was conducted in Addis Ababa, the capital city of Ethiopia, which comprises 10 sub-cities. There are 66 government-owned senior secondary high schools (with students from grade 9-12) in the city. The total number of students at the secondary level in 2011 is 131,355 (City Government of Addis Ababa Education Bureau Planning and Programming Service 2011*).*

1.9.3 Population and sample

The research population in this study consisted of all-day high school students in senior secondary high schools (grade 9-12), within the age group of 15-19 years in the selected 12 senior secondary schools owned by the government in Addis Ababa.

1.10 OPERATIONAL DEFINITIONS USED IN THE RESEARCH REPORT

Brief descriptions of concepts used in the study are as follows:

Adolescents: for the purpose of this study adolescents will mean secondary school students aged 15-19 years in Addis Ababa, Ethiopia.

Attitude: consistent feeling directed towards a person, idea, object or situation.

Counselling: a purposeful dialogue between a person and care provider aimed at enabling a person to cope with stress and make personal decisions about taking an HIV test.

Discrimination: an action or treatment based on stigma and directed towards stigmatisation.

Knowledge about HIV prevention: respondents were considered to be knowledgeable about HIV prevention if they correctly identified the three main ways to prevent HIV transmission: abstinence, faithfulness to one uninfected partner, and consistent condom use.

Misconception: respondents are considered to have misconceptions about HIV and AIDS transmission if they agreed to any of the following three statements about HIV and AIDS: (1) a mosquito bite can transmit HIV (2) sharing a meal with someone who is HIV positive can transmit HIV, and (3) a healthy-looking person cannot be infected with HIV.

Senior secondary high school: respondents who are enrolled in the current academic year in at least one of the classes from grade 9 to 12 during the data collection period and were attending the class.

Plasma session: modality of delivery of education through plasma television from one centre to all high schools within the country.

Stigma: negative feeling towards people with HIV and AIDS, intention to avoid people living with HIV and AIDS in social relationships.

VHCT: an acronym for voluntary HIV counselling and testing which is a process by which an individual undergoes counselling to enable him/her to make informed choices about being tested for HIV.

Willingness: readiness to undergo VHCT.

Youth: those aged 15-24 years.

1.11 ORGANISATION OF THE DISSERTATION

The dissertation is divided in the following chapters:

Chapter 1: Introduction and background information of the research study

Chapter 2: Literature review for the research study

Chapter 3: Research methodology

Chapter 4: Research results

Chapter 5: Discussion of the study

Chapter 6: Conclusions, limitations and recommendations

1.12 CONCLUSION

This chapter provides an overview of the study. It includes an introduction to the chapter, background information for the study on a global scale and regionally in Ethiopia, context of VHCT, research problem, research purpose, and research objectives, foundation of the study, significance of the study, ethical considerations, research methodology, and definition of terms.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The purpose of this chapter is to provide an overview of literature relevant to the study of adolescents' knowledge of HIV, attitudes toward VHCT, and factors influencing the use of VHCT. Available literature was searched to place the current study in the context of previous studies in related fields. The review related literature supporting knowledge and attitudes of adolescents towards HIV testing and utilisation of VHCT services. Electronic sources, journal articles, books and policy documents on VHCT were used in the review of the literature.

During the literature review process, the researcher focused on both the global and the Ethiopian status of HIV and AIDS, particularly in the adolescent population. The researcher also focused on adolescent characteristics such as, adolescent development and adolescent influences. Information on selected important issues related to VHCT including history of VHCT in Ethiopia, VHCT objectives, VHCT success and failures in the global context and especially in the context of Ethiopia, and the efficacy of VHCT for achieving prevention goals were also discussed in the literature review.

The outline of the chapter is as follows:

- Global HIV and AIDS
- HIV and AIDS in Ethiopia
- Adolescents and HIV and AIDS
- HIV and AIDS in Ethiopia
- VHCT services
- VHCT in Ethiopia
- Conclusion

2.2 GLOBAL HIV AND AIDS

The overall growth of the global AIDS epidemic appears to have stabilised. This is due to a steady decline in the annual number of new HIV infections as a result of different prevention programs and the significant up-take of antiretroviral therapy that led to fewer AIDS related deaths over the past few years (UNAIDS 2010:16). In 2009, there were an estimated 2.6 million people newly infected with HIV compared to 3.1 million people in 1999 (UNAIDS 2010:16). According to UNAIDS, at the end of 2009, an estimated 33.3 million people were living with HIV globally (UNAIDS 2010:22). The number of new infections has been falling worldwide yet the prevalence rate of HIV is still high. During this same time, the availability of antiretroviral drug therapy has increased the survival rate of people living with HIV (UNAIDS 2010:22).

According to the UN 2010 Millennium Development Goals report, young people are greatly threatened by the HIV pandemic; hence an understanding in prevention is the first step to avoiding infection (United Nations 2010b:41). In 2008, young people alone accounted for 40% of new HIV infections among people worldwide (United Nations 2010b:41). Comprehensive and correct knowledge about HIV among young people is still unacceptably low in most countries (United Nations 2010b:41). Less than one-third of young men and less than one-fifth of young women in developing countries have adequate knowledge about HIV (United Nations 2010b:41).

Though the rate of new HIV infections has decreased, the total number of people living with HIV has continued to rise in Sub-Saharan Africa which still bears an inordinate share of the global HIV burden (UNAIDS 2010:16). In 2009, the number of people living with HIV had reached 22.5 million, which is 68% of the global total (UNAIDS 2010:19). Of the estimated 2.6 million new global infections in 2009, this region contained 1.8 million infected people (UNAIDS 2010:16). Sub-Saharan Africa has more women than men living with HIV (UNAIDS 2010:25), and remains the most seriously affected region in the world, with AIDS being the leading cause of death (UNAIDS 2010:25). In 2007 alone, the region accounted for more than two-thirds of all HIV positive people, and among them more than three quarters of all deaths occurred due to HIV and AIDS (UNAIDS/WHO 2007:7,15).

In Sub-Saharan Africa, the high prevalence of HIV infection is due to heterosexual intercourse. This region contains almost two-thirds of all young people living with HIV and 61% of these are female (UNAIDS/WHO 2007:8). The region remains the most severely affected in the world and accounted for 72% of all new HIV infections in 2008 (United Nations 2010b:40). In the same year, of the 33.4 million people who were living with HIV worldwide, 22.4 million were in Sub-Saharan Africa (United Nations 2010b:41).

In Sub-Saharan Africa, disparities in knowledge about HIV prevention among women and men aged 15 to 24 years are linked to different factors, such as gender, household wealth and place of residence (United Nations 2010b:42). The likelihood of HIV prevention increases with the income level of one's household.

2.3 HIV AND AIDS EPIDEMIC IN ETHIOPIA

The HIV epidemic in Ethiopia is generally considered to be high, with increasing levels of economic hardship, expanding urbanisation, increased mobility due to labour migration, a history of conflicts and civil disruption, and better educational and trading opportunities facilitating the spread. (The World Bank 2008:3, 23). Since the first two reported AIDS cases in 1986, the deaths have spread at an alarming rate throughout the country (FMOH/HAPCO 2007:8, 44). In fact, any attempt to analyse the epidemiology of HIV in Ethiopia is limited by the lack of sufficient longitudinal, cross-sectional and behavioural data. The country's HIV epidemic varies according to region, so HIV and AIDS programmes should not only be based on national-level statistics but should be more geographically focused, directed to those regions, districts or communities exhibiting high prevalence rates (The World Bank 2008:46). Conducting research and disaggregating data to the district level in order to identify population groups at higher risk are mandatory to expand services such as VHCT, treatment of sexually transmitted infections, antenatal and postnatal prevention of mother to child transmission (PMTCT), TB/HIV integration, and services targeted to specific populations, including youth, students, sex workers, migrants, refugees and other displaced populations, and the uniformed services (The World Bank 2008:49).

In 2007, the national adult HIV prevalence was estimated to be 2.1%, of which 7.7% was from urban areas and 0.9% from rural areas (FMOH/HAPCO 2007:8, 44). Similarly in 2010, adult HIV prevalence in Ethiopia was 2.1% (United Nations 2010b:1, 2). In

2006, the population aged 15-24 years had a prevalence rate of 5.6% according to the 6th report of AIDS in Ethiopia (FMOH and National HAPCO 2006:10). According to the Ethiopian Central Statistic Agency, of the population aged 15-49 years, 4% of women and 6% of men have been tested for HIV (Central Statistic Agency 2006:238).

Even though various efforts at preventing the spread of HIV have been carried out in the country, HIV infection is still on the increase in Sub-Saharan Africa, and AIDS is now recognised as the leading cause of adult morbidity and mortality in Ethiopia. Unprotected sex and the high frequency of causal partners are the cause for the fast progression of the epidemic (FMOH and National HAPCO 2006:1, 12).

In 2003, a study was conducted on urban and rural out-of-school youths and their thoughts about STD, HIV and AIDS and factors associated with these behaviours in the Ethiopian district of Dera Woreda. These results indicated that 8.6% of school youths in urban areas and 6.5% of school youths in rural areas had heard about AIDS but had incorrect conceptions about HIV prevention. Some of these misconceptions included drinking locally brewed liquor and eating hot peppers as means of HIV prevention (Alemu 2003:50).

2.4 ADOLESCENTS AND HIV AND AIDS

Young people aged between 10 and 24 years account for over 50% of all HIV infections occurring worldwide (UNAIDS 2010:10). Preventing HIV among young people is particularly urgent in sub-Saharan Africa where, in many countries, youths comprise over 30% of the population and general HIV prevalence rates are high (UNAIDS 2001:32). Several cultural, biological and environmental factors place young people; especially adolescents aged 10 to 19, at an increased risk. Young people often begin their sexual lives at an early age (UNAIDS 2001:33). HIV prevalence rates among youth reflect the realities of these risks. Altogether, HIV rates are high among youth with HIV infected females being disproportionately affected, with a ratio to infected males in excess of 4:1 in some populations (UNAIDS 2001:33).

Young people between the ages of 15 and 24 years are the most threatened globally – they account for 45% of all new cases of HIV worldwide. Lack of knowledge and information often prevents adolescents from making well-informed decisions about their

situation and prevents them from finding ways out of abusive or exploitative situations. Adolescents who are unaware of their rights or are unaware of the potential for exploitation and violence are at risk for abuse. They need information and knowledge to protect them (Adolescent Development and Participation Unit Program Division 2006:19).

HIV prevalence was found to be particularly high among orphaned adolescents (Jerker & Nichola 2009:44). Higher rates of sexual behaviour were found among orphans than among other children (Jerker & Nichola 2009:44). There are many reasons why orphans may be sexually more vulnerable than other children. Being orphaned has been associated with psychological stress including low perceived self-efficacy, feelings of lack of control over sexual health and riskier sexual behaviours. There is also more disaggregated data and a wealth of evidence that suggest relative poverty in the context of inequality and urbanisation can increase riskier behaviours and raise the odds of contracting HIV – particularly for young people (Jerker & Nichola 2009:44).

Education provides adolescents with skills; knowledge and an understanding of sexual risk, as well as sources of peer support and social capital. More comprehensive ways of teaching adolescents by providing different options and factual information have been shown to be effective in many cases (Thupayagale-Tshweneagae 2010:260).

Negative influence by young people is one of the most visible forms of violence in society. Youth influence harms not only its victims but also their families, friends and communities (Adolescent Development and Participation Unit Program Division 2006:27). Violent young people also often engage in alcohol and substance abuse, drop out of school, drive recklessly, and practice unprotected sex (Adolescent Development and Participation Unit Program Division 2006:27). A combination of these factors results in high rates of STIs and an increased risk of HIV infection. VHCT service is one of the first public health interventions to address adolescents' knowledge and attitude gaps on the transmission of HIV.

2.5 HIV AND AIDS AMONG ADOLESCENTS IN ETHIOPIA

Ethiopia is a nation of young people – over 65% of its population is under 25 years of age. It is also a nation whose youth have profound reproductive health needs. Among

the many sexual and reproductive health problems faced by youth in Ethiopia are gender inequality, sexual coercion, early marriage, female genital mutilation, unplanned pregnancies, sexually transmitted infections (STIs), and AIDS (YouthNet Assessment Team 2004:2).

Young people in Ethiopia also disproportionately suffer from the country's unsustainable population growth. This rapid population increase strains the government's ability to provide health care to young people. Besides unsustainable population growth, the spectre of AIDS hangs heavily over Ethiopian youths. In 2006, HIV prevalence was 6.6% in the adult population and a large proportion of new HIV infections was in young people under 25 years of age (YouthNet Assessment Team 2004:2).

In Ethiopia, the highest HIV prevalence still occurs in the 15-24 years age group (Attawell 2004:3), this scenario is still true 8 years later (UNAIDS 2011:16). The same age group of women who are sexually active but never married contributed to the maximum concentration of HIV infection and are expected to bring about a decrease in the population's life expectancy (The World Bank 2008:20). A variety of factors are placing young people at the centre of HIV vulnerability. Young girls in Ethiopia are more vulnerable to HIV than boys because of their early age at sexual debut, early marriage, sexual abuse and violence such as rape and abduction (The World Bank 2008:17). The disparity in HIV infection between males and females signals the fact that gender affects not only the general level of HIV prevalence, but also the shape of the prevalence curve. (The World Bank 2008:23).

A study conducted in Fiche and Muke Turi High Schools, North Shoa Zone, Ethiopia, on high school adolescents was carried out to determine the effects of the use of pamphlets on knowledge and attitude towards VHCT. This randomised controlled intervention revealed that among respondents 11.6% had one sexual partner, 7.3% had more than one sexual partner and 18.9% had already had sex (Tolcha 2007:46). This result indicated that students were at risk of HIV infection because of the high-risk behaviours they were engaged in.

Young people are a critical focus for behaviour-change programmes, because people between 15 and 24 years old make up an estimated 6 to 9% of all HIV infections in Ethiopia (Attawell 2004:3). Risk prevention programming must be designed according to

the cultural context of those particular young people (Family Health International 2004:45, 46).

Therefore, the present study was conducted to identify gaps in knowledge about HIV and VHCT and factors influencing VHCT service utilisation among adolescent high school students, which can be helpful in designing and implementing possible intervention.

2.6 VOLUNTARY HIV COUNSELLING AND TESTING (VHCT) SERVICES

VHCT is a process in which individuals or couples undergo counselling to enable them to make informed choices about being tested for HIV. The decision to be tested must be entirely the couple's or the individuals being tested (Shangula 2006:23). HIV counselling and testing have been identified as the key to prevention, care, treatment and support services. Following counselling and testing, people learn whether they are infected and are helped to understand the implications of their HIV status and make informed choices for the future. The development of affordable and effective medical care for people living with HIV is urgently needed to improve access and quality of service because of increased demand (Joint Publications of IPPF South Asia Regional Office and UNFPA 2004:6).

VHCT is recognised as one of the few potentially effective and affordable methods for reducing the transmission of HIV in developing countries (Family Health International 2004:1). According to the UNAIDS report, there is very little information on VHCT services and young people (UNAIDS 2001:33). As the same UNAIDS report stated, in many areas with high-prevalence rates, young people, especially young women, are at a high risk of HIV infection and yet they often have no access to VHCT services. The report described the general vulnerabilities of young people to HIV and in particular the vulnerability of young women. Nonetheless, this has not been translated into increasing access to VHCT services for the affected young people (UNAIDS 2001:33).

2.6.1 Knowledge of VHCT by adolescents

Examining and understanding knowledge, attitudes and service delivery factors that influence VHCT service utilisation are needed to improve the use of services thereby

increasing the impact in the long run. This is vital among adolescents and the public, in order to facilitate an HIV prevention effort in the country.

A study done on factors determining the acceptance of VHCT among pregnant women attending antenatal care clinics used the unmatched case-control study design in Gurage Zone, Ethiopia. The study reported that 19.3% of the respondents had not heard of VHCT in general, and the main reason for non-use among those who did know about VHCT included un-cooperative partners and self-trust (23.1%), no information on VHCT (17.8%), and lack of nearby services (13.0%). The majority of the case studies were in the age groups of 15-19 and 20-29 years (Getachew 2004:27, 28).

A cross-sectional survey assessing the knowledge, attitude, behaviour and practice towards VHCT for HIV prevention of mother-to-child transmission was carried out in Gondar town, Ethiopia. In that study 4.1% and 36.1% of the urban and the rural population respectively believed that VHCT is necessary to protect oneself from infection. The findings of the same study showed 42.2% of urban and 26.3% of rural adolescents would do an HIV test if the service were made available (Shtaye, Nuru, Getu, Yared & Solomon 2004:86, 87).

Amsale (2002) conducted a study on the perceived sufficiency and usefulness of information, education and communication (IEC) material about HIV in Addis Ababa. The study findings indicated that 50.6% of the respondents claimed that the IEC messages and materials were enough to increase their knowledge, 49.4% of respondents reported the messages were not adequate to change their attitudes. Similarly 57.6% of respondents stated that the messages were not sufficient to make them change their attitudes or to acquire practices relevant to HIV and AIDS prevention (Amsale 2002:45, 47).

2.6.2 Attitudes towards testing for HIV

According to Alemu (2008:16) VHCT is an important tool that allows young people to evaluate their behaviour and the consequences of that behaviour. However, adolescents do not usually use the VHCT services for fear of being stigmatised. Deacon, Stephney and Prosalendis (2004:58) argue that HIV testing may be perceived as a waste of time by adolescents hence they may not use the service. This is in

contrast to what Mhloyi and Mholoyi (2000) alluded to when they advocated for educating young people, especially girls, to reduce the rate of new infections by about 10% among adolescents.

2.6.3 Factors that influence VHCT utilisation

In a study done in Dire Dawa administrative council of Ethiopia on factors contributing to VHCT utilisation among the youth, a total of 629 people responded to the survey. The results showed that 2.2% (n=14) did not have any information about VHCT. The majority of the respondents (n=615) have heard about VHCT services from the mass media (Hiwsot 2008:34).

The results of another study done on perceptions and attitudes of high school students towards VHCT in Butajujra, Ethiopia revealed that a significant number of respondents were not willing to utilise VHCT services because of stigma and discrimination. The study also showed that fear of being HIP positive was also a deterrent from utilising the VHCT services (Abiy 2006:25)

VHCT has been recognised as one of the essential prevention-interventions to control the HIV pandemic. However, sufficient emphasis has not been given to assess factors associated with the utilisation of VHCT services among the youths in cities. Therefore, the aim of this study is to assess factors that contribute to VHCT service utilisation among youths in Addis Ababa, the administrative capital city of Ethiopia. The findings of the study may be helpful in expanding and improving the VHCT service and contribute to HIV and AIDS prevention and control programmes in the city administration.

2.6.4 History of VHCT in Ethiopia

Ethiopia responded to the HIV and AIDS epidemic as early as 1985. The first 2 identified persons with AIDS were in 1986.The country developed an HIV and AIDS policy, different guidelines for prevention of mother to child transmission (PMTCT), Antiretroviral therapy (ART) and VHCT and strategic documents to create a conducive environment for the implementation of HIV prevention, care, treatment and support programmes. As part of this effort, the first counselling and testing guidelines were published by the Federal Ministry of Health (FMOH) in 1996, the second edition in 2002

and third edition, currently in use, in 2007 (Federal HIV/AIDS Prevention and Control Office 2007:2). Despite all the efforts the country undertook, adolescents' vulnerability continued.

2.6.5 Rationale for VHCT

The rationale for VHCT can be summarised in four points:

(1) VHCT is a vital point of entry for HIV and AIDS services including prevention of transmission and management of HIV positive people.
(2) VHCT meets the demand of people to know their HIV sero-status.
(3) VHCT provides benefits to those who tested positive as well as those who tested negative.
(4) VHCT offers a holistic approach that can address HIV in the broader context of peoples' lives (Family Health International 2004*:*1, 3, 4).

VHCT is said to be a public health intervention in which governments and donors need to assume some of the associated costs to ensure the widest possible access (Federal HIV/AIDS Prevention and Control Office 2007*:*7).

2.6.6 The efficacy of VHCT for achieving prevention goals

A fundamental goal of HIV prevention is to change the behaviour that puts the individual at risk of infection. HIV prevention has been dominated by individual-level behavioural interventions that seek to influence knowledge, attitudes, and behaviours, such as the promotion of condom use, sexual-health education, and the education of teaching drug users about the dangers of sharing equipment (Gupta, Ogden, Parkhurst & Mahal 2008:52). Different interventions showed that HIV counselling and testing based on people's knowledge of their antibody status enables individuals to make informed choices, helps them to change behaviours that may put them or others at risk of HIV infection, and enables them to take action to prevent individuals from HIV infection and also to seek early medical care if they are HIV positive.

2.6.6.1 VHCT goals

VHCT goals are:

(1) Prevention of HIV transmission from positive tested people to untested or negative partners or from positive tested mother to child by developing appropriate knowledge and attitudes (UNAIDS 2001:7).
(2) Prevention of HIV acquisition by negative tested people from positive tested people through keeping oneself away from risk behaviours (UNAIDS 2001:7).
(3) Early and appropriate uptake of service by positive-tested people such as appropriate medical care, emotional care, counselling for positive living, social support, improved coping, planning for the future and legal advice (UNAIDS 2001:7).
(4) Societal benefits such as normalising HIV, challenging stigma, promoting awareness and supporting human rights (UNAIDS 2001:8).
(5) Counselling for adherence to ARVs and preventive therapies, coping with adverse effects and adherence in MTCT interventions (UNAIDS 2001:8).

2.6.6 2 VHCT usage

The 15-24 years age group has the highest prevalence of sexually transmitted infections, indicating high rates of unprotected sex with multiple partners (Attawell 2004:3). Better communication, knowledge, and improved attitude among young people decrease risky behaviours that include sexual risk-taking and substance abuse.

Expanding access to youth-friendly VHCT services provides quality services where they do not exist. This could include involving the youth in the management of the clinic, to train service providers in existing clinics and enhance links and referrals among schools, and between public and private clinics.

The study's recommendations may guide, develop and enforce policies and laws that protect the health and rights of the youth, especially girls, young women, and others who are vulnerable to HIV. The recommendations may also help in reviewing existing laws and policies related to the protection and rights of youths and in implementing new policies and laws as well as in enforcing existing youth-friendly policies and laws.

While results from recent studies done in sub-Saharan Africa revealed that high-quality VHCT is an effective strategy for reducing HIV and sexual risk behaviours among adults, little is known about VHCT for youth, especially among adolescents aged between 14 and 19 years (UNAIDS 2001:33). Studies done in several Sub-Saharan Africa countries revealed that the youth actively seek and receive VHCT, although many have expressed concerns about confidentiality, cost, access and lack of trust in their sexual partners (UNAIDS 2001:33).

The aim of VHCT associated with blood donation is primarily to prevent those who are at high risk of HIV infection from donating blood. VHCT services associated with blood banks may not be the appropriate sites for counselling individuals about coping with HIV infection and their own sexual behaviour. Referral to other VHCT sites would often be more useful. VHCT associated with blood donation may include personal risk-reduction counselling (UNAIDS 2001:32).

2.7 CONCLUSION

The literature review focused on international and Ethiopian VHCT and HIV- and AIDS-related factors. The chapter covers the introduction, literature review, background on HIV and AIDS in the global and Ethiopian context among adolescents, adolescents' development and adolescents' influences, voluntary counselling and testing services, the history of VHCT in Ethiopia, VHCT objectives, VHCT services' successes and failures, the efficacy of VHCT for achieving prevention goals and VHCT usage.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter presents the research methodology used in the study. Topics covered in the chapter include the research design, research paradigm, population and sample selection, data collection, data collection tools and procedures, reliability of the research instrument, criterion-related validity, data entry and analysis. The chapter also discusses ethical considerations and provides conclusions.

3.2 RESEARCH DESIGN

Research design is the structured approach followed by researchers to answer a particular research question (Joubert & Ehrlich 2007:77). The research design involves a plan, structure and strategy of the study. These three research design concepts guide a researcher in writing the research questions, conducting the project, and in analysing and evaluating the data (Haber & Lobiondo-Wood 2006:202). The current study employs a quantitative, descriptive cross-sectional study design in twelve government owned high schools under the administration of the Addis Ababa city, Ethiopia.

The quantitative approach provided a method to collect statistical data for analysis and reporting. Haber and Lobiondo-Wood (2006:206) are of the view that the main purpose of scientific research is to explore the association among primary variables in an effort to gain a better understanding of the phenomena under study.

A cross-sectional school-based design using quantitative methods was employed in this study to assess knowledge about HIV attitudes towards VHCT services, and factors influencing the use of these services by adolescent high school students in Addis Ababa, Ethiopia.

3.2.1 Rationale for choosing a quantitative cross-sectional design

A descriptive design, specifically cross-sectional, was chosen for this study so that the current status of the research variables could be assessed at one point in time. The study aims at producing information that would provide answers to questions as to whether there are knowledge and attitude gaps about HIV and VHCT utilisation, as well as factors influencing use of VHCT by adolescents in high schools.

3.3 RESEARCH METHODOLOGY

Research methodology refers to the steps, procedures and strategies for gathering and analysing the data (Polit & Beck 2004:723). This section discusses the study setting, population and sample selection.

3.3.1 Study setting and period

Addis Ababa city administration was the study setting. It was chosen because it is the largest city in Ethiopia with a population of 2,738,248, which is 3.7% of the total Ethiopian population (Federal Democratic Republic of Ethiopia Population Census Commission 2008:10). There are 10 sub-cities under the Addis Ababa City administration. In the city there were 66 government owned senior secondary high schools (grade 9-12) and the total number of students in secondary level in 2011 was 131,355 (City Government of Addis Ababa Education Bureau Planning and Programming Service 2011). The number of high school students is also the largest in the country and therefore may give a more accurate representation of urban Ethiopia. The study period was April 2011 to December 2011.

3.3.2 Study population

A study population is an aggregate of elements sharing some common set of criteria (Burns & Grove 2001:366). The population is described in terms of the target population, inclusion criteria, and sampling method. The target population in this study was all senior secondary high school students in Addis Ababa, enrolled in grades 9-12 for the academic year of 2011, within the age group 15-19 years in the selected senior

secondary schools. The study population was included in 12 senior secondary high schools owned by the government in Addis Ababa City Administration, and the total number of students present in these schools was 26,289 (City Government of Addis Ababa Education Bureau Planning and Programming Service 2011).

3.3.3 Inclusion criteria

Inclusion criteria are a set of conditions that must be met for a respondent to be included in the sample (Polit & Beck 2004:290). Determining the criteria is essential for the delineation of the study sample (Polit & Beck 2004:290). The inclusion criteria for the research respondents were the following:

- Day time high school students attending senior secondary high school (grades 9-12).
- Age 15-19 years because this age group's knowledge and attitudes are believed to be under continuous change (Griesel-Roux 2004:51).
- Government owned senior secondary high schools are in the majority and hence admit many more students than the few non-governmental owned schools under the city administration.

3.3.4 Sample size, sampling and sampling procedure

3.3.4.1 Sample size

The determined sample size was an outcome estimated of knowledge and attitude of VHCT services. According to the HIV and AIDS behavioural surveillance survey in 2005 in Ethiopia, 9.3% of youths in schools had undergone an HIV test (Federal Ministry of Health/HAPCO, AAU, CSA, EPHA 2006:62). This group was taken with the assumption that it is close to and representative of the group of senior secondary high school students.

Using a 95% confidence level of certainty (α=0.05) as an assumption, the computed actual sample size for the study used one sample proportion formula as indicated below (Joubert & Ehrlich 2007:347). Eighty percent was the expected power (1-β) for the study

because it could allow good generalisation since this level is the probability that a test will produce a significant difference at a given significance level if there is in fact a difference (Joubert & Ehrlich 2007:346).

$$n=\frac{(Z\alpha/2)^2\ p\ (1-p)}{d^2}$$

$$n=\frac{(1.96)^2(0.093*0.907)}{(0.03)^2}=360$$

Adding 5% non-response rate

Total sample size= 360+18= 378 respondents

Where:

- n=the required minimum sample size
- level of confidence 95%, which gives the percentile of normal distribution, $Z_{\alpha/2=}1.96$
- d (margin of error)=0.03
- p=proportion of being tested=0.093
- 1-p=proportion of not being tested=0.907
- Estimated non-response rate in school youth=5%

Based on the above assumptions, a total of 378 students were required for the study.

3.3.4.2 Sampling

Sampling is a process of selecting a portion of the designated population to represent the entire population (Polit & Beck 2008:339). Similarly, a sample is a set of elements that make up the population. An element is the most basic unit about which information is collected (Haber & Lobiondo-Wood 2006:263).

Random sampling is a specific selection technique, which can ensure that the sample is representative of the population (Joubert & Ehrlich 2007:95). The purpose of sampling is to study a sub-group of a population in order to make generalisations of the population from which the group was drawn (Joubert & Ehrlich 2007:104). For the

current study, a sampling procedure was designed to ensure it represented of the study population.

3.3.4.3 Sampling procedures

Multistage sampling involves a succession of random sampling of units that progress from large to small, and meet sample eligibility criteria (Polit & Beck 2008:347). According to Haber and Lobiondo-Wood (2006:273), the first-stage sampling unit consists of large units or clusters; the second-stage sampling unit consists of smaller units and the third-stage and successive sampling units are even smaller.

For this study a multistage sampling technique was used. The researcher randomly selected, by lottery, 12 high schools from 66 government owned high schools under Addis Ababa City Administration, which consists of ten sub-cities. The researcher incorporated all ten sub-cities in the study, to ensure the representation of each sub-city. The researcher determined the number of schools from each sub-city based on a proportional sampling procedure. The researcher also selected schools from each sub-city randomly by using a lottery method. Data collection included students of both genders from each school by proportional sampling procedure. According to Van Dalen (1999:23), proportional sampling provides the researcher with a way of achieving greater representativeness in the sample of the population.

The summary of the procedure for selecting schools and students is summarized as follows:

1. The study included 12 government owned senior secondary high schools of 66 government owned senior secondary high schools.
2. These 12 schools were selected by the lottery method to sample eight schools from eight sub-cities (one school per sub-city) and then four schools from two sub-cities (two schools per sub-city) based on number of schools available under each sub-city.
3. The total number of students presented in each school was taken by using proportional sampling procedure as follows: $(n/N=nj/Nj) \Longrightarrow nj=Nj*n/N$ (see table 3.1) where n=total sample size, N=total number of students in twelve government

owned schools which are included in the study, nj= students sampled from each school, Nj=total number of students in each school which is included in the study.

4. The same proportional sampling procedure was used to select both male and female students in each school. (nj=Nj*0.0144).
5. The total number of students to be selected for the study from each school divided equally for the four classes (grade 9-12).
6. Number of sections under each grade was listed.
7. From the lists of sections, one section was chosen by random sampling to be included in the study.
8. From randomly chosen sections, students were randomly chosen after being assembled in a classroom and completing a questionnaire in the presence of the data collector. The completed questionnaires were collected by the researcher and placed in a box. From these, the requisite numbers were randomly selected.

Table 3.1 Calculated sample size for each school using proportional sampling, according to the population size of each school in Addis Ababa, 2011

Sub City	Name of high school	Population size per school			Sample size per school		
		Male	Female	Total	Male	Female	Total
Addis Ketema	Addis Ketema	1,098	1,296	2,394	16	19	35
Akaki Kaliti	Derartu Tulu	618	660	1,278	9	10	19
Akaki Kaliti	Tikur Ambessa	662	665	1327	10	10	20
Arada	Dagmawi Menilk	1,140	1,506	2,646	16	22	38
Bole	Bole Secondary	1,494	2,034	3,528	22	28	50
Gullele	Medhanialem	1,634	1,874	3508	24	26	50
Kirkose	Abyot kirse	1,091	1,625	2,716	16	23	39
Kolfe Keranyo	Ayer Tena	1,472	1,878	3,350	21	27	48
Lideta	Limat Michi	592	877	1,469	9	13	22
Nifas Silk Lafto	Keftegna 23	699	861	1,560	10	12	22

Sub City	Name of high school	Population size per school			Sample size per school		
		Male	Female	Total	Male	Female	Total
Nifas Silk Lafto	Ginbot 20	509	443	952	7	6	13
Yeka	Wondirad Secondary	709	852	1,561	10	12	22
Total		**11,718**	**14,571**	**26,289**	**170**	**208**	**378**

3.4 DATA COLLECTION AND DATA COLLECTION INSTRUMENTS

3.4.1 Data collection

In a cross-sectional study, data is collected on each respondent at a single point in time (Bailey, Chandramohan, Langham & Vardulaki 2005:50). For this study, the students completed pre-developed structured self-administered questionnaires. The researcher visited all the selected schools, and explained the process to the respondents. All information filled was anonymous; there was no personal identification of the respondents to ensure anonymity of the responses.

3.4.2 The research instrument

The researcher developed a structured questionnaire with mostly close-ended questions but a few open-ended questions were included. The questionnaire was structured to give demographic data, knowledge of HIV and AIDS; knowledge of VHCT services and attitudes.

According to Polit and Beck (2008:324), structured questionnaires allow for the exploration of patterns and trends which help to describe what is happening and provide a measure of respondents' attitudes and knowledge. Questionnaires are objective because responses are gathered in a standard way and respondents feel a greater sense of anonymity than with interviews.

3.4.3 Reliability of the research instrument

The reliability of the research instrument is the extent to which the instrument yields the same results on repeated measures (Haber & Lobiondo-Wood 2006:345). Reliability is then concerned with consistency, accuracy, precision, stability, equivalence, and homogeneity (Haber & Lobiondo-Wood 2006:345). The following steps were taken to ensure reliability of these research instruments:

- The purpose of the study was explained to the respondents in order to obtain their cooperation and participation in the study.
- The pilot study was carried out and the necessary adjustments made to the study.
- The researcher was available throughout the data collection process to answer and explain any aspects of the instruments that were unclear.
- Questions were made clear and no medical terms were used to enable respondents to understand what the researcher needed.

3.4.3.1 Pre-testing of the instrument

The questionnaires were pretested using the same procedure and with a similar target group. The respondents involved in pre-testing did not participate in the actual study. The pre-tested findings showed that the questionnaires were well developed, except for few changes made in part 3 where sexual history was completely deleted from the questionnaire.

3.4.4 Validity of the research instrument

Validity means an instrument that accurately measures what it is supposed to measure (Haber & Lobiondo-Wood 2006:338). When an instrument is valid, it truly reflects the concept it is supposed to measure (Haber & Lobiondo-Wood 2006:238). The study validity is the measure of truth or accuracy of a claim (Burns & Grove 2001:226). Validity is an important concern throughout the research process.

3.4.4.1 Content and face validity

Content validity represents the universe of content, or the domain of a given construct (Haber & Lobiondo-Wood 2006:338). The universe of content provides the framework and basis for formulating the items that will adequately represent the content (Haber & Lobiondo-Wood 2006:338). When an investigator is developing a tool and issues of content validity arise, the concern is whether the measurement tool and the items it contains are representative of the content domain that the researcher intends to measure (Haber & Lobiondo-Wood 2006:338). The researcher begins by defining the concept and identifying the dimensions that are the components of the concept (Haber & Lobiondo-Wood 2006:338).

For face and content validity of the research instrument, the researcher requested assistance from the study supervisor as well as from colleagues working in the area of HIV and AIDS in relation to youths. By doing this, the researcher relied on their individual judgements to evaluate content validity. The study supervisor reviewed the structured questionnaire.

To guarantee content validity of the structured questions, the researcher attempted to determine whether the content of the instrument adequately addressed the research topic. The sources from which evidence was obtained were the literature, and content experts who were colleagues working in the area of HIV and AIDS. According to Polit and Beck (2004:423), an instrument's content validity is based on judgement and there is no objective method of ensuring the adequate content coverage of the instrument.

3.5 DATA COLLECTION PROCEDURE

After selection of the respondents by random sampling, respondents were first given a consent form to sign and once completed the forms were placed in a box provided by the researcher, which was sealed once all the forms had been placed in the box. The consent forms were not attached to the questionnaires thereby preserving anonymity. Additional boxes were provided for questionnaires for each grade. The researcher handed the respondents the questionnaire after a thorough explanation and after informed consent was obtained. The respondents then filled in the questionnaire and

dropped them in the box provided. When all respondents had filled out the questionnaires, the researcher then sealed the box and took it to the researcher's office.

3.6 ETHICAL CONSIDERATION

The age of consent in Ethiopia is 15 years old *(*FMOH and Federal HAPCO 2007:4*)*. The ethical protection of adolescents was maintained throughout this study. Before the study began, ethical clearance was obtained from Research and Ethics Committee of the Department of Health Studies at UNISA (see Annexure A). Institutional consent was gained from the Addis Ababa City administration after communicating through a formal letter from UNISA (see annexures B and C). The following ethical principles were observed:

3.6.1 Informed consent

Informed consent was obtained from respondents before they filled in the questionnaires. Specifically, respondents were informed in writing about the objectives of the study and its benefits in the prevention of HIV and AIDS.

3.6.2 Maintaining privacy and anonymity

The researcher used codes and not respondent's names, so that the respondents would not be identifiable. Two boxes were provided in each grade. One for the signed the consent forms, which was sealed once all the forms had been placed in the box. Another box was provided for questionnaires, which was also sealed after the respondents had completed all the questionnaires.

3.6.3 Consent to do the study

The School Administration of Addis Ababa city gave permission to the researcher to conduct the study (Ref:TA/705/h28-40/35) (see annexure C). The researcher further requested that the heads of the schools be present at the beginning of the data collection. The teachers in the different grades were also notified orally before data collection.

3.6.4 Ethical clearance

The Research and Ethics Committee of the Department of Health Studies gave permission that this study could be collected (Ref: 4508-547-1) (see annexure A).

3.7 DATA ENTRY AND ANALYSIS

The researcher, to ensure that each one had been fully answered, manually checked the questionnaires (see annexure E). The questionnaires were then coded and the data entered and processed by using the Statistical Package for Social Sciences (SPSS) for Windows Version 17. The results are illustrated in the form of frequency tables and depicted graphically in order to provide an overview of the findings.

3.8 CONCLUSION

Chapter 3 outlined the research methods used to answer the research question. The population sampling, data collection, instrument, ethical considerations, and data analysis were also discussed. Chapter 4 will present the results of the study.

CHAPTER 4

RESEARCH RESULTS

4.1 INTRODUCTION

The findings from the study are presented according to the sequence in the questionnaire and are presented according to the following sub-headings: socio-demographic data, knowledge about HIV and AIDS; VHCT service; perception of personal risk, stigma and discrimination. Tables, charts, figures and descriptions are used to present the findings.

4.2 SOCIO-DEMOGRAPHIC DATA

4.2.1 Age of respondents

Three hundred and seventy-eight adolescents between 15 and 19 years of age completed the self-administered questionnaires with the assistance of trained research assistants and supervisors. All respondents completed the questionnaires, making a 100% response rate. Table 4.1 illustrates the age distribution of the subjects.

Table 4.1 Age of respondents (N=378)

Age of respondents	Frequency	Percent
15	37	9.80
16	92	24.30
17	109	28.80
18	91	24.10
19	49	13.00
Total	**378**	**100.00**

4.2.2 Gender of respondents

Among respondents 55.03% (n=208) were females and 44.97% (n=170) were males, as depicted in figure 4.1.

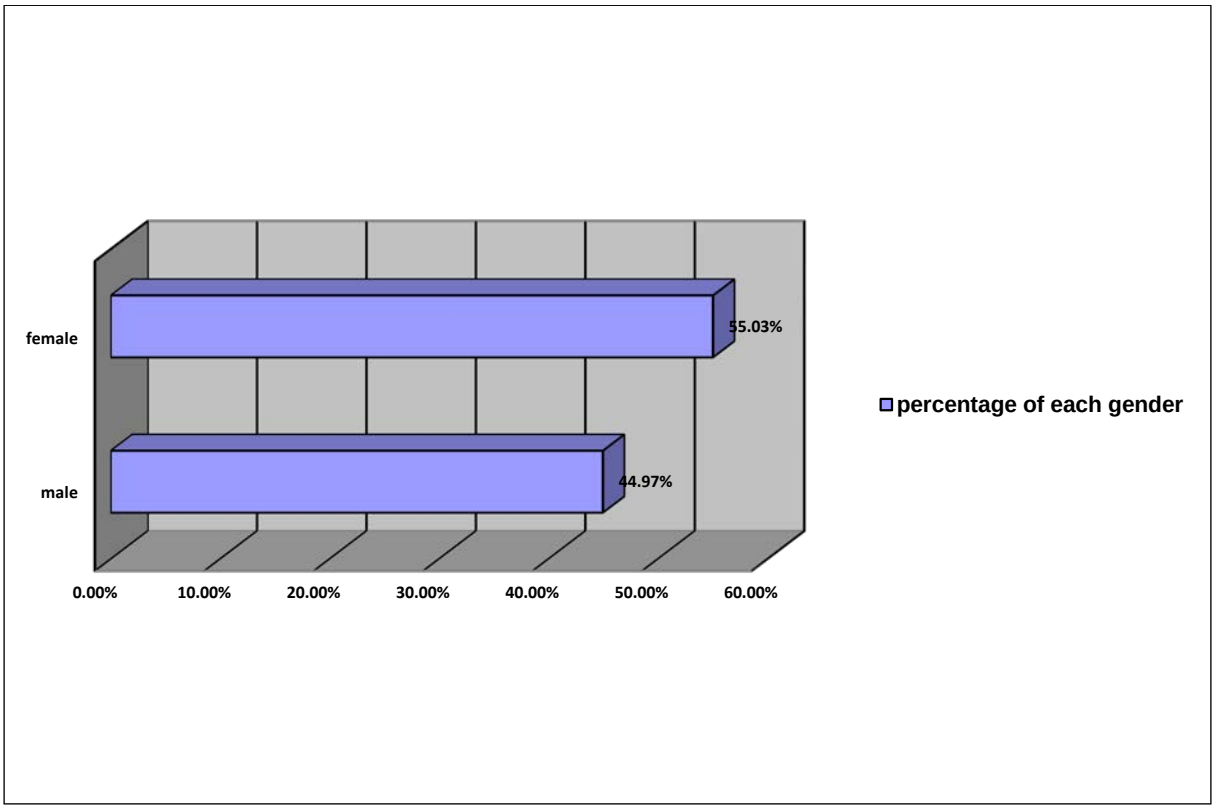

Figure 4.1 Gender of respondents (N=378)

4.2.3 School grade of the respondents

All respondents were literate, as the study included students from grade 9 to grade 12. Cross tabulation by grade and gender for students is shown in table 4.2.

Table 4.2 Grade of respondents *Gender of respondents cross tabulation (N=378)

Grade of respondents	Gender of students		Total
	Female	Male	
Grade 10	57 (15.08%)	48 (12.70%)	105 (27.78%)
Grade 11	56 (14.82%)	42 (11.11%)	98 (25.93%)
Grade 12	41 (10.84%)	39 (10.32%)	80 (21.16%)
Grade 9	54 (14.28%)	41 (10.85%)	95 (25.13%)
	208 (55.02%)	**170 (44.98%)**	**378 (100.00%)**

4.2.4 Religion of respondents

Table 4.3 presents religious affiliation of respondents.

Table 4.3 Religion of students (N=378)

Religion of respondents	Frequency	Percent
Christian	306	81.00
Muslim	51	13.50
Others	21	5.50
Total	**378**	**100.00**

4.2.5 Marital status of respondents

A large majority (96.80%; n=365) of students were unmarried. Figure 4.2 presents marital status of students.

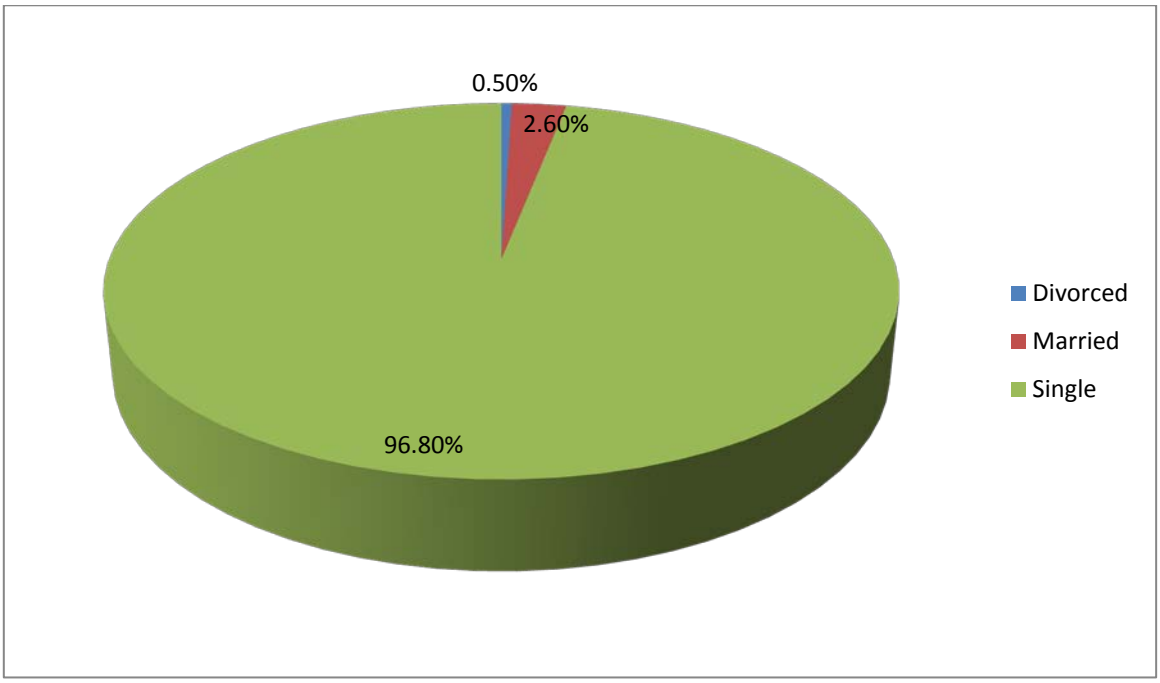

Figure 4.2 Marital status (N=378)

4.3 KNOWLEDGE ABOUT HIV AND AIDS TRANSMISSION PREVENTION

4.3.1 Modes of HIV transmission

The modes of HIV transmission mentioned by students were (i) unprotected sexual intercourse with HIV positive individuals, (ii) infected mother-to-child transmission during delivery (iii) breast feeding, (iv) sharing sharp materials with HIV positive individuals, and (v) contaminated blood contact.

Out of the five modes of HIV transmission mentioned by respondents, 67.00% (n=253) correctly identified more than three modes of HIV transmission. Of the respondents 46.03% (n=174) mentioned knowledge of three; 10.58% (n=40) mentioned knowledge of four modes of transmission while 10.85% (n=41) mentioned knowledge of all the seven modes of HIV transmission.

Table 4.4 Modes of HIV transmission (N=378)

How many modes of HIV transmission do you know?	Frequency	Percentage
One	31	8.20
Two	92	24.34
Three	174	46.03
Four	40	10.58
Five	41	10.85
Total	**378**	**100.00**

4.3.2 Sources of HIV and AIDS information

Respondents got information about HIV transmission from different sources. The sources of information included schools, friends, radio and TV. Most of the respondents mentioned more than one source.

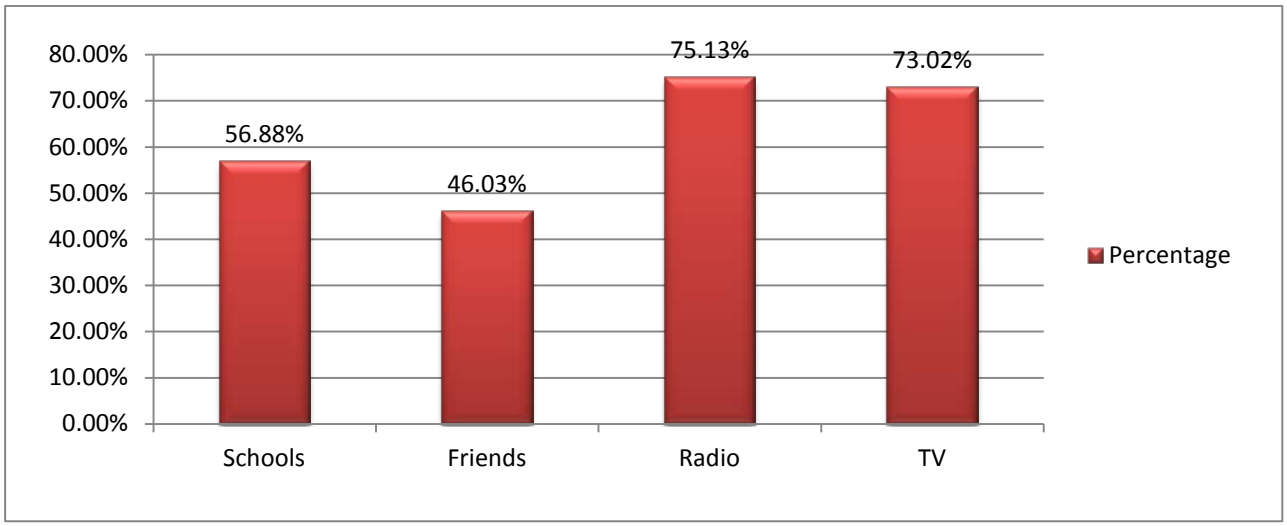

Figure 4.3 Sources of information (N=378)

4.3.3 The most common cause of HIV infection in Ethiopia

The majority of respondents (78.31%; n=296) identified unprotected sexual intercourse as the most common cause of infection in Ethiopia.

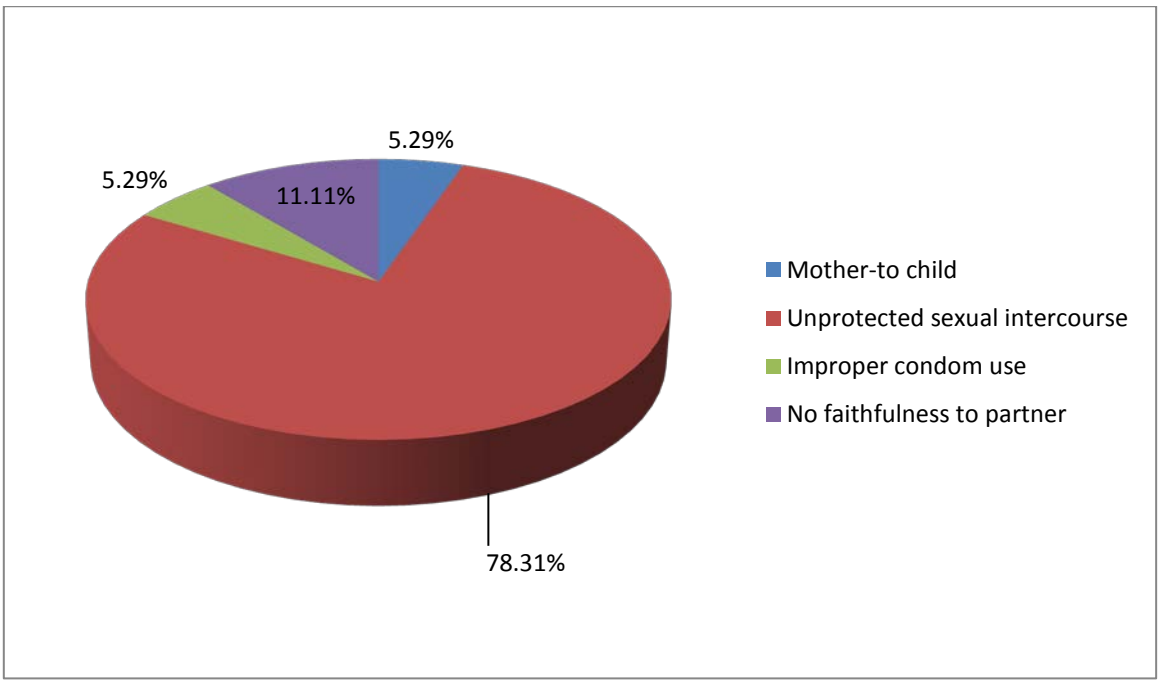

Figure 4.4 Common causes of HIV infection (N=378)

Unfaithfulness to uninfected partner would still be unprotected sexual intercourse.

4.3.4 List of the HIV prevention methods that respondents knew

Respondents listed prevention methods as; condom use during sexual intercourse, abstinence from sexual intercourse before marriage, faithfulness to a single uninfected partner, avoiding the sharing of sharp materials, avoiding blood contact from infected persons, and prevention of mother-to-child transmission. Respondents listed multiple responses.

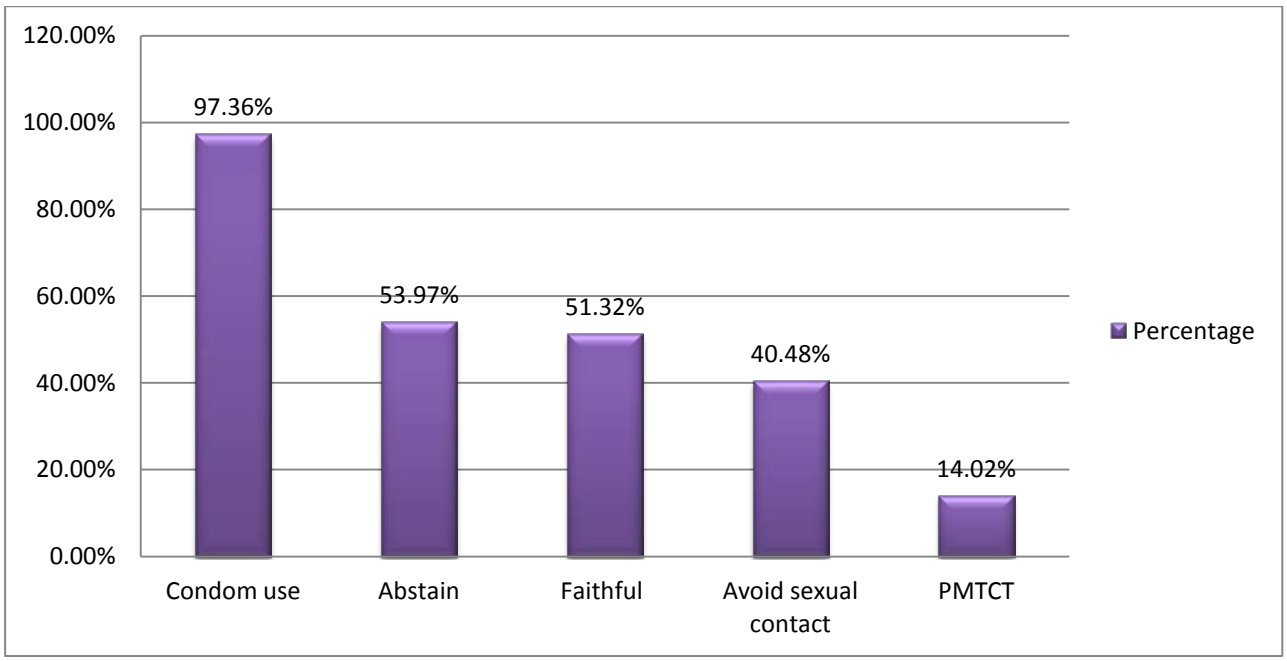

Figure 4.5 HIV prevention methods (N=378)

4.3.5 Most relevant prevention methods for young people

Adolescents identified condom use, abstinence, faithfulness, avoiding sharing sharp materials and blood contact as prevention methods. Among prevention methods identified, 35.20% (n=133) and 32.50% (n=123) of them identified condom use and abstinence from sexual intercourse, respectively.

Table 4.5 Most relevant prevention methods proposed by current respondents

Which prevention method do you think most relevant for young people?	Frequency	Percentage
Condom use	133	35.20
Abstinence	123	32.50
Faithfulness	72	19.00
Avoid sharp material sharing	10	2.60
Avoid blood contact	51	13.40

4.4 KNOWLEDGE, ATTITUDE AND PRACTICE OF VHCT SERVICES

4.4.1 Knowledge of why people should be tested for HIV

Over 75.66% (n=285) of the respondents knew the reasons why a person should be tested as depicted in figure 4.6.

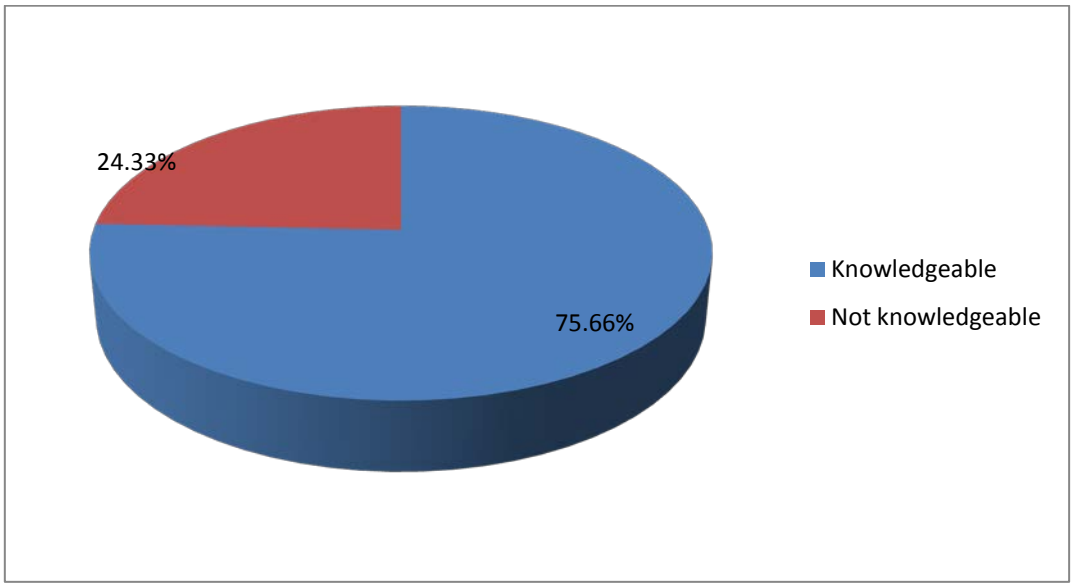

Figure 4.6 Knowledge of the importance of HIV testing (N=378)

4.4.2 Knowledge of VHCT services

Among students who participated in this study, 83.86% (n=317) of them had heard about VHCT services and 16.14% (n=161) were not familiar with the VHCT services.

Table 4.6 Knowledge of VHCT service (N=378)

Have you ever heard about VHCT?	Frequency	Percentage
Yes	317	83.86
No	61	16.14
Total	**378**	**100.00**

4.4.3 Sources of knowledge about VHCT

Respondents identified multiple sources of information about VHCT services as indicated in figure 4.7.

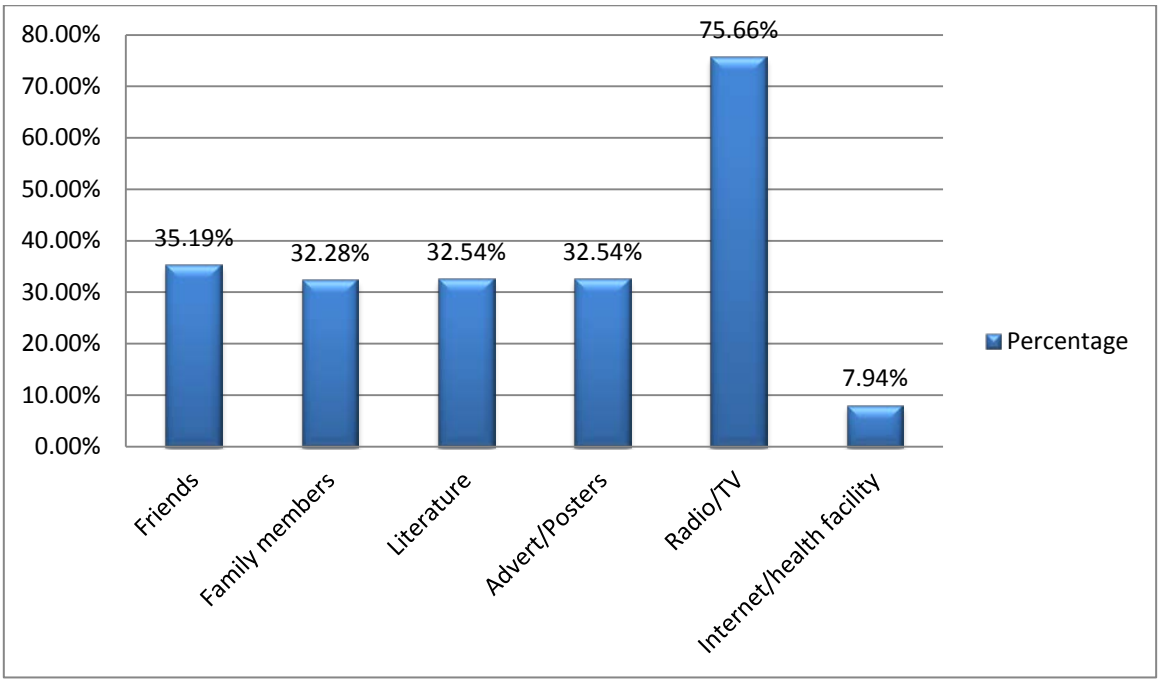

Figure 4.7 Source of information about VHCT (N=378)

4.4.4 Uses of VHCT services

Respondents mentioned more than one use of VHCT services. Among the mentioned uses, the majority of respondents 86.50% (n=327) responded that VHCT was a source of information for self-protection from HIV infection.

Table 4.7 VHCT uses

What are the uses of VHCT services?	Frequency	Percentage
Know self-protection	327	86.50
To protect co-infection	122	32.30
To encourage behavioural change	31	8.20
Freely communicate about HIV	30	7.90
Educate public on HIV issues	42	11.10

4.4.5 Knowledge of the importance of VHCT for HIV prevention

Of the respondents 91.80% (n=347) knew the importance of VHCT for HIV infection prevention, but 8.20% (n=31) lacked such knowledge about the importance of VHCT in preventing the spread of HIV.

Table 4.8 Knowledge on VHCT importance for HIV prevention (N=378)

Is VHCT important for prevention of HIV transmission?	Frequency	Percentage
Yes	347	91.80
No	31	8.20
Total	**378**	**100.00**

4.4.6 Appropriate time to have VHCT service

The majority of participants (91.70%; n=347) said it is important to have VHCT at any time. Others responded before initiation of sexual contact. Respondents chose more than one option. Table 4.9 shows the responses.

Table 4.9 Appropriate time to have VHCT

When do you think is appropriate to have VHCT?	Frequency	Percentage
Any time	347	91.70
Before marriage	72	19.00
Before initiation sexual contact	112	29.60
Before pregnancy	61	16.10
After pregnancy	42	11.10
Any time a person feels at risk	133	35.20

4.4.7 Benefits of being tested

More than 91.80% (n=347) of respondents mentioned that both HIV positive and negative individuals would benefit from being tested.

Table 4.10 Those who benefit from being tested (N=378)

Who do you think benefits from being tested?	Frequency	Percentage
HIV positive individuals	6	1.59
HIV negative individuals	25	6.61
Both HIV positive and negative individuals	347	91.80
Total	**378**	**100.00**

4.4.8 Importance of counselling in HIV testing

The respondents chose more than one option as indicated in table 4.11.

Table 4.11 Importance of counselling for HIV testing (N=378)

Do you think counselling is important for HIV testing?	Frequency	Percentage
Yes	336	88.89
No	42	11.11
Total	**378**	**100.00**

4.4.9 Reason for counselling or not counselling for testing

The respondents chose more than one option as indicated in table 4.12.

Table 4.12 Reason for counselling or not counselling

Reasons for counselling and not counselling	Frequency	Percentage
To know self HIV status	163	43.10
To provide basic information on HIV	102	26.90
To take care	92	24.30
To reduce fear	102	26.90

4.4.10 Individuals to be tested

Pertaining to individuals who should be tested, 59.50% (n=225) wrote that every individual who is sexually active should test, and 43.10% (n=163) of the respondents responded that only high-risk groups should be tested. More than one response was chosen.

Table 4.13 Individuals to be tested

Who do you think needs to be tested?	Frequency	Percentage
High risk groups	163	43.10
Those to be married	143	37.80
Everybody who is sexually active	225	59.50
Only those suspected by medical personnel to be HIV positive	51	13.40

4.4.11 Knowledge on location of VHCT service

According to the respondents' answers, 13.49% (n=51) said they don't know where they can get VHCT service.

Table 4.14 Knowledge on location of VHCT service (N=378)

Do you know where you can get the service?	Frequency	Percentage
Yes	327	86.51
No	51	13.49
Total	**378**	**100.00**

4.4.12 Distance of VHCT site relative to clients' house

Though the majority of respondents said that the VHCT service-providing site was close to their locality, 36.30% (n=137) respondents commented that their service-delivering sites were far from their locality.

Table 4.15 VHCT service site relative to clients' house (N=378)

Is there service near your area or far	Frequency	Percentage
Near	241	63.70
Far	68	18.00
Very far	69	18.30
Total	**378**	**100.00**

4.4.13 Location of VHCT service centre

The respondents knew more than one location of VHTC services. Regarding the location of existing VHCT services, 73.00% (n=276) and 46.00% (n=174) were said to be in a health facility and youth club or association respectively.

Table 4.16 Location of VHCT centre

Where is the service located	Frequency	Percentage
In a health facility	276	73.00
In youth club or association	174	46.00
It is a stand-alone service (giving only VHCT)	61	16.10

4.4.14 Knowledge on VHCT service cost

Regarding knowledge of VHCT service cost, 40.48% (n=153) respondents said that they have no information about the cost of VHCT services.

Table 4.17 Knowledge VHCT service cost (N=378)

Do you know how much it costs to be tested for HIV	Frequency	Percentage
Yes	225	59.52
No	153	40.48
Total	**378**	**100.00**

4.4.15 Accessibility of VHCT service to the clients

Majority of respondents indicated that the VHCT services were accessible in regard to cost, distance and location as depicted in figure 4.8.

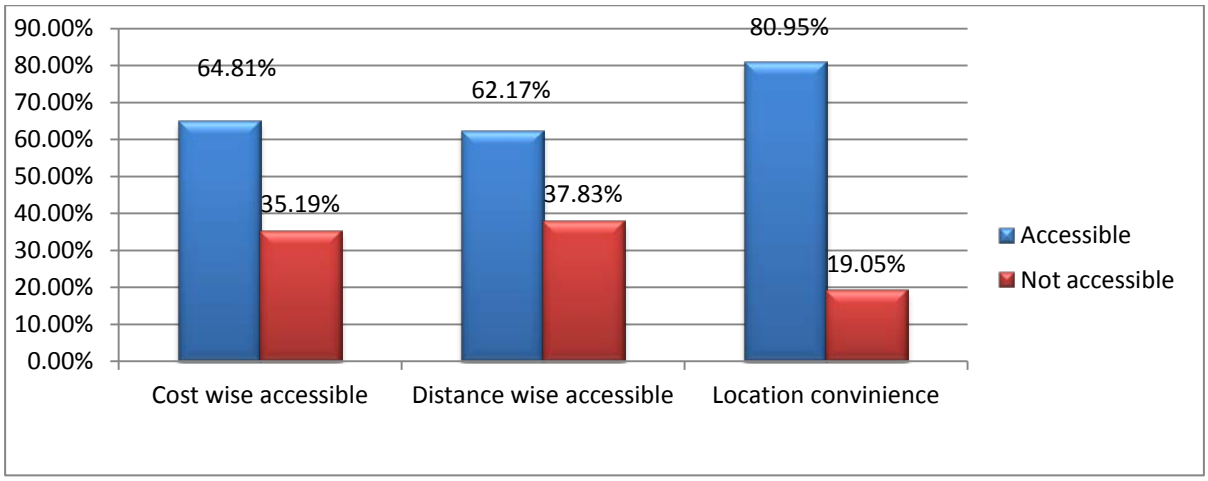

Figure 4.8 Accessibility of VHCT service (N=378)

4.4.16 One thinks the test should be free

Regarding VHCT service payment, the majority of respondents (94.71%; n=358%) said the test should be free to improve accessibility.

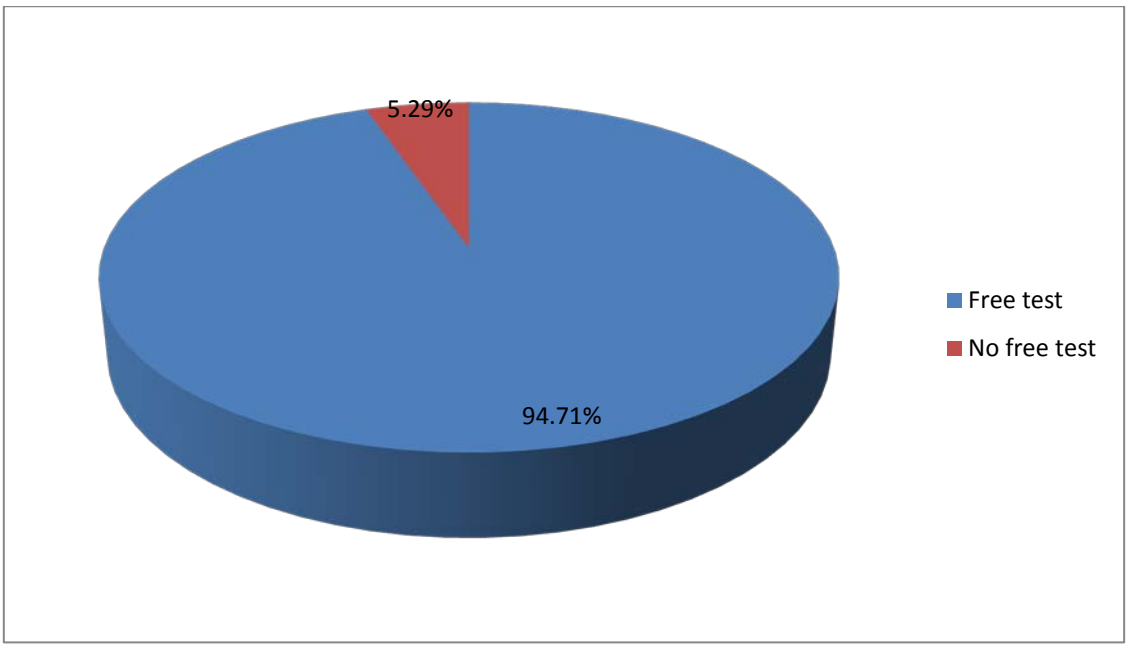

Figure 4.9 Fee for VHCT service (N=378)

4.4.17 Proposal for location of VHCT services for easy accessibility by adolescents

Respondents proposed more than one option on where VHCT services can be located as shown in table 4.18.

Table 4.18 Location proposal for VHCT

Where do you think should a VHCT centre be located for easy access for adolescents?	Frequency	Percentage
In a health facility	112	29.60
In schools	235	62.20
In youth clubs	245	65.00
In a separate centre for VHCT alone	51	13.50

4.4.18 Preferred counsellor for adolescents

A trained health personnel was preferred by most respondents (54.00%; n=204). Similarly, 40.40% (n=153) preferred a trained peer counsellor.

Table 4.19 Preference of counsellor

Who do you think should counsel adolescents?	Frequency	Percentage
Trained health personnel	204	54.00
Trained non-medical personnel	72	19.00
Trained youth(peer groups) counsellors	153	40.40
Religious leaders	82	21.60
Traditional healers	72	19.00
Anybody who is a trained counsellor	112	29.60

4.4.19 Utilisation of VHCT services

Regarding the utilisation of VHCT services, 143 (37.83%) respondents had never used VHCT services, whereas 235 (62.17%) respondents had used the service in the past.

Table 4.20 VHCT usage status (N=378)

Have you ever been using VHCT services?	Frequency	Percentage
Yes	235	62.17
No	143	37.83
Total	**378**	**100.00**

4.4.20 Comment on quality of VHCT service delivery

Out of the 378 respondents, only 235 had used the VHCT services. All the respondents who have used them regarded them as being very good or good as shown in table 4.21.

Table 4.21 Quality of VHCT (n=235)

How did you find the service?	Frequency	Percentage
Very good	163	69.36
Good	72	30.64
Total	**235**	**100.00**

4.4.21 Rationale for the quality of VHCT services

Multiple options were given by respondents on why they believed that VHCT services offer good quality.

Table 4.22 Rationale for quality issue

Can you provide reasons for your answer for above question?	Frequency	Percentage
Avoid fear	122	32.30
Confidential	143	37.80
In school	10	2.60
Good information	153	40.40

4.4.22 Comment on confidentiality rating for the counselling and testing process

Among the VHCT service users, when asked to rate the confidentiality of the counselling process, the majority of them responded good and very good but 8.51% (n=20) of the respondents responded that the service delivery process was poor and very poor.

Table 4.23 Confidentiality rating for VHCT (n=235)

How do you rate the confidentiality of the counselling process?	Frequency	Percentage
Very good	92	39.15
Good	123	52.34
Poor	11	4.68
Very poor	9	3.83
Total	**235**	**100.00**

4.4.23 Comments on time taken to receive test results

Of the respondents who had VHCT services, when asked to comment about the length of time it took before receiving test results, 65.11% (n=153) of respondents responded

that it took 30 minutes to obtain test results, even though about 26% of them mentioned longer than 30 minutes.

Table 4.24 Time elapsed to take test result (n=235)

How long did it take before the result of test?	Frequency	Percentage
15 minutes	8	3.40
20 minutes	12	5.11
30 minutes	153	65.11
1 hour	42	17.87
1 day	20	8.51
Total	**235**	**100.00**

4.4.24 Time proposal to obtain test result

Of the respondents, 47.23% (n=111) of those who had VHCT services, felt that they should have access to their test results immediately, but 8.51% (n=20) of those who had tested said it didn't matter when the test results would be issued.

Table 4.25 Time proposal to obtain test result (n=235)

When do you think should a test result be given?	Frequency	Percentage
Immediately after the test	111	47.23
Few hours after the test	62	26.38
Few days after the test	42	17.87
It doesn't matter when	20	8.51
Total	**235**	**100.00**

4.4.25 Comment on reason for being tested

Seventeen percent (n=40) of the 235 respondents who had tested mentioned that they tested because they had engaged in high-risk behaviour.

Table 4.26 Reason for being tested (n=235)

What was your reason for being tested?	Frequency	Percentage
Just to know your status	163	69.36
Had unprotected sex	21	8.93
Multiple sex partners	19	8.09
Think that your partner could have risk factor	22	9.36
You had other risk factor for the infection	10	4.26
Total	**235**	**100.00**

4.4.26 Partner knew about one being tested and/or took test result

Both the graphs in figure 4.10 show that if partners know about being tested, then the results may be shared among them.

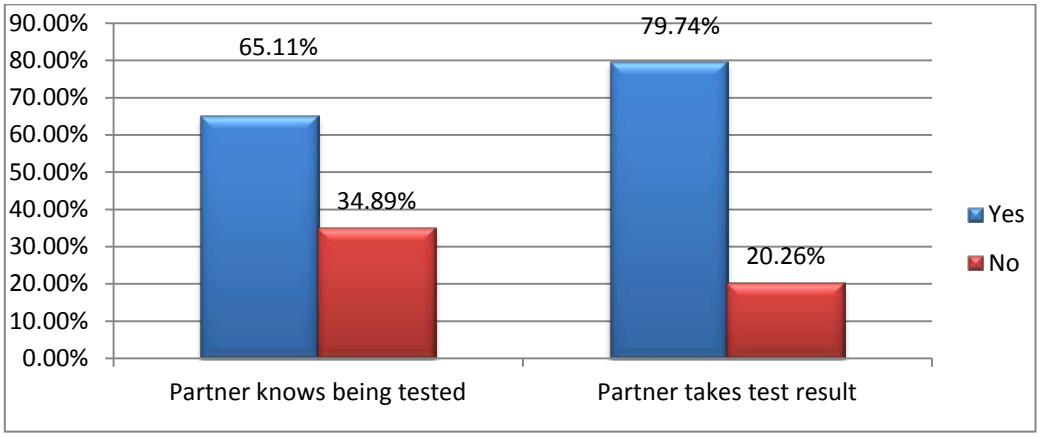

Figure 4.10 Partner knowledge status being tested result (N=378)

4.4.27 Intention to test for HIV

Out of the 143 respondents who had not used VHTC services, more than 85.00% (n=122) have thought of testing and 21 of them had not thought of testing.

Table 4.27 Intention to test for HIV (n=143)

Have you ever thought of testing for HIV?	Frequency	Percentage
Yes	122	85.31
No	21	14.69
Total	**143**	**100.00**

4.4.28 Reasons for not intending to be tested for HIV

Of those who had no intention of being tested, 57.14% (n=12) did not trust the quality of available VHCT services.

Table 4.28 Reasons for not being tested (n=21)

What are your reasons for not testing for HIV	Frequency	Percentage
You have no risk	2	9.52
Trust oneself and partner	4	19.05
You don't see the importance of being tested	3	14.29
You don't trust the quality of the available service	12	57.14
Total	**21**	**100.00**

4.4.29 Easier access of VHCT services

Of the respondents, 80.95% (n=306) said that they could get VHCT services easily if they were to seek it out, but 19.05% (n=72) said it was not easy to get VHCT service.

Table 4.29 Possibility of getting VHCT (N=378)

If you want, can you get VHCT service easily?	Frequency	Percentage
Yes	306	80.95
No	72	19.05
Total	**378**	**100.00**

4.4.30 Reason for not easily getting VHCT service

Seventy-two respondents mentioned that they had no access to VHCT services. The reasons why one could not easily access VHCT services were that the VHCT providing centre was too far, the confidentiality aspect was not fully trusted, unwillingness to know ones personal HIV status, the test results took too long to know and in some private health facilities the service was expensive.

Table 4.30 Not easily getting VHCT (n=72)

Why can you not get VHCT service easily?	Frequency	Percentage
It is expensive for you	6	8.33
The location is far	32	44.44
You don't trust the confidentiality aspect	15	20.83
The results take a long time	7	9.73
You don't want to know your status at all	12	16.67
Total	**72**	**100.00**

4.5 PERCEPTION OF PERSONAL RISK

4.5.1 Rating personal risk of being infected with HIV at the moment

Regarding personal risk perception, 32.53% (n=123) of total respondents felt they were at low risk of being infected with HIV.

Table 4.31 Rating personal risk (N=378)

How do you rate your personal risk of being infected with HIV at the moment	Frequency	Percentage
Very high	72	19.05
High	51	13.49
Moderate	45	11.91
Low	87	23.02
Very low	123	32.53
Total	**378**	**100.00**

4.5.2 Reason for personal risk

Reasons provided by those who were at a high risk of contracting HIV, included a gap in their knowledge of HIV and AIDS, and repeated sex with multiple partners, ignorance, and unwillingness to discuss HIV and AIDS because they were afraid. Reasons for those who were at a lower risk, included the use of double condoms during sexual intercourse, no risk behaviour exposing themselves to HIV, preventative methods well known by them, they were knowledgeable about effect of HIV and AIDS, and free from any exposure that could lead to being infected by HIV. Respondents gave chose multiple options.

Table 4.32 Reason for personal risk

Can you explain the reason for the above answer	Frequency	Percentage
Knowledge shortage	31	8.20
Use double condom	11	29.10
No risk behaviour	101	26.70
Repeated sex risk	42	11.10
Prevention methods well known	9	2.40
Ignorance	42	11.10
Knowledgeable	133	35.20
Afraid	41	11.00
Free from exposure	10	2.60
Due to time	61	16.10
Self directing	82	21.60

4.5.3 Rating sexual partner risk of having HIV infection

In relation to having a sexual partner who may be infected, 25.93% (n=98) of all respondents responded that their partners were at a high risk of having contracted HIV.

Table 4.33 Rating sexual partner risk (N=378)

How do you rate your sexual partner's risk of having contracted HIV?	Frequency	Percentage
Very high	61	16.14
High	37	9.79
Moderate	30	7.94
Low	83	21.96
Very low	167	44.18
Total	**378**	**100.00**

4.5.4 Intention of using VHCT in future

Of the respondents, 13.49% (n=51) said they had no intention of having VHCT in the future.

Table 4.34 Intention to use VHCT (N=378)

Do you intend to have VHCT for HIV in the future?	Frequency	Percentage
Yes	327	86.51
No	51	13.49
Total	**378**	**100.00**

4.5.5 Importance of partner testing and intention to seek VHCT services

The majority of respondents stated that it was important for their partner to be tested and similarly 67.99% (n=257) of the respondents replied that they intended to ask their partner to seek VHCT, even though 32.01% (n=121) respondents had no intention of asking their partners to undertake a HIV test.

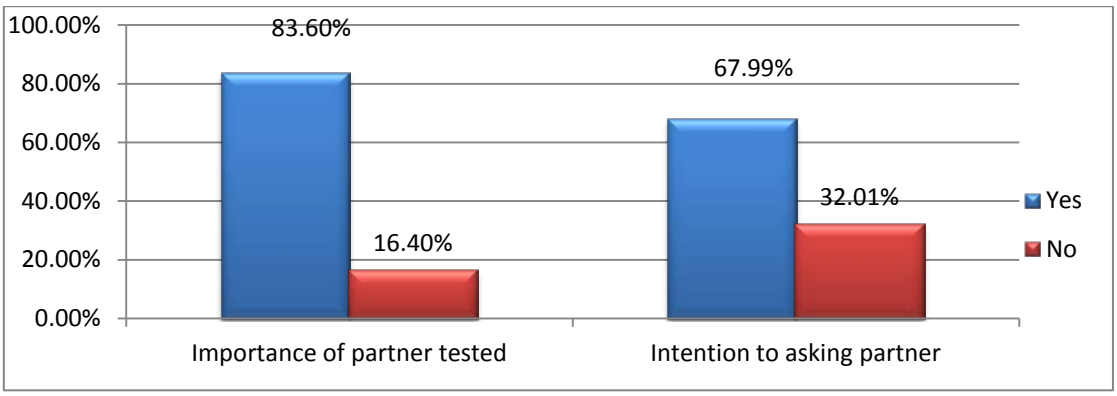

Figure 4.11 Importance of partner testing and asking to have test (N=378)

4.6 STIGMA AND DISCRIMINATION

4.6.1 Knowledge of a person with HIV and AIDS

Of all the respondents, 62.70% (n=227) knew a person living with HIV and 37.30% (n=141) respondents did not know a person living with HIV. Whereas, 60.58% (n=229) knew the person who has AIDS and 39.42% (n=149) did not know a person with HIV and AIDS.

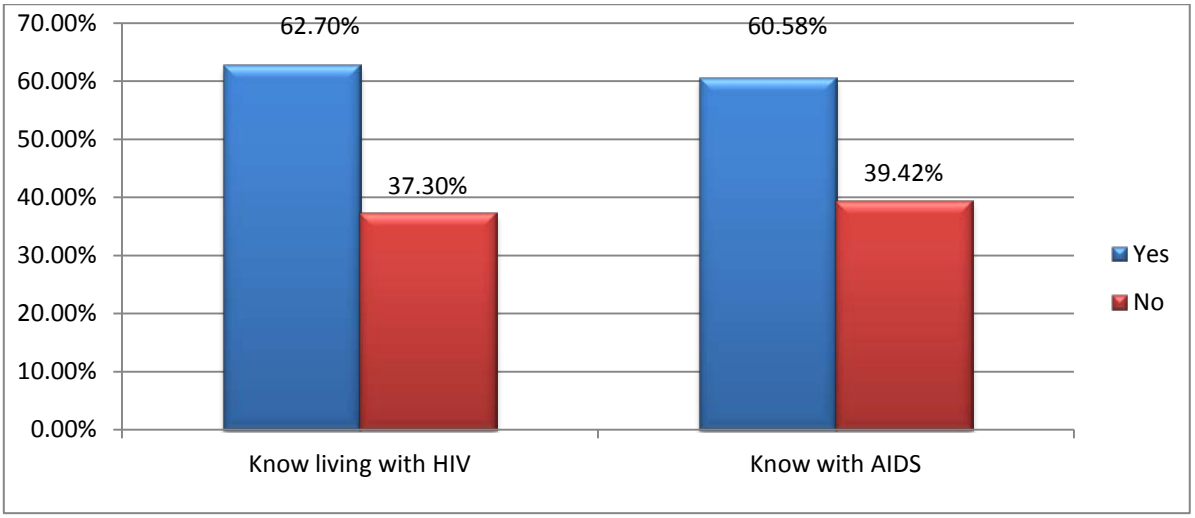

Figure 4.12 Knowing individual living with HIV and AIDS (N=378)

4.6.2 Response on safeness to live with a person with HIV in the household

Of all the respondents, 20.37% (n=77) said that it was not safe to live with a person with HIV in the household.

Table 4.35 Safeness to live a person with HIV (N=378)

Do you think it is safe to live with a person with HIV in the household?	Frequency	Percentage
Yes	301	79.63
No	77	20.37
Total	**378**	**100.00**

4.6.3 Precautions needed to live with a person living with HIV and AIDS

The precautions needed to live with a person with HIV and persons with AIDS are indicated in table 4.36.

Table 4.36 Precaution needed to live with a person with HIV and AIDS

What precautions do we need to take to live with a person living with HIV and AIDS?	Frequency	Percentage
Separate beds	61	16.10
Separate eating utensils	53	14.00
Avoid external body contact	59	15.60
Use gloves to clean his /her materials	153	40.40
Avoid contact with body fluids	204	54.00
Separate toilet	47	12.40
Better to keep the person in a healthy facility	86	23.00

4.6.4 Informing others if one of family members living with HIV and AIDS

Of all the respondents, 47.36% (n=179) said that they would not disclose the HIV and AIDS status of a family member to anyone outside the family, as he/she may be stigmatised.

Table 4.37 Information sharing family member living with HIV and AIDS (N=378)

If one of your family members were a person living with HIV and AIDS. Would you tell anyone?	Frequency	Percentage
Yes	199	52.65
No	179	47.36
Total	**378**	**100.00**

4.6.5 Discussing about HIV and AIDS at home

Of all the respondents, 30.42% (n=115) said that they had no intention of discussing HIV and AIDS at home.

Table 4.38 Discussing about HIV and AIDS at home (N=378)

Do you discuss about HIV and AIDS at home?	Frequency	Percentage
Yes	263	69.58
No	115	30.42
Total	**378**	**100.00**

4.6.6 Who should be informed if one's test result is positive?

Of all the respondents, 35.19% (n=133) had no intention of disclosing their HIV positive status to anyone.

Table 4.39 Who to be informed if ones test result is positive

Who would you tell your HIV test result if you test positive?	Frequency	Percentage
Your family	144	38.10
Your partner	53	14.02
Your friends	107	28.31
No one	133	35.19

4.7 CONCLUSION

The main contents included in this chapter are: socio-demographic data, knowledge about HIV and AIDS, knowledge, attitude and practice of VHCT service, perception of personal risk, stigma and discrimination and finally a conclusion with respect to the chapter.

CHAPTER 5

DISCUSSIONS OF THE STUDY

5.1 INTRODUCTION

This chapter presents a discussion based on the major findings presented in chapter 4. Findings that are discussed include demographic characteristics, knowledge of VHCT, attitudes towards testing for HIV and factors that influence VHCT utilisation.

5.2 DISCUSSION ON SOCIO DEMOGRAPHIC DATA

There were more females than males who participated in the study. Fifty-five percent (208) of the total respondents were females and this confirms the fact that more females than males are enrolled in these schools (Geman & Siwela 2004:20).

The respondents who participated in this study were 15 to 19 year old. This age group was chosen because young people aged 10 to 24 accounts for over 50% of all HIV infections occurring worldwide. Adolescents are particularly vulnerable to HIV because of the strong influence of peer pressure and the development of their sexual and social identities, which often leads to experimentation. Adolescents should be counselled to delay their sexual debut and practice abstinence (FMOH and Federal HAPCO 2007:15-16).

In 2006, the population mostly affected by HIV in Ethiopia were those between the ages of 15-24 years. Of these, the majority of them were adolescents. There was a 5.6% prevalence rate of HIV infection among the group (FMOH and National HAPCO 2006:10). This indicates that age is an important demographic factor that should be given due attention in designing important prevention interventions for HIV infection.

The findings of the study further showed that adolescents who were not married knew more about HIV transmission and prevention than the few that were married. This notion is also supported in literature because of gender inequalities such as decision-making about sexual intercourse in marriage (UNAIDS 2008:72).

5.3 DISCUSSION OF KNOWLEDGE ABOUT HIV AND AIDS

The respondents knew the modes of HIV transmission. Unprotected sex with HIV infected individuals was the most common mode of HIV transmission cited by the respondents. This finding also emerged in the 2005 Ethiopian Demographic Health Survey among the youths (Central Statistic Agency 2006:209*).*Thus to prevent HIV transmission, it is important that young people practice safe sex through the much advocated ABC methods (abstinence, being faithful to one uninfected partner, and condom use) (Central Statistic Agency 2006:209*).* Knowledge of HIV transmission modes is particularly important for adolescents, since adolescents are greatly threatened by the HIV pandemic and understanding how to prevent HIV transmission is the first step to avoid infection (United Nations 2010b:41).

The finding is also supported by UNAIDS report which stated that in Sub-Saharan Africa the high prevalence of HIV infection is due to heterosexual intercourse as the main mode of transmission. This region contains almost two-thirds of all young people living with HIV, 61% of who are female (UNAIDS/WHO 2007:8). Therefore, educating adolescents about HIV transmission is important because it provides adolescents with the skills that are necessary; knowledge and understanding of sexual risks as well as providing a source of peer support and social capital.

The respondents cited both radio and television as their main sources of information for VHCT services and HIV and AIDS in general. Several studies done among adolescents also mentioned television and radio as the primary sources of information for adolescents (Abiy 2006:23; Mwandira 2008:29).

The study findings also show that adolescents are well informed about the methods of preventing HIV infection. However, a knowledge gap was identified among a significant number of respondents, where 33% (n=123) knew one or two methods of HIV infection. This may prevent adolescents from making a well-informed analysis of their situation and prevent them from finding ways out of exploitative situations. Thus, improving adolescents' knowledge on HIV transmission prevention methods has particular importance (Adolescent Development and Participation Unit Program Division 2006:19).

The respondents of this study knew some of the uses mentioned in the VCT toolkit. The VHCT toolkit is an information box designed as an educational tool. The VCT toolkit categorises the benefits of knowing VHCT at two levels: individual and community. At the individual level, knowledge of VHCT creates a more realistic self-perception of a client's vulnerability to HIV, promotes or maintains behaviours to prevent acquisition or further transmission of HIV, alleviates anxiety, and facilitates understanding and coping, facilitates prevention of mother-to-child transmission of HIV, helps client to plan and make information choices for future and leads to early referral to specific clinical care, treatment and support (USAID/Family Health International 2004:3). At the community level, VHCT creates peer educators; mobilises support for appropriate responses; reduces denial, stigma and discrimination; and normalises HIV and AIDS because of a clear and open communication (USAID/Family Health International 2004:3). Thus public health administration and other concerned bodies should work to make students more knowledgeable about VHCT.

5.4 DISCUSSION ON ADOLESCENTS' ATTITUDE TOWARDS TESTING FOR HIV

Respondents were aware of the importance of being tested for HIV for all persons, whether they tested negative or positive.VHCT offers benefits to those who test positive or negative (Baggaley & Boswell 2002:1). Yet some respondents believed it was of value only if one was HIV positive. Potential benefits of VHCT are alleviation of anxiety, increased awareness of vulnerability to HIV, promotion of behaviour change, facilitation of early referral for care and support and assistance in reducing stigma in the community through education (Baggaley & Boswell 2002:1). Knowledge of a negative HIV status helps those individuals to make specific decisions to reduce their risk and increase safer sex practices so they can remain disease free. For those who are HIV infected, there are also benefits because knowledge of their status allows them to take action, to protect their sexual partners, to access treatment, and to plan for their future (Central Statistic Agency 2006:195).

Counselling was also mentioned as being important to HIV testing. The counselling process includes evaluating personal risk of HIV transmission and discussing how to prevent infection (USAID/Family Health International 2004:25). HIV counselling plays two important roles: preventing HIV infection by promoting behaviour change and providing psychosocial support to people infected and affected by HIV (USAID/Family

Health International 2004:25). The majority of respondents provided good reasons for the need for counselling, because hearing the test results can be emotionally challenging (USAID/Family Health International 2004:25). Having to deliver HIV positive results is especially demanding in situations where support is inadequate and clients may be vulnerable to discrimination (USAID/Family Health International 2004:25). Those respondents who said counselling was not important for HIV testing did not mention their reasons, indicating a need for education about the importance of counselling along with HIV testing.

5.5 DISCUSSION ON FACTORS THAT INFLUENCE VHCT UTILISATION

The respondents mentioned distance to the VHCT services as a barrier to utilisation of services. Respondents suggested that the VHCT services should be within the school premises for easier access. This finding is supported by the Ethiopian VHCT guideline which says VHCT services can be provided through the following four models of delivery: (1) integrated services provided in public, NGO, and private health facility settings, as designated VHCT units or under other programmes (Federal HIV/AIDS Prevention and Control Office 2007:8); (2) stand alone counselling and testing services provided at sites outside health facilities (Federal HIV/AIDS Prevention and Control Office 2007:8); (3) outreach VHCT services for special populations such as people in remote rural areas, refugees, and schools (Federal HIV/AIDS Prevention and Control Office 2007:8); and (4) VHCT services provided by trained practitioners in government agencies, NGO, and private sector institutions as part of comprehensive workplace HIV programmes (Federal HIV/AIDS Prevention and Control Office 2007:8). These VHCT sites are for the general public but they are often not designed to address adolescents' especial needs.

VHCT services are reported not to be tailored for adolescents (UNAIDS 2001:33). The report further stated that there is very little information on VHCT services for young people (UNAIDS 2001:33). The same UNAIDS report stated that in many high-prevalence areas, young people, especially young women, are at high risk from HIV infection yet they often have no access to VHCT services. The report described young people's special vulnerabilities and a particular vulnerability of young women to HIV; however, this has not been translated into increasing access to VHCT services for them

(UNAIDS 2001:33). This is one of the barriers to VHCT availability and accessibility for young people (Baggaley & Boswell 2002:15).

The expenses of VHCT are also mentioned in this study, and are supported in literature as a barrier in terms of access by young persons. Baggaley and Boswell (2002:16) reported that for VHCT services to reach young people, VHCT must be free. Any attempt to introduce or scale up VHCT for young people must take cost analysis in to consideration (Baggaley & Boswell 2002:16). Similarly the finding strengthens results obtained from a 2004 study done on knowledge and attitude towards voluntary counselling and testing for HIV in North West, Ethiopia in which 93.8% of respondents reported their willingness to use the VHCT service if such services were to be made available free of charge (Shtaye et al 2004:86).

In order to address the needs of adolescents, it is important to provide youth-friendly services and youth-friendly service provider sites. But according to the Ethiopia VHCT guideline 2007, available VHCT services are found in integrated services, stand alone counselling and testing services, outside health facilities, and outreach VHCT services which are provided for special populations such as schools and government agencies (Federal HIV/AIDS Prevention and Control Office 2007:8). VHCT services currently available, do not seem to address adolescents' needs because statistics show minimal usage by adolescents (Federal HIV/AIDS Prevention Control Office 2007:8).The majority of students prefer schools and youth clubs to provide them with VHCT services. Counselling and testing services targeting youth should be provided, where possible, by trained counsellors (Federal HIV/AIDS Prevention and Control Office 2007:16). This guideline is congruent with the findings of this study. The counsellors involved in providing VHCT services for young people should be trained to work especially with young people and to understand the roles of transference and counter- transference in counselling, which has strong cross-cultural relevance for VHCT (Baggaley & Boswell 2002:21).

The increase in the use of VHCT services by adolescents, such as HIV counselling and testing is encouraging for both policy makers and health care workers. In addition to providing quality VHCT services, the development of affordable and effective medical care for people living with HIV is essential to address the urgent need to improve

access and quality of services (Joint Publications of IPPF South Asia Regional Office and UNFPA 2004:6).

Short waiting periods at the VHCT services would also enhance utilisation of VHCT services (Baggaley & Boswell 2002:15). The current study also mentioned short waiting periods as necessary to enhance utilisation of VHCT services. A study carried out in 2005 in Ethiopia also reported long waiting periods as a deterrent from accessing VHCT services, and suggested a waiting period of thirty minutes as suitable (Federal Ministry of Health/HAPCO, AAU).

5.6 DISCUSSION ON PERCEPTION OF PERSONAL RISK

The highest prevalence of HIV is still found among the age group of between 15-24 years (UNAIDS 2010:16). Attawell (2004:3) reported that the highest HIV prevalence still occurs in the age group 15-24 years It is this same age group of women who are sexually active but never-married that has the highest rate of HIV infection and thus is expected to bring about a significant reduction in overall life expectancy (The World Bank 2008:20). A variety of factors are placing young people at the centre of HIV vulnerability and young people often begin their sexual lives at early ages (UNAIDS 2001:33). HIV prevalence rates among youth reflect the realities of these risks. Altogether, HIV rates are high among youth (UNAIDS 2001:33). The current study found that most of the adolescents are reluctant to go for testing and this place them and their partners at risk of being infected with HIV.

This study also supported another study which looked at the perception of high school students on VHCT using the Health Belief Model, with a descriptive cross sectional study design in Butajujra, SNNPR, and Ethiopia. Of a total of 656 respondents, 17.5% showed that they were not willing to undergo VHCT. Out of those not willing to undergo VHCT, 45.5% stated fear of anxiety following the result as the reason for not undergoing VHCT and 19.6% indicated fear of stigma and discrimination by society as the reason (Abiy 2006:25). This shows the importance of providing necessary information for adolescents to change their attitude and practices.

Couple counselling is promoted to enhance safer sexual behaviour and to encourage disclosure between sexual partners. Couples counselling and testing should be

encouraged, and services should address couples' needs in a flexible manner. Both partners must consent to testing and agree to learn the results together (Federal HIV/AIDS Prevention and Control Office 2007:4).

5.7 DISCUSSION ON STIGMA AND DISCRIMINATION

Stigma and discrimination associated with HIV and AIDS is still relevant in Ethiopia, especially among adolescents (Shtaye et al 2004:83). Reluctance to test and to inform one's partner is associated with stigma and discrimination associated with an HIV positive test result. This assertion was also very clear with the current study as a significant number of respondents reported that they would not tell their partners if they discovered that they were HIV positive. Another significant number also reported a fear of being tested because of the stigma surrounding an HIV positive test. This finding is supported by Baggaley and Boswell (2002:10), they reported that most youth prefer not to disclose their HIV status to their parent(s) because of the fear of rejection, discrimination, isolation and how it may affect the parent(s) who have made sacrifices for their education (Baggaley & Boswell 2002:10). Similarly some claim that because their parents are already stressed with life, it would be unfair to stress them further with positive HIV results (Baggaley & Boswell 2002:10).

With the advent and use of antiretroviral medications, it was not surprising that there were some respondents who did not know anyone with HIV or anyone who was suffering from AIDS. Acceptance of those with an HIV positive diagnosis is more significant than it was before (Tolcha 2007:23).Even though the discrimination for those who have AIDS is still relevant, there is a noticeable degree of reduction among the adult population, but no noticeable change among adolescents and the youth in general (Central Statistic Agency 2006:187).

5.8 CONCLUSION

The chapter presented discussion of study findings by using different literatures. The subheadings used under this chapter were introduction, discussion on socio demographic data, discussion on knowledge about HIV and AIDS (transmission, prevention), discussion on VHCT service (knowledge, attitude and practice), discussion on perception of personal risk, discussion on stigma and discrimination and finally the conclusion.

CHAPTER 6

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

The aim of the study was to investigate adolescents' knowledge and attitudes towards VHCT services in Addis Ababa, Ethiopia. This chapter presented conclusions based on results of a study to answer objectives formulated in chapter 1 as follows:

- To determine adolescents' knowledge of VHCT for HIV
- To establish adolescents' attitude towards testing for HIV
- To determine factors that influence VHCT utilisation

The chapter also presented some possible limitations for generalisations of findings on adolescents who live in Addis Ababa city, Ethiopia and are not high school students. The findings sited in chapter four served as a basis for recommendations in this chapter to bring about better access to VHCT services in the future, especially for adolescents, by identifying factors that affect access to the service.

6.2 CONCLUSIONS IN RELATION TO THE MAIN FINDINGS OF THE STUDY

- Adolescents in this study got information about HIV transmission primarily from the radio, TV, schools and friends. These different information sources about HIV transmission made respondents knowledgeable about different modes of HIV transmission, different methods for HIV infection and prevention. Information sources are important for young people in order to protect themselves from HIV transmission. Due to these various information sources, young people were able to realise the benefits of going for testing. A majority of the students responded that condom use was the best option for them to prevent them from HIV infection. This indicated that young people engage in high-risk behaviour that could expose them to HIV infection, so it is advisable to improve adolescents' knowledge for those who still lack the correct knowledge to protect themselves. This is

particularly important for health managers, when it comes to planning for better access to youth friendly information sources for adolescents.

- Findings from this study showed that adolescents in Addis Ababa, Ethiopia have a positive attitude towards VHCT services as the majority of them went for HIV testing and are aware of VHCT services.
- Students identified some barriers that they felt prevented them from accessing VHCT services. These barriers included poor access of VHCT services due to distance, lack of VHCT services in the schools, lack of youth involvement in VHCT services, cost of VHCT services and the untrained personnel within the VHCT services.
- Stigma and discrimination still exists as some respondents mentioned that they would not sleep and use same utensils as those who are HIV positive.

6.3 LIMITATIONS OF THE STUDY

Possible threats to the generalisability of the study:

- The study was carried out in the age range of 15-19 year's population so this might limit the generalisability of study findings to the youth in Addis Ababa City Administration in general.
- The study population was chosen from government owned high-schools only so this might limit the study findings from generalisability for all high schools adolescents in Addis Ababa, Ethiopia
- Only daytime students were included in the study, this might affect the generalisation for night -time students.
- Only literate adolescents participated in the study, this limits the findings from generalising to illiterate adolescents.
- Only 12 high schools were chosen to be part of the study, these schools may have drawn different conclusions from those schools not included in the study.
- The study was a descriptive type study design so it could not test the association between different variables and could not allow differentiating significant differences among variables.

6.4 RECOMMENDATIONS FOR IMPROVING ACCESS TO VHCT SERVICES BY ADOLESCENTS IN ETHIOPIA

- School adolescents should be provided with a VHCT service at their schools, with trained peer educators to increase access to the same service for the school age population.
- Adolescents and parental VHCT information sharing should be encouraged and strengthened, so that adolescents can learn from their parents without fear of cultural barriers that could lead to stigma, discrimination and other possible consequences.
- VHCT education should focus on avoiding stigmatising and discriminatory behaviour, so that students will develop positive attitudes towards people living with HIV and AIDS.
- VHCT services should be free in order to attract more utilisation by adolescents.
- Quality of counselling should be considered the most important factor for all counsellors, as this could motivate adolescents' VHCT service seeking.

6.5 RECOMMENDATIONS FOR FURTHER STUDIES

- Conducting same study on out of school adolescents before generalising current finding to all adolescents in Addis Ababa, Ethiopia.
- Explore knowledge, attitude and practices towards VHCT services for rural adolescents in Ethiopia.
- Further investigating the perceptions of young people towards accessing VHCT services from the health facility versus youth centres and school services.

6.6 CONCLUSIONS

The findings of the study clearly indicate a need for a more accessible voluntary HIV counselling and testing services for adolescents. Accessibility can be achieved through provision of VHCT services within the school premises and using other adolescents as counsellors for the VHCT services.

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List of abbreviations

AIDS	Acquired Immune Deficiency Syndrome
BSS	Behavioural Surveillance Survey
FMOH	Federal Ministry of Health
HCT	HIV Counselling and Testing
HIV	Human Immunodeficiency Virus
MoFED	Minister of Finance and Economic Development
SPSS	Statistical Package for Social Sciences
SSA	Sub-Saharan Africa
STIs	Sexually Transmitted Infections
UNISA	University of South Africa
VHCT	Voluntary HIV Counselling and Testing
WHO	World Health Organization

List of annexures

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Ethical Clearance Certificate of UNISA for proposal approval

Annexure B

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Annexure C

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Annexure D

Letter seeking consent from study participants

Annexure E

Questionnaire

Ethical Clearance Certificate of UNISA for proposal approval

UNISA university of south africa

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

Date of meeting: 26 July 2011 Project No: 4508-547-1

Project Title: Knowledge and attitude towards human immune deficiency virus counseling and testing (HCT) services among adolescent High School students in Addis Ababa, Ethiopia.

Researcher: Abraham Alemayehu Gatta

Degree: Masters in Public Health (General) Code: DIS4986

Supervisor: Prof G Thupayagale-Tshweneagae
Qualification: DLITT 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

Letter seeking permission to conduct a study from UNISA Addis Ababa Regional Learning Centre to Addis Ababa Education Bureau

UNISA university of south africa

August 26, 2011

UNISA-ET/KA/ST/29/ 26-08-2011

Addis Ababa Education Bureau
Addis Ababa

Dear Sir/Madam:

Mr. Abraham Alemayehu Gatta is a student in Master of Public Health program at University of South Africa (UNISA). The student is currently conducting research to write his masters dissertation. Topic of his research is:

> "Knowledge and attitude towards human immune deficiency virus counselling and testing (HCT) services among adolescent high school students in Addis Ababa, Ethiopia"

The student is going to start data collection for his research. I kindly request your cooperation in assisting the student in facilitating his research and giving him access to data sources. I would like to thank you in advance for your assistance.

Sincerely,

Meseret Melese Tefera
Deputy Director

UNISA REGIONAL LEARNING CENTRE
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Permission letter to conduct a study from Addis Ababa Education Bureau to High Schools

የአዲስ አበባ ከተማ አስተዳደር ትምህርት ቢሮ

CITY GOVERNMENT OF ADDIS ABABA EDUCATION BUREAU

Ref. No ት/ብ/705/ት28 4ዐ/35 Date 3/01/04 E.C

To whom it may concern

Mr. Abraham Alemayehu Gatta is a student in master of public health at UNISA. He is currently conducting his research in Addis Ababa Secondary schools.

The university requested our Bureau in a letter written with a reference number UNISA-ET/KA/ST/29/26-08-2011 on the date August 2011 to provide access to data sources (high schools under city Administration).

Therefore, the Bureau requests your cooperation in providing relevant information so that anticipated study can be carried out. We would like to thank you in advance for your unreserved cooperation.

With regards,

NEGUSSIE

የትምህርት ጥራት አመራርና ተቋማት አደረጃጀት

Educational Quality Leadership and Organizational Management Vice Bureau Head

"ለትምህርት ጥራትና መስፋፋት በወቅቱ የሚከፍሉት ግብር ዓይነተኛ መሣሪያ ነው"

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አዲስ አበባ - ኢትዮጵያ Addis Ababa – Ethiopia

ማሳሰቢያ ሁልጊዜ የምንገናዘቢያ ቁጥሮችን የጉዳዩን ርዕስና የሚመለከተውን ክፍል ይጥቀሱ

REMINDER: PLEASE ALWAYS PROVIDE REF. NO SUBJECT AND ATTENTION T

Letter seeking consent from study participants

Participant Information Sheet

Hello, my name is _____I am working as data collector for the research project titled "Knowledge and attitude towards Human Immune Deficiency Virus counselling and testing (HCT) services among adolescent high school students in Addis Ababa, Ethiopia".

The purpose of this study is to conduct research for dissertation paper of masters of public health at UNISA, Department of Health Studies for investigating the adolescents' level of knowledge and attitudes towards HCT services.

Adolescent high school students are the foci for this study to determine their knowledge and attitude towards HCT services in the city. A total of 378 participants will be interviewed. I will ask the socio demographic characteristics, personal risk perception, knowledge and use of HCT, reasons for using service, attitudes and opinions about HCT including misconceptions, stigma and discrimination associated with being tested, explore to HCT services. Filling in the questionnaire may take a maximum of 30 minutes.

The benefit of this study is that the results of the study will help responsible parties to identify the weaknesses and strengths of the program to take corrective action in places where there are problems and simultaneously to put effort on strengthening better where there are positive achievements. There is no financial or in kind item to be provided for you up on participating in this study.

Risk: There will not be any type of risk that may come on you or others up on providing information in this study

Confidentiality: All information you give will be kept strictly confidential and your name will not be written in this form and will never be used in connection with any of the information you tell us.

Free participation and withdrawal: Your participation is voluntary and you are not obliged to answer any questions you don't want to respond. You may also withdraw from the study at any time and you would not be penalized for your decision to withdraw.

Contact information:

1. Name of principal investigator: Abraham Alemayehu Gatta
Pharmaceutical Fund and Supply Agency
Cell phone: +251912165699
Email: 45085471@mylife.unisa.ac.za
Addis Ababa

Consent form

I understood all the above provided information and I entered the study after complete understanding of the objective, confidentiality, risks and benefits of the study and my participation is also completely voluntarily.

Signature of participant_____

Date_____

Data collector signature_____

Date_____

Contact information:

1. Name of principal investigator: Abraham Alemayehu Gatta
Pharmaceutical Fund and Supply Agency
Cell phone: +251912165699
Email: 45085471@mylife.unisa.ac.za
Addis Ababa

Questionnaire

My name is _____. I am working _____. We are collecting data among students here in _____ (name of school) about knowledge and attitude towards HIV counselling and testing services.

So this is a research designed to explore the knowledge and attitudes of adolescents about HCT and HIV prevention, and you are kindly requested to fill all the questions below. And I would like to remind you that your genuine answer is of paramount importance to the outcome of the research and that all the answers and your identity are kept anonymous.

Thank you in advance.

I. Socio demographic data

1. Age------
2. Sex--------
3. Grade-------
4. Religion: Christian------ Muslim--------- Others-------
5. Marital status: Married------ Single------ Divorced--------

II. Knowledge about HIV/AIDS (transmission, prevention)

1. How many modes of HIV transmission do you know? --------- Please describe them

2. Where do you get your information about HIV/AIDS?

School---------

Friends----------

Radio----------

TV----------

Others (specify) ------

3. Which way of transmission is the most common cause of infection in our country

---

4. List the prevention methods that you know

5. Which prevention method(s) do you think most relevant for young people? ----------

III. HCT service (knowledge, attitude and practice)

1. Do you know that one can test for HIV and know his/her status?

Yes---- No -----

2. Have you ever heard about HCT? Yes -------- No ----------

3. How did you come to know about HCT

From friends----------
From family members----------
From literature----------
From adverts/ posters----------
From radio/TV ----------
Others specify----------

4. What are the uses of HCT service

5. Is HCT important for prevention of HIV transmission? Yes ------- No ----

6. What do you think is appropriate to have HCT?

Any time, --------
Before marriage ----------
Before initiation of sexual contact ----------
Before pregnancy ----------
After pregnancy ----------
Any time a person feels at risk ----------
Others specify ----------

7. Who do you think benefits from being tested?
HIV positive individuals-------
HIV negative individuals---------

8. Do you think counselling is important for HIV testing? Yes ------ No -----

9. Why? ----------

10. Who do you think needs to be tested?
High risk groups ----------
Those to be married ----------
Everybody who is sexually active --------
Only those suspected by medical personnel to be HIV positive ------
Others, specify ----------

11. Do you know where you can get the service? Yes ------ No ------

12. Is there service near your area or far?
Near ------
Far --------
Very far -------

13. Where is the service located?

In a health facility ------

In youth club or association ------

It is a stand- alone service (giving only HCT) --------

14. Do you know how much it costs to be tested for HIV? Yes ---- No -----

15. Do you think it is accessible for you to get the service?

Cost wise? Yes -------- No ---------

Distance wise? Yes --------- No -------

Is the location convenient? Yes ---------- No ----------

16. Do you think the test should be free? Yes ------ No ------ -

17. Where do you think should a HCT centre be located for easy access for adolescents?

In a health facility------

In schools----------

In youth clubs------

In a separate service centre for HCT alone--------

Others (specify) -------

18. Who do you think should counsel adolescents?

Trained health personnel------

Trained non-medical personnel ----

Trained youth (peer group) counsellors --------

Religious leaders ----------

Traditional healers-------

Anybody who is a trained counsellor------

19. Have you ever been using HCT services? Yes ---- No ---- if no, go to question no. 28

20. If yes, how did you find the service? Very good ---- good ------ bad ---- Very bad –

21. Can you provide reasons for your answer for the above question? ----------
---

22. How do you rate the confidentiality of the counseling and testing process?
Very good ------
Good ---
Poor ----
Very poor -----

23. How long did it take before the result of the test? ----------

24. When do you think should a test result be given?
Immediately after the test -------
Few hours after the test -----------
Few days after the test ---------
It doesn't matter when ----------
Others, specify ----------

25. What was your reason for being tested?
Just to know your status (no particular reason) --------
Had unprotected sex ----------
Multiple sexual partners ----------
Thinking that your partner could have risk factor ------
You had other risk factor for the infection ----------
Others (specify) ----------

26. Did your partner know about you being tested? Yes ----- No -------

27. If yes, did you partner take the test as well? Yes ------ No ----------

28. If no, have you ever think of testing for HIV? Yes ------ No ----------

29. If no, why not?

You have no risk ------

Trust oneself and partner ---------

You don’t see the importance of being tested -------

You don’t trust the quality of the test available ----------

30. If you want, can you get HCT service easily? Yes ------ No ------

31. If no, why not?

It is expensive for you ----------

The location if far ----------

You don’t trust the confidentiality --------

The result takes a long time ----------

You don’t want to know your status at all ---------

IV. Perception of personal risk

1. How do you rate your personal risk of being infected with HIV at the moment?

Very high --------

High ----------

Moderate ----------

Low ----------

Very low ----------

2. Can you explain the reason for the above answer ----------

3. How do you rate your sexual partner(s) risk of having HIV infection?

Very high ------

High ----------

Moderate -------

Low ----------

Very low ---------

4. Do you intend to have HCT for HIV in the future? Yes ------ No -------

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

Yes --------

No ----------

6. Do you have any intention of asking your sexual partner to seek for HCT?

Yes ---------

No ----------

V. Stigma and discrimination

1. Have you ever seen a person with HIV? Yes ---- No -------

2. Have you ever seen a patient with AIDS? Yes ------- No ------

3. Do you think it is safe to live with a person with HIV in the household?

Yes ---------- No --------

4. What precautions do we need to take to live with a person living with HIV/AIDS?

Separate beds ----

Separate eating utensils -------

Avoid external body contact -------

Use gloves to clean his/her materials ------

Avoid contact with body fluids ----------

Separate toilet ----------

Better to keep the person in a healthy facility ---------

Others specify ----------

5. If one of your family members were a person living with HIV/AIDS. Would you tell anyone?

Yes ---------- No ----------

If yes, to whom ----------

If no, why not ----------

6. Do you discuss about HIV/AIDS at home?

Yes --------, with whom ----------

No ----------

7. Who would you tell your HIV test result if you test positive?

Your family ---------

Your partner(s) ------

Your friends ----------

No one ----------

Others, specify ---------