FACTORS AFFECTING UTILIZATION OF VOLUNTARY COUNSELLING
AND TESTING SERVICES: COMPARISON BETWEEN PUBLIC BOYS’ AND
GIRLS’ SECONDARY SCHOOLS IN NAIROBI COUNTY.

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A research thesis submitted in partial fulfillment of the requirement for the award
of the degree of Master of Public Health in the School of Public Health of
Kenyatta University.

August 2012
DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

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DEDICATION

I dedicate this work to my loving and supportive husband Kaplich Barsito, and my sweet lovely children Shekinah, Akim and Adalia
ACKNOWLEDGEMENTS:

Coming up with this work has been an uphill task. However, a number of people have worked hand in hand with me to make it manageable.

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_Ngobururok Kiptayat._
(God bless you all)
TABLE OF CONTENT

DECLARATION PAGE ........................................................................................................ ii
DEDICATION.................................................................................................................. iii
ACKNOWLEDGEMENTS: .............................................................................................. iv
LIST OF TABLES .............................................................................................................. x
LIST OF FIGURES .......................................................................................................... xii
ABBREVIATIONS/ACRONYMS ....................................................................................... xiv
ABSTRACT ....................................................................................................................... xvi

CHAPTER I: INTRODUCTION ......................................................................................... 1
  1.1 Background of the study ...................................................................................... 1
  1.2 Problem Statement .............................................................................................. 3
  1.3 Justification .......................................................................................................... 4
  1.4 Research Questions .............................................................................................. 5
  1.5 Null Hypotheses .................................................................................................. 6
  1.6 General Objective ............................................................................................... 6
  1.7 Specific Objectives ............................................................................................... 6
  1.8 Operational definition ....................................................................................... 7
  1.9 Significance and Anticipated Output .................................................................... 7
  1.8 Limitations .......................................................................................................... 8

CHAPTER II: LITERATURE REVIEW .............................................................................. 9
  2.1 Global Perspective of HIV .................................................................................. 9
  2.2 HIV Transmission ............................................................................................... 11
  2.3 HIV and the Youth in General .......................................................................... 12
  2.4 HIV in Boys and Girls Compared ..................................................................... 14
2.5 Voluntary Counselling and Testing (VCT) ...........................................18
2.6 The Role of VCT in HIV Prevention..........................................................22
2.7 Youth and VCT.........................................................................................25
2.8 Factors affecting utilization of VCT services among the youth. ..............28

CHAPTER III: RESEARCH METHODOLOGY ...........................................29
3.1 Study Design..............................................................................................29
3.2 Variables ....................................................................................................29
3.3 Location of the Study.................................................................................29
3.4 Target Population.......................................................................................30
3.5 Sampling Technique and Samples Size Determination............................30
3.6 School Type ..............................................................................................31
3.7 Construction and Research Instruments ...................................................32
3.8 Pilot Study, Validity and Reliability............................................................32
3.9 Data Collection Techniques.......................................................................32
3.10 Data Quality Control Measures.................................................................33
3.11 Data Analysis ............................................................................................33
3.12 Logistical and Ethical Considerations .....................................................34

CHAPTER IV: RESULTS ..............................................................................35
4.1 Introduction..................................................................................................35
4.2 Socio-Demographic Characteristics of Respondents.................................35
4.2.1 Age..........................................................................................................35
4.2.2 Sex Distribution ....................................................................................36
4.2.3 Respondents Level of Study .................................................................36
4.3.1 Knowledge on Meaning and Purpose of VCT .....................................37
4.3.2 Comparison of knowledge on VCT with respondents’ characteristics.....38
4.3.3 Knowledge on where VCT is Located ................................................. 40
4.3.4 Distance to the Nearest VCT centre .................................................. 41
4.4.1 VCT Service Utilization by Respondent’s Characteristics ...................... 43
  4.4.1.1 VCT Service Utilization by Sex .................................................. 43
  4.4.1.2 VCT Service Utilization by Age ............................................... 44
  4.4.1.3 VCT Service Utilization by Class of Study .................................. 45
  4.4.1.4 VCT Service Utilization by School Type ..................................... 45
  4.4.1.5 VCT Service Utilisation by Distance to the Nearest VCT ............... 47
  4.4.1.6 VCT Use by Students’ Knowledge on HIV/AIDS and VCT ............. 47
4.5 Factors affecting utilization of VCT services by secondary school students in
  Nairobi ........................................................................................................ 49
  4.5.1 Knowledge on HIV and AIDS ........................................................... 49
    4.5.1.2 Knowledge on meaning of HIV and AIDS with respondents
      characteristics ....................................................................................... 49
  4.5.2 Knowledge on how HIV is spread .................................................... 51
  4.5.3 Knowledge on how to Stop Spread of HIV ........................................ 52
  4.5.4 Knowledge on Infected Persons ....................................................... 55
    4.5.4.1 Comparison in knowledge of infected persons with respondents’
      characteristics ..................................................................................... 56
  4.5.5 Reasons for Going to VCT Centre ...................................................... 57
  4.5.6 Reasons for not going to VCT Centre ............................................... 58
  4.5.7 Encouragers to VCT Use .................................................................. 60
  4.5.8 Respondents’ Sexual Behaviours and Perceptions on Risk of Infection .... 62
    4.5.8.1 Students Sexual Behaviours ...................................................... 62
    4.5.8.1.1 Sexual involvement with gender .......................................... 62
4.5.8.1.2 Sexual involvement with age........................................63
4.5.8.1.3 Sexual involvement with class of study.........................64
4.5.8.1.4 Sexual involvement with the school type ......................65
4.5.8.2 Last time of sexual involvement........................................66
4.5.9 Number of Sexual Partners ..................................................67
4.5.9.1 Number of sexual partners versus visit to VCT use ...............70
4.5.10 Perception of Risk of HIV Infection and respondents characteristics ....71
4.5.11 Peer Influence on VCT Use .................................................74
4.5.12 Encouraging others to Visit VCT ........................................75
4.5.13 Family Reactions to VCT ......................................................78
4.6 Students Suggestions on Control of HIV Spread among the Youth........80
4.7 Students Suggestions on Scaling Up VCT Uptake among the Youth. ....80

CHAPTER V: DISCUSSION ................................................................82

5.1 Introduction ............................................................................82
5.2 Respondents’ characteristics ..................................................82
5.3 Knowledge,behaviours and perceptions on HIV and AIDS ............82
5.4 Knowledge and utilization of VCT services ..............................86
5.5 Factors Affecting Utilization of VCT Services by the Students .........90
5.5.1 Perception of Risk ...............................................................90
5.5.2 Knowledge on HIV and AIDS .............................................91
5.5.3 Fear of positive results ..........................................................91
5.5.4 Confidentiality .....................................................................92
5.5.5 Knowledge of an Infected Person .........................................93
5.5.6 Knowledge of where VCT centre is located .......................94
5.5.7 Distance to the nearest VCT .................................................94
CHAPTER VI: CONCLUSION AND RECOMMENDATIONS................................96

6.1 Introduction........................................................................................................96
6.2 Summary of the Findings....................................................................................96
6.3 Implications of the Findings..............................................................................99
6.4 Conclusions........................................................................................................99
6.5 Recommendations.............................................................................................99
6.6 Further Research...............................................................................................100

REFERENCES..........................................................................................................101

APPENDIX 1: Survey Questionnaire ......................................................................109
APPENDIX II: Research Authorization Documents.............................................115
APPENDIX III: Study Area Map...........................................................................116
LIST OF TABLES

Table 3.1 Respondent’s distribution by type of school........................................... 31
Table 4.1: Respondents distribution by age............................................................. 36
Table 4.2: Respondents distribution by sex ............................................................ 36
Table 4.3: Respondent distribution by level of study ............................................. 37
Table 4.4: Percent distribution of respondents by knowledge of VCT....................... 39
Table 4.5: Cross tabulation on knowing VCT centre near home and uses of VCT...... 41
Table 4.6: Cross tabulation on knowledge of VCT centre near home and school type. 41
Table 4.7: Distribution by distance to the nearest VCT centre from home ............... 42
Table 4.8: Cross tabulation on distance to the nearest VCT by school type .......... 43
Table 4.9: Percent distribution of VCT use by student’s age .................................. 44
Table 4.10: Cross tabulation on knowing VCT centre near home and its use .......... 48
Table 4.11: Cross tabulation on knowing VCT centre near school and it use .......... 48
Table 4.12: Cross tabulation on knowing meaning of HIV with sex type............... 50
Table 4.13: Cross tabulation on knowing meaning of HIV with school type........... 50
Table 4.14: Distribution by knowledge on meaning of HIV and AIDS.................... 51
Table 4.15: Cross tabulation on how HIV is spread with students’ sex type .......... 52
Table 4.16: Cross tabulation on how to stop spread of HIV and sex type............... 52
Table 4.17: Cross tabulation on knowing how to stop spread of HIV and school type. 53
Table 4.18: Distribution on how to stop spread of HIV by school type .................. 54
Table 4.19: Knowledge of infected person............................................................. 55
Table 4.20: Distribution of respondents by knowledge on infected person ............ 56
Table 4.21: Reasons of having not gone to VCT by school type ............................ 60
Table 4.22: Encouragers to VCT by school type...................................................... 61
Table 4.23: Proportion of students by number of sexual partners (%) .................... 69
Table 4.24: Number of sexual partners of respondents by school type .................. 70
Table 4.25: Number of sexual partners and discussions on going to VCT to be tested
(Cross tabulation).......................................................... 71
Table 4.26: Knowledge on contracting HIV with respondents’ characteristics .......... 72
Table 4.27: Cross tabulation of perception of risk and sexual activeness ................. 73
Table 4.28: Cross tabulation on perceptions of getting HIV with school type .......... 74
Table 4.29: Cross tabulation on school type and ever encouraged one for VCT ....... 76
Table 4.30: Distribution of ever encouraged one for VCT by reason for visit .......... 77
Table 4.31: Reasons for not encouraging other (multiple response permitted)......... 78
Table 4.32: Students who think family get upset on going to VCT by school type ...... 79
LIST OF FIGURES
Figure 4.1: Percent distribution by knowledge on VCT meaning and function .......... 38
Figure 4.2: Proportion in relation to knowledge on VCT uses ..................................... 40
Figure 4.3: Distribution by knowledge on VCT locations ............................................. 40
Figure 4.4: Distribution by respondent’s use of VCT services with sex type .............. 44
Figure 4.5: Proportion by knowledge on VCT locations ............................................. 45
Figure 4.6: Proportion of VCT use among secondary school students ..................... 46
Figure 4.7: Difference in VCT utilization by distance to nearest VCT centre ............ 47
Figure 4.8: Distribution by knowledge on HIV: meaning, mode of transmission and prevention ................................................................. 49
Figure 4.9: Distribution by knowledge on HIV: meaning, mode of transmission and prevention. (multiple responses permitted; n=358) ........................................ 54
Figure 4.10: Distribution of students by knowledge of infected persons ............. 57
Figure 4.11: Proportion of respondents by reason for VCT visit ................................. 58
Figure 4.12: Distribution by reasons for having not gone for VCT .............................. 59
Figure 4.13: Encouragers to VCT use ................................................................. 61
Figure 4.14: Difference in sexual involvement with sex of the student ..................... 63
Figure 4.15: Difference in sexual involvement with age ............................................. 64
Figure 4.16: Difference in sexual involvement with class of study ............................. 65
Figure 4.17 Difference in sexual activity with school type ...................................... 66
Figure 4.18: Distribution by approximate dates of last sexual involvement ............. 67
Figure 4.19 Proportion of respondents by number of sexual partners ......................... 68
Figure 4.20: Distribution by perceptions of contracting HIV ...................................... 71
Figure 4.21: Proportion of respondents by who they discuss VCT use with ............ 74
Figure 4.22: Distribution by persons encouraged for VCT use ................................. 75
Figure 4.23: Reason for encouraging others for VCT ................................. 77
Figure 4.24: Respondents reasons on their family reaction if they go for VCT ........... 79
Figure 4.25: Suggestions on control of HIV spread (multiple responses permitted).... 80
Figure 4.26: Suggestions on scaling up VCT uptake among youths. (multiple responses permitted)................................................................. 81
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>AIDS</td>
<td>Acquired Immunodeficiency Syndrome</td>
</tr>
<tr>
<td>CACC</td>
<td>Constituency AIDS Control Council</td>
</tr>
<tr>
<td>CBO</td>
<td>Community –Based Organizations</td>
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<tr>
<td>CBS</td>
<td>Central Bureau of Statistics</td>
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<tr>
<td>FBO</td>
<td>Faith-Based Organizations</td>
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<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>IRC</td>
<td>International Rescue Committee</td>
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<tr>
<td>HTC</td>
<td>HIV testing and counselling</td>
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<tr>
<td>KDHS</td>
<td>Kenya Demographic and Health Survey</td>
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<tr>
<td>KIE</td>
<td>Kenya Institute of Education</td>
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<td>KNASP</td>
<td>Kenya National HIV/AIDS Strategic Plan</td>
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<td>Ministry of Health</td>
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<td>NACC</td>
<td>National AIDS Control Council</td>
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<td>NASCOP</td>
<td>National AIDS and STI Control Programme</td>
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<td>NGO</td>
<td>Non–Governmental Organization</td>
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<td>PLWA</td>
<td>People Living With HIV/AIDS</td>
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<td>STD</td>
<td>Sexually Transmitted Diseases</td>
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<td>STI</td>
<td>Sexually Transmitted Infections</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNAIDS</td>
<td>Joint United Nations Programme for HIV and AIDS</td>
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<td>UNGASS</td>
<td>United Nations General Assembly Special Session on AIDS</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>VCT</td>
<td>Voluntary Counselling and Testing</td>
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<td>WHO</td>
<td>World Health Organisation</td>
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ABSTRACT

HIV and AIDS is one of the biggest threats to global health and stability. UNAIDS estimated that there were 33.3 million people living with HIV at the end of 2009. In 2009, there were an estimated 2.6 million people who became newly infected with HIV. In sub-Saharan Africa, where the majority of new HIV infections continue to occur, an estimated 1.8 million people became infected in the same year; Individuals in their most productive years (15-49 years old) are most commonly infected with HIV and AIDS, the disease has a wide socioeconomic impact that threatens development progress in many poor countries, especially those in sub-Saharan Africa. HIV prevalence in girls aged 15 to 19 years old is six times higher than in boys of the same age group. VCT services act as entry point for behaviour formation, behaviour change and care and support in HIV prevention. The broad objective of this study was to determine knowledge, access and factors affecting utilization of VCT services among secondary school students in public schools in Nairobi County. Data was collected using pretested questionnaires. Reliability of the data collection instrument was established using the internal consistency technique. Data was analyzed using SPSS software and presented in bar graphs, pie charts, percentages and measures of central tendency. 2x2 contingency tables, correlation analysis and chi-square statistics were used to test the hypotheses. The respondents were aged between 13 – 20 years. The mean age was 16.2 years. Of the 385 respondents, 213 were females representing 55.3%. Having heard of VCT was closely associated to knowing the function of VCT ($\chi^2 (df=1) = 9.214, p \leq 0.002$). Students in boarding schools were more likely to know the meaning of HIV ($\chi^2 (df=3) = 55.614, p \leq 0.023$) and generally more knowledgeable. Only 18.2% had ever been to a VCT. Students in day schools who knew how HIV is spread were more likely to have gone to VCT to know their status ($\chi^2 (df=3) = 16.340, p \leq 0.003$). There is a significant difference in sexual activeness of students with school type ($\chi^2 (df=3) = 84.111, p < 0.0001$). Students in day school tend to have a higher number of sexual partners than those in boarding schools ($\chi^2 (df=6) = 125.086, p < 0.0001$). Those who did not think they could get HIV were more likely to have more than one sexual partners ($\chi^2 (df=2) = 19.719, p \leq 0.0001$). 55.1% of the respondents discussed about going to VCT. Of those who discussed, 49.8% discussed with their friends, 31.4% discussed with their girlfriends or boyfriends. Students in boarding schools were less likely to encourage others to VCT use compared to those in day schools. Respondents who have been to VCT to know their status were more likely to have encouraged or discussed with others about going to VCT to know their status ($\chi^2 (df=1) = 36.938, p \leq 0.00001$). The factors that affected VCT service utilization included fear, risk perception, distance to the nearest VCT centre, sexual activity, knowledge of infected person, school type, knowledge on VCT and HIV, and availability of youth-friendly VCT centres. There exists a knowledge gap among the youth on the importance of VCT in control of HIV. Interventions are needed to promote utilization of VCT services by the secondary school students. These interventions could use the peers and PLWA to encourage the youth to be tested. Youth friendly VCT centres should be set up or increased in numbers so as to encourage the youth to seek the services. The findings of this study will be used by government policy makers, NACC, NASCOP, NGOs, education sector and other organizations involved in the fight against HIV and AIDS especially among the youth.
CHAPTER I: INTRODUCTION

1.1 Background of the study

HIV and AIDS is one of the biggest threats to global health and stability. UNAIDS estimated that there were 33.3 million people living with HIV at the end of 2009 compared with 26.2 million in 1999. In 2009, there were an estimated 2.6 million people who became newly infected with HIV. In sub-Saharan Africa, where the majority of new HIV infections continue to occur, an estimated 1.8 million people became infected in 2009; considerably lower than the estimated 2.2 million people in sub-Saharan Africa newly infected with HIV in 2001 (UNAIDS 2010).

In the 30 years since HIV and AIDS was first discovered, the disease has become a devastating pandemic, taking the lives of 30 million people around the world. In 2010 alone, HIV and AIDS killed 1.8 million people, 1.2 million of whom were living in sub-Saharan Africa. By 2020, more than 70 million deaths will be attributable to HIV and AIDS which is more than all the soldiers killed during the Second World War. Though life-saving antiretroviral treatment is available, access is not yet widespread; of the estimated 14.2 million HIV-positive individuals in need of treatment, nearly 8 million are not currently able to access it. Even more troublesome, new HIV infections continue to outpace those added onto antiretroviral treatment. (WHO, 2011).

Individuals in their most productive years (15-49 years old) are most commonly infected with HIV and AIDS, the disease has a wide socioeconomic impact that threatens development progress in many poor countries, especially those in sub-Saharan Africa. (UNAIDS, 2011). Sub-Saharan Africa still bears an inordinate share of the
global HIV burden. Although the rate of new HIV infections has decreased, the total number of people living with HIV continues to rise. In 2009, that number reached 22.5 million 68% of the global total. Sub-Saharan Africa has more women than men living with HIV (UNAIDS 2010)

The average life expectancy in sub-Saharan Africa is now 47 years when it could have been 62 years without AIDS (UNAIDS, 2006). The vast majority of people newly infected with HIV in sub-Saharan Africa are infected during unprotected heterosexual intercourse. Having unprotected sex with multiple partners remains the greatest risk factor for HIV in this region (UNAIDS, 2010). In this part of the world, women particularly are disproportionately at risk. HIV prevalence in women aged 15-49 is 8.7% while for men aged 15-49 is 4.6% in Kenya. This female to male ratio of 1.9 to 1 which is higher than that found in other populations based studies in Africa. Urban women residents have a significantly higher risk of HIV infection (12%) than rural residents (8%), (MOH, 2005).

Kenya recorded 92,000 new HIV infections and 80,000 AIDS related deaths of the 1.8 million new infections in sub-Saharan Africa (UNAIDS, 2010). The KNASP III strategy expects to halve HIV incidence and reduce AIDS related mortality by 25%. It also targets that by 2013, there will be universal access to prevention, treatment, care and support services in Kenya (KNASP III 2009/10-2012/13, 2009).

Protecting teenagers especially girls and young women remains a great challenge for controlling HIV infection in Kenya since young women are particularly vulnerable to
HIV infections compared to young men. For example, 3% of women aged 15-19 are HIV infected, compared to less than 0.5% of men 15-19 years. HIV prevalence in girls of 15-19 years old is six times higher than in boys of the same age group and rates in pregnant teens are even higher (MOH, 2005). The Kenya AIDS Indicator Survey (KAIS) of 2007 showed that youths aged 15-24 years account for half of all infections, women being 4 times more likely to be infected than men (KAIS, 2007).

Prevention intervention in Kenya is multi-sectorial targeting educational institutions, work places, civil society organizations, religious groups and private sectors in order to reach communities, families and individuals effectively. The ABC message of “Abstinence, Be faithful to an uninfected and faithful partner and or use of Condoms” now includes a fourth component of “Diagnosis” know your status (MOH, 2005). Voluntary counseling and testing (VCT) is an important strategy for prevention of HIV and AIDS since it helps prevent infections to uninfected and give access to treatment for those already infected. While youths are able to make their own decision when supplied with adequate information on HIV and AIDS, they are faced with a challenge of comprehensive information on sexuality and HIV and AIDS. Scaling up VCT services among the youth demands an understanding of their needs as well as factors that affect their use of such services in the community.

1.2 Problem Statement

HIV and AIDS remains a major concern in Kenya exerting its effects on individuals and communities and is a major problem in the health and socio-economic development of many nations of the world. Due to reasons of peer pressure, limited information, vulnerability to sexual exploitation young people aged between 15-24 are at risk of HIV
infection. Global estimates show that over 6000 young people aged between 15 – 24 years become infected with HIV everyday worldwide (AVERT, 2008). This accounts for almost half of all new infections worldwide.

Many youths continue to engage in risky sexual behaviours oblivious of the danger they are getting themselves into. While Nairobi County is well supplied with VCT facilities as compared to other towns in Kenya, low turn outs of young people utilizing these services has been registered in the past (NASCOP 2008) Though statistics clearly show that young people are vulnerable and are at risk of infection, it is not known whether young people in secondary schools in Kenya know that they are at risk, and the existence and use of VCT services. In addition, information on the factors limiting access to VCT services among secondary school students in Kenya has not been adequately documented.

### 1.3 Justification

Young people still lack knowledge and, importantly, often lack the tools they need to practice HIV risk-reduction strategies. Fulfilling the UNAIDS vision of zero new infections will require a hard look at the societal structures, beliefs and value systems that present obstacles to effective HIV prevention efforts (UNAIDS 2010)

Women, especially young women, remain disproportionately affected in sub-Saharan Africa, highlighting the need to address gender inequity and harmful gender norms as a central component of the global response to HIV (WHO 2011). HIV testing and counselling is the entry point to all HIV prevention, care and treatment interventions. Achieving
Universal Access for response to HIV implies achieving and maintaining universal knowledge of correct HIV status (NASCOP, 2012)

The purpose of this research was to assess knowledge, access and utilization of VCT services by public secondary school students in Nairobi County of Kenya. It also sought to identify the factors that limit access and utilization of VCT services by the students.

VCT serves as an entry point to preventive and behaviour change information as well as care and support for the infected. Knowledge of HIV status helps those who test negative to make decisions to adopt safer sexual behaviours for them to remain disease free while those who test positive have an opportunity to access care thus improving their quality of life.

High school students fall within the 13-19 years age bracket, they are, therefore one of the groups with the highest risk of exposure to the HIV. These youths live under constant peer pressure to enter into sexual liaisons and may not have the discipline or courage to insist on protective measures. This is, therefore, the group who need VCT services; most as a tool for behaviour formation, behaviour change and to reinforce positive behaviours. Similarly, schools remain the single most important place to reach a large number of youths with prevention education at an appropriate early age. The information generated from this study will be beneficial to the policy makers in the Republic of Kenya as it scales-up VCT services for HIV prevention among the youth.

1.4 Research Questions
i. What proportion of secondary school students in public schools in Nairobi know the meaning and purpose of VCT?
ii. What proportion of secondary school students in public schools in Nairobi have ever gone to VCT centres to be tested and how does the VCT seeking behaviour among students compare in the different genders and school type?

iii. What factors limit access to VCT services among students in public secondary schools in Nairobi County?

1.5 Null Hypotheses

i. Ho: Secondary school students in selected public schools in Nairobi do not know the meaning and purpose of VCT and do not seek VCT services.

ii. Ho: There is no difference in the VCT seeking behaviour of students with their gender and school types.

iii. Ho: There are no factors limiting access to VCT services by secondary school students in public schools.

1.6 General Objective

The aim of this study was to determine factors affecting access and utilization of VCT services among secondary school students, comparison between public boys and girls secondary schools in Nairobi County

1.7 Specific Objectives

i. To determine knowledge of the purpose of HIV Voluntary Counselling and Testing among secondary school students and to obtain the proportion of those who have ever gone to a VCT centre to be tested.

ii. To estimate the magnitude of VCT utilization among the students and compare their VCT seeking behaviour with regard to various aspects.

iii. To identify reasons for VCT utilization and factors that affect access to VCT services among students in public secondary schools in Nairobi County.
1.8 Operational definition

Confidential HIV testing: - client’s identifying information is linked to testing information but only client and provider know about it.

Counselling: - a confidential dialogue between a person and care provider aimed at enabling the person to cope with stress and make personal decision to take the test.

Knowledgeable about HIV/AIDS/VCT: – respondents were being able to give the full names of HIV, AIDS and VCT and to give correct information regarding mode of transmission, prevention, correct conception of HIV/AIDS and VCT.

Prognosis: development of the disease from infection to death.

Sexual Intercourse refers only to penetrative vaginal sex.

Stigma: negative feeling toward people with HIV/AIDS, intention to avoid people living with HIV/AIDS from social relationship.

VCT: A process by which an individual undergoes counselling to enable him/her makes informed choice about being tested voluntarily for HIV.

VCT uptake: - ever use of HIV testing service.

Voluntary testing: - a process of HIV testing after being counselled.

Willingness: - readiness to undergo to VCT.

Youth: - those aged 13-24 years.

1.9 Significance and Anticipated Output

HIV and AIDS is a global problem, sub-Saharan Africa including Kenya, being the most affected. The study findings will help in establishing the factors that limit utilization of VCT services by secondary school students hence increase utilization of the services. This is crucial in the attainment of the millennium development goal (MDG) of reversing the effects of HIV and AIDS and other diseases by 2015. The findings will also be used by the government policy makers, NACC, NASCOP, NGOs,
Education Sector and other organization involved in the fight against HIV and AIDS especially in the youth so as to reverse the trends of this epidemic.

1.8 Limitations

The study was restricted to the selected public secondary schools in Nairobi. Views from students in private schools which may be different will not be included. Similarly, the study is restricted to obtaining views from secondary school students, although school dropouts of the same age bracket and those in the colleges may be facing similar problems.

The study employed the use of self administered questionnaire to obtain data on knowledge, access and utilization of VCT services, and factors limiting its access. Due to financial and time constraints the study was restricted to selected public secondary schools in Nairobi and was not expanded to include all secondary schools in the country hence outliers may not have been captured.
CHAPTER II: LITERATURE REVIEW

2.1 Global Perspective of HIV

HIV and AIDS remains a worldwide pandemic that is of great concern. UNAIDS estimates that there were 33.3 million people living with HIV at the end of 2009 compared with 26.2 million in 1999. In 2009, there were an estimated 2.6 million people who became newly infected with HIV. In sub-Saharan Africa, where the majority of new HIV infections continue to occur, an estimated 1.8 million people became infected in 2009 (UNAIDS 2010). Slightly more than half of all people living with HIV are women and girls. In sub-Saharan Africa, more women than men are living with HIV, and young women aged 15–24 years are as much as eight times more likely than men to be HIV positive (UNAIDS 2010).

On the cusp of the fourth decade of the AIDS epidemic, the world has turned the corner and it has halted and begun to reverse the spread of HIV (Millennium Development Goal 6.A). The question remains how quickly the response can chart a new course towards UNAIDS’ vision of zero discrimination, zero new HIV infections, and zero AIDS-related deaths through universal access to effective HIV prevention, treatment, care and support (UNAIDS 2010).

Since HIV and AIDS was first discovered 30 years ago, the disease has become a devastating pandemic, taking the lives of 30 million people around the world. In 2010 alone, HIV and AIDS killed 1.8 million people, 1.2 million of whom were living in sub-Saharan Africa. Though life-saving antiretroviral treatment is available, access is
not yet widespread; of the estimated 14.2 million HIV-positive individuals in need of
treatment, nearly 8 million are not currently able to access it (UNAIDS, 2011). Among
HIV-infected Kenyans, 82% did not know their HIV status and 26% believed that they
were HIV negative, based on previous testing (NASCOP, 2012) This means that
millions of Africans now live with the virus without adequate treatment and care, most
of them will not survive the next decade.

Recent antenatal clinic data show that several parts of Southern Africa have now joined
Botswana with prevalence rates among pregnant women exceeding 30%. In some
African countries which were experiencing serious epidemic, adult HIV prevalence
dropped for example in Uganda. While there is evidence that prevalence among young
people especially women is not dropping (UNAIDS, 2008).

One of these targets included the reduction of HIV infection among 15-24 year olds’ by
25% in the most affected countries by 2005 and globally by 2010, Kenya included.
Globally, comprehensive and correct knowledge about HIV among both young men
and young women has increased slightly since 2003 but at only 34%, the number of
young people with this comprehensive knowledge is only slightly greater than one third
of the UNGASS target of 95% (UNAIDS 2010).

A successful response to AIDS requires that essential public service, such as education,
health, security, and justice be maintained. The session paper number 4, (1997), which
was adopted by parliament for implementation, provides the policy framework designed
to guide the fight against AIDS in Kenya for fifteen years and beyond. The paper states
that AIDS affects development and security and calls among other things a multi-
sectoral AIDS prevention programme. It is also very clear that knowledge on HIV and AIDS alone is not sufficient to prevent the spread of the virus yet at the same time, knowledge is very important as the first step of prevention. One of the targets of KNASP III is to enhance knowledge of HIV prevention among men and women aged 15-64 years (KNASP III 2009/10-2012/2013, 2009).

Opportunities to improve HIV prevention knowledge and behaviour still abound. Less than half of young people living in 15 of the 25 countries (Kenya included) with the highest HIV prevalence can correctly answer basic questions about HIV and its transmission. Young people aged 15-24 years old showed gradually improving knowledge about HIV in these 25 countries but still fall short of the global targets for comprehensive knowledge set in 2001 (UNAIDS 2010).

2.2 HIV Transmission

At the end of 2010, an estimated 34 million people were living with HIV worldwide, up 17% from 2001. This reflects the continued large number of new HIV infections (UNAIDS 2011).

Although the annual number of people newly infected with HIV has dropped since their peak in the late 1990s, this is still occurring at an unacceptably high rate: between 2.5 and 3 million people annually for the past five years, adding to the global number of people living with HIV that reached 34 million (WHO 2011). The vast majority of people newly infected with HIV in sub-Saharan Africa are infected during unprotected heterosexual intercourse (including paid sex). Having unprotected sex with multiple partners remains the greatest risk factor for HIV in this region (UNAIDS 2010).
Globally, comprehensive and correct knowledge about HIV among both young men and young women has increased slightly since 2008, but at only 34%, the number of young people with this comprehensive knowledge is barely one third of the UNGASS target of 95%. (UNAIDS 2010) The declines in HIV prevalence have occurred amid signs of encouraging changes in sexual behaviour among people 15–24 years old in several countries with generalized epidemics (WHO 2011). the

Since there is no cure found yet for HIV, prevention of transmission is the key to stem infections and thus reduce its burden in the population. Prevention services are held in both the health sector and other sectors including education institutions, the workplaces, the community and through religious groups. In Kenya the ABC message of “abstinence, be faithful to an uninfected and faithful partner and or use of condoms, now includes a fourth component of “diagnosis” – know your status. Promoting testing in health settings and in the community both helps prevent infections to an uninfected and give access to treatment for the infected (NASCOP, 2008).

2.3 HIV and the Youth in General

11% of young women and 22.2% of young men aged 15-24 have had sexual intercourse before age of 15 of these, 1.2% women, and 9.3% men aged 15-49 have had sexual intercourse with more than one partner in the last 12 months (KDHS, 2009) This is thus a high risk group accounting for some 60% of all new infections in many countries and is also the group where ignorance remains dangerously high and where education effort can yield maximum results.
Comprehensive and correct knowledge about HIV among both young men and young women has increased slightly since 2008 globally (UNAIDS 2010). Opportunities to improve HIV prevention knowledge and behaviour still abound. The goals and targets set at the United Nations General Assembly Special Session on HIV/AIDS (UNGASS) in 2001, which emphasize increasing knowledge and behaviour change, continue to be the mainstay of HIV prevention efforts (UNAIDS 2010).

Declines in new HIV infections across the world have been spurred by changes in behaviour among young people, sex workers and their clients, people who inject drugs, men who have sex with men and transgender people. Access to HIV prevention services has empowered individuals and communities to act in earnest against the disease. In countries with generalised epidemics, a combination of behaviour changes, including reductions in numbers of sexual partners, increases in condom use, and delayed age of first sex, have reduced new infections (incidence) in several countries. HIV incidence in urban Zimbabwe fell from an extremely high peak of almost 6% in 1991 to less than 1% in 2010 (UNAIDS 2011).

If a high percentage of youth become infected with the HIV virus, the hope of the future generation will be shuttered. Investment in prevention among young people is vital and offers the greatest hope for altering the course of the epidemic. Education is the most effective strategy, so far prevention is not only the most economical response, it is the most effective and potent response. That is changing behaviour by providing knowledge, fostering attitudes and conferring skills through culturally sensitive and effective communication. (Brown et al, 2004).
Education provides an avenue for impartation of knowledge about HIV and AIDS, and a vehicle for developing the right attitude in HIV and AIDS prevention. It is also important in the development of the right behaviour and behaviour change. According to the sessional paper number 4 of 1997 the goal of AIDS education is, to facilitate and sustain responsible behaviour for continued HIV prevention. The Kenya National HIV and AIDS Strategic Plan (2000-2005) notes the importance of the education sector with its potential to influence behaviour formation and behaviour change among 50% of the country’s youthful population. The education Sector Policy on HIV and AIDS states that all learning institutions have a responsibility to address HIV and AIDS through education by developing skills and values and changing attitudes to promote positive behaviours that combat the scourge.

2.4 HIV in Boys and Girls Compared

Millions of young African women are dangerously ignorant about HIV and AIDS. According to UNICEF 2001, more than 70% of adolescent girls (aged 15-19 years) in Somalia and more than 40% in Guinea Bissau and Sierra Leone for instance have never heard about AIDS. In Kenya and the United Republic of Tanzania, more than 40% of adolescent girls harbour serious misconceptions about how the virus is transmitted. At least 90% of Young men and women should by 2005 have the information, education and services needed to defend themselves against HIV infection.

Teenagers are more at risk of HIV infection considering that they are more sexually active. VCT use among young people is therefore important in providing necessary information and education that will enable them make informed choices on knowing
their HIV status and adopt behaviours that reduce HIV transmission. The vulnerability of women and girls to HIV remains particularly high in sub-Saharan Africa; 80% of all women in the world living with HIV live in this region. Efforts to promote universal access to HIV prevention, treatment, care and support services require a sharper focus on women and girls (UNAIDS 2010)

In Kenya women aged 15–24 are four times more likely to be HIV infected than men (5.6% and 1.4% respectively (NASCOP 2012). HIV and AIDS is a major cause of morbidity and mortality in Kenya and other Sub-Saharan countries. It is, therefore, important to control HIV infection and improve prognosis of the disease for those already infected. To be able to do this, voluntary counselling and testing (VCT) is very important. With VCT, the uninfected would be counselled to maintain their status while the infected would be counselled on how to prolong their lives and improve prognosis including administration of Antiretroviral (ARVs) when appropriate.

HIV prevalence in 0-5 years is high, as this represents children who are born of HIV positive mothers. There is then a decline in the prevalence with age since most HIV positive children die before they reach adolescents. The age group 5-14 years represents a group in the population with the lowest prevalence rate. They thus present a window of hope. Referred to as a window of hope, because, if at these ages, HIV infection is prevented, then in future, we may have a population without HIV. Thus while the young people represent a population at significant risk they also provide a window of opportunity for shaping the course of epidemic.(MOH, 2005)
The rate of new infections remains unacceptably high and there are major differences in the risk of infections faced by different population groups, particularly vulnerable are young girls (NACC, KNASP.2006). In Kenya, the HIV and AIDS prevalence rate among young girls aged 15 to 24 years old is 5.8 % compared to 1.2 % for young men in the same age range (KDHS 2009). The upsurges in the number of girls who turn to older men to pay school expenses protect them from violence or to escape poverty also contributes to the gender disparity in the sero-prevalence rates. This disparity underlies the higher HIV and AIDS risk girls face.

Women are more affected in sub-Saharan Africa (59% of all people living with HIV) UNAIDS 2011 There were 2.7 million new HIV infections in 2010, Sub-Saharan Africa remains the region most heavily affected by HIV. In 2010, about 68% of all people living with HIV resided in sub-Saharan Africa, a region with only 12% of the global population. Sub-Saharan Africa also accounted for 70% of new HIV infections in 2010 (UNAIDS, 2011)

Women, especially young women, remain disproportionately affected in sub-Saharan Africa, highlighting the need to address gender inequity as a central component of the global response to HIV (WHO 2011)

HIV and AIDS among Kenyan adolescents are almost entirely a sexually transmitted infection. Teenage girls are most susceptible and vulnerable to the epidemic. In Kenya, the infection rates for girls six times higher than that of boys of the same age, and most teenagers report very early sexual debut (experience of first sexual intercourse). This increases sexual activity rates and vulnerability to AIDS.
The percentage of young women and men aged 15-24 years old who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission were still low. Women at 47.5% and men at 54.9% (KDHS, 2009). This clearly shows that a lot need to be done to educate the youth on HIV/AIDS infection. Close to 80% of Kenyan adolescent girls perceive themselves to be at no risk of getting AIDS (KDHS, 1998). The reality is that on the KDHS surveys in Kenya over the last decade consistently show that at age 16, a majority of our adolescents are sexually active and an overwhelming 60-70% of under 20’s are presently at clear and present danger of HIV and AIDS infections. A KDHS report indicates that 3.1% of girls 15-19 years reported more than one sexual partner in the past 12 months (KDHS, 2009).

Since the adolescent girls are at high risk of HIV infections, intervention programmes should target them. According to Gordis, a major goal of epidemiology is to identify subgroups in the population who are at high risk for the disease so we can direct preventive effort (Gordis, 2004). Preventing HIV infection in girls and women requires a combination of interventions that offer tools to block the various routes of infection and provide information to enable those at risk to use these tools.

The need for prevention strategies that reach girls and women is urgent. This is especially the case for adolescent girls who face infection rates that are six times higher than those of boys of the same age.

According to data from the surveys compiled by UNICEF on the knowledge about HIV and AIDS and the use of condom among young people globally, more than 80% of the
young women aged 15 to 24 years did not have sufficient knowledge about HIV and AIDS, many had no idea how HIV and AIDS is transmitted and little or no information on protection methods (UNICEF 2006).

2.5 Voluntary Counselling and Testing (VCT)

Counselling can be defined as a structured conversation aimed at facilitating a client quality of life in the face of adversity counselling helps the clients manage their problems more effectively and develop unused or under used opportunities to cope more fully (Dyk, 2001). It also empowers the clients to become more effective self-helpers in the future. It also focuses on life beyond the adversity

As a critical gateway to services, HIV testing and counselling are essential in expanding access to HIV prevention and treatment and ultimately achieving universal access in both. HIV testing and counselling services were provided by 131 000 health facilities in 2010 versus 107 000 health facilities in 2009 (118 countries), 78 000 in 2008 (111 countries) and 30 300 in 2007 (78 countries). With respect to the uptake of testing and counselling, 108 countries reported that more than 79 million people received HIV testing and counselling in 2010. 67.4 million tests were reported in 100 countries in 2009 and in 2010 (WHO, 2011) of facilities per 100 000 population increased from 5.7 to 8.2 (44%).

Uptake of HIV testing and counselling, which is critical to ensuring appropriate referral to prevention and treatment services, also increased from about 64 million tests in 2009 to 72 million in 2010 (WHO, 2011) Although HIV testing and counselling uptake has
improved, many people living with HIV in low- and middle-income countries still do not know their HIV status (WHO, 2011)

Universal HTC was considered a priority in response to data that 82% of HIV-infected Kenyans did not know their HIV status and that 84% of those in need of cotrimoxazole were not enrolled due to lack of knowledge of their HIV status (NASCOP, 2012)

Voluntary counselling and testing (VCT) facilitates early referral for care and support of HIV-infected individuals and is an effective method of preventing infection. VCT services can result in positive behaviour change including a decrease in unprotected intercourse. (youthnet 2011)

An estimated 2 million adolescents (aged 10–19 years) are living with HIV; most of them are unaware of their HIV status (WHO, 2011). Recent survey data from sub-Saharan Africa showed that only 15% of young women aged 15–24 years and 10% of young men have been tested and know their HIV status (13). As such, many adolescents and young adults are diagnosed late and do not access treatment until they are severely immunocompromised. A study in Zimbabwe found that 50% of adolescents admitted for acute care in primary health facilities were living with HIV, and HIV accounted for about 75% of the hospitalized adolescents who died (14). Improving the application of the guidelines for provider-initiated testing and counselling among adolescent clients receiving chronic care could help improve early diagnosis of HIV in adolescents and minimize late initiation on antiretroviral therapy (WHO 2011)
Age-specific prevalence data show a clear sex disparity in HIV prevalence by age 15 years, indicating how non-vertical transmission affects adolescents. In Botswana, the HIV prevalence among men 15–19 years old was 2.4% in 2008 but reached 5% among young women in the same age group (15). A similar pattern was observed in South Africa, where men aged 15–19 years had an HIV prevalence of 2.5% in 2008 versus 6.7% among young women (16). This underscores the need to increase testing uptake among adolescents, including through provider-initiated testing and counselling. WHO is currently developing global guidance on HIV testing and counselling for adolescents to help address the gap in diagnosis and uptake of HIV testing and counselling among adolescents (KAIS, 2008). In 2009 alone, 3,471,567 individuals above 15 years of age received an HIV test. The scale up of HTC services has contributed to an increase in number of men and women tested from 14.3 and 13.1 percent respectively in 2003 to 40.4 and 56.5 respectively in 2008 (UNGASS 2010).

VCT involves pre-test counselling which is offered either through one or more sessions with a trained counsellor, after which the client may choose to test on the same day or a different day. Informed consent is obtained from the client by a service provider. The HIV test is then performed using approved HIV test kits and testing protocols. Post test counselling (one or more sessions) that includes informing the clients of their HIV test results takes place on the same day. The basis of VCT is that knowledge of the status is voluntary.

In Kenya, there has been rapid increase of VCT sites form 3 in the year 2000 to 555 sites by May 2005 and to 1026 in 2008 (NASCOP, 2012). Stand-alone HTC centres are facilities within the community that are not attached to other specific health
services. Generally these sites are operated by nongovernmental organisations, faith-based organisations, or other community-based organisations, though the Government of Kenya does provide support to some stand-alone HTC sites. Stand-alone HTC centres target the general population, or can also be tailored to populations with specific needs such as HTC for the deaf, youth-friendly HTC centres, and sites specifically available for commercial sex workers and injecting drug users (NASCOP 2010). Integrated HTC sites are co-located on the grounds of a health facility such as a hospital or a health clinic. The sole function of an integrated HTC centre is the provision of HTC services; other health services are generally not offered, though some related services such as family planning may be offered (NASCOP, 2012).

The integrated HTC site may be a separate facility on the grounds of a functioning health facility, or it may be attached to the health facility such as a group of rooms in a specific ward (NASCOP, 2012). Initially, HIV testing and counselling was predominantly delivered through the voluntary testing and counselling model and, more recently, through provider-initiated testing and counselling, which has been shown to increase testing uptake (WHO, 2011). Provider-initiated HIV testing and counselling refers to a situation in which the HTC service provider, who may be a health care worker or other type of HTC service provider, offers an HIV test to a client or patient regardless of their reason for attending the facility (NASCOP, 2012).

In the community–based approach, VCT is either integrated into other social services or implemented as the sole activity of a local CBO or FBO. This approach offers good opportunity for wide spread scale-up of VCT centres at the grassroots. In the mobile
approach VCT is provided as an outreach to remote or hard-to-reach communities where other models of VCT are either not feasible or unavailable (NASCOP 2012).

2.6 The Role of VCT in HIV Prevention

VCT is an important strategy for prevention of HIV. This is because it is associated to behaviour change. VCT has emerged as a major strategy for the prevention of HIV infection and AIDS in Africa. Apart from raising awareness about HIV and AIDS, knowing one’s HIV status is instrumental in effecting behaviour change and the adoption of safer sex practices (Dyk, 2001). The test outcome could help individuals plan for their future. If the person is HIV negative, the results should motivate him or her not to seroconvert by avoiding high risk behaviour in future or by taking appropriate protective measures such as practising total abstinence. HIV positive results may motivate some to change their life styles so as to protect themselves from re-infection and others. It has been demonstrated that patients who seek and obtain HIV management early, live longer and better quality lives than those who do not.

Ignorance is a major reason why the epidemic is out of control. The need for preventive education flows from the types of ignorance closely associated with the epidemic, particularly in the most affected developing countries. Preventive education must make people aware that, they are at risk. However, knowledge is often not enough to change behaviour. Preventive education must address mentalities and the culture within which they are embedded in order to generate the attitude, provide the skills and sustain the motivation necessary for changing behaviour to reduce risk and vulnerability.
In May 2007 an HIV prevention summit was held in Kenya which among other things emphasized the need to scale up HTC services. Which are of two types namely: client-initiated HTC and provider-initiated. Client-initiated HTC refers to a situation whereby an individual, couple, or group actively seeks out HIV testing and counselling at a site where these services are provided and/or accessible. Previously in Kenya this took place primarily in the context of VCT (NASCOP, 2012)

Kenya’s HIV testing and counselling services were offered primarily through VCT with a rapid and sustained scale-up from 3 to 1,026 sites between 2001 and 2008, maintained through a regulatory framework and national quality assurance mechanism. By 2007, 54% of registered VCT sites were in public health institutions and 12% stand-alone sites (NASCOP, 2012)

Fighting HIV and AIDS through preventive education is directed towards changing risk behaviour, caring for the infected and the affected and coping with the institutional impacts of HIV and AIDS. The purpose of preventive education is to promote health and prevent disease by providing the knowledge, the attitudes, the skills and the means to foster and sustain behaviour that reduces risk, improves care and lessens the impact of illness.

VCT has a role in preventing infection and providing an entry point for care of people with the infection. VCT provides the opportunity for people to know their HIV status with quality counselling and support to help them cope with a positive or a negative test results. Counselling and support services help those infected and affected to cope with the social, emotional, psychological and other concerns associated with HIV and AIDS.
and encourage them to sustain behaviour changes that reduce the risk of HIV transmission (High Ridge Teachers College, 2003). VCT also provides a channel through which preventive education can be disseminated.

The basic element of successful preventive programmes include communication, sexual health education and behaviour change, the creation of an enabling socio-political environment for people to protect themselves against the virus, condom promotion, voluntary and confidential counselling and testing and the treatment of sexually transmitted infections.

One of the functions of CACCs is to promote positive health seeking behaviour including addressing cultural practices with emphasis on safer sex, nutrition, sexually transmitted disease management, voluntary counselling and testing and reproductive health needs and overall health improvement (NACC, 2006).

VCT offers benefits to those who test positive or negative, alleviates anxiety, increases clients’ perception of their vulnerability to HIV, promotes behaviour change, facilitates early referral for care and support including access to ARV therapy and assists in reducing stigma in the community because of the awareness on the sero-status (Subedde and Nangendo, 2009).

VCT is therefore a very important tool in increasing knowledge on HIV and AIDS and prevention, changing attitudes, reducing denial, reducing stigma and discrimination of those infected, enabling people to know their status, a tool for behaviour change and also act as a link for those infected to options for treatment, care, and support. It is
therefore a very important tool in HIV prevention. In this case, if VCT services do exist, the community should be well informed about such services and encouraged to seek them.

2.7 Youth and VCT

Young people’s knowledge about HIV is increasing but needs to grow further. Positive behaviour change can alter the course of the epidemic while stigma and discrimination, lack of access to services and bad laws can make epidemics worse. In both cases, the effects are often profound. (UNAIDS, 2010).

Youth are a key target group for VCT interventions, because of the concentration of new HIV infections among young people. Young people are relatively more open to behaviour change than older adults, thus enhancing the impact of interventions such as VCT. When compared with other age groups, young people often have very different motivations for seeking VCT. Similarly, what they gain from the service and their subsequent needs may be quite different. (Youthnet, 2011).

Because of the importance of VCT in combating HIV and AIDS, health ministries in many countries now support VCT through national policies. To address the special needs of youth, a number of key policy actions are warranted which include Allow minors to consent to VCT without requiring the consent of a parent or other adult, Protect the confidentiality of HIV test results for minors consistent with the obligation to protect their right to privacy and reassure counsellors and other health care workers that they can provide VCT to adolescent minors who request it, without fear of retribution (Youthnet, 2011)
Given that about 93% of Kenyans are not infected with the HIV virus, efforts to reduce the number of new HIV infections in both vulnerable groups and the general population are critical in the struggle to further reduce the incidence. One of the prevention strategies to be implemented is increasing availability and access to counselling and testing services. Counselling and testing is a key sexual behaviour change strategy. KNASP 2005/06-2009/10 focuses on scaling up voluntary counselling and testing services in the country as a key HIV infection prevention strategy.

In Maxwell’s criteria for evaluation of a service, Maxwell suggested a series of principles that should underlie any service. One is access to services. Access can mean personal access, such as the availability of the service or its proximity or its times of opening in relation to the people who need to use it. When a service is available to the population who need it, it should be tailored so as to be able to access it. The number of VCT centres may have been increased but if they have not been tailored to reach specific population groups, those groups may never access them.

The health sector can play a very prominent role in the national response through making provisions for HIV prevention in various deliverables including voluntary counselling and testing protocols as well as carrying out VCT activities and promotion of behaviour change (Brown et al, 2004). Youth friendly VCT centres have been established to try and increase the uptake of VCT services by the youth.

In YES program developed and implemented by Infectious Diseases Centre in Tanzanian four of its Dar-es-Salaam facilities, visits increased from a total of 5,681 youth clients served in 2002 to 17,606 in 2003. This shows that making existing
VCT Centres more youth friendly may better accommodate adolescents needs hence increase the uptake of this services by the youth.

In a study conducted by IRC in Karago Refugee Camp, Kibondo, Tanzania, it revealed that there were more boys than girls who accessed VCT. The IRC designed the community section of the Youth Centre to promote youth participation in sports, drama and music to enable easy access to VCT. From October 2001 to March 2002, 84 youths attended VCT services, among them 52 were boys and 32 were girls. The boys were 61.09% while girls formed 38.09%. This research revealed that adolescent girls and boys, when given the same conditions boys tend to utilize the VCT services more than the girls yet it is the girls who have a higher risk of HIV infection. While in a research study by Okpala et al 2000, on voluntary counselling and testing among African women in Onitsha, South East Nigeria it revealed that the level of awareness of VCT among women was low.

While the government has developed a national VCT policy, very few of the current VCT guidelines explicitly address the needs of young people. Undoubtedly, some young people will seek VCT services regardless of whether they are designed specifically for them or not. Yet a most favourable policy environment is likely to induce many more youth to use VCT services. According to the research by Horizons and Population Council on social relationships and adolescents’ HIV counselling and testing decisions in Zambia, it found out that perceived negative reactions of family and friends, fear of HIV-related stigma, lack of youth friendly facilities and unaffordability, were among the factors preventing youth from seeking VCT.
2.8 Factors affecting utilization of VCT services among the youth.

Utilization of VCT services is determined by a number of factors. Although the uptake of VCT services varies greatly between settings and countries. There are several societal and delivery associated factors such as:

- Availability and acceptability of VCT services, including legal issues, waiting time or availability of simple rapid testing/same day testing, costs and pressure by health staff to notify partners.
- Fear of being labelled and stigmatized by their families, friends and communities.
- Perceptions of the consequences of living with HIV.
- Community mobilization.
- Worries about confidentiality and fear that results would be shared with parent(s)
- Availability of treatment.
- Inaccurate risk perception.
- Inadequate responses from health care providers, including counsellors, to effectively meet the HIV prevention, care and support needs of youth (Alemu H, 2008)
CHAPTER III: RESEARCH METHODOLOGY

3.1 Study Design

Cross-sectional survey research design was used. Cross-sectional study design is research which makes observations at only one period in time. Data was collected from the research participants at a single point in time. Data was collected from multiple groups. A survey was carried out in selected public secondary schools in Nairobi, to include a public girls’ boarding school, a public girls’ day school, a public boys’ boarding school and a public boys’ day school. This study design was considered the most appropriate and also the best in describing and explaining the variables at a given point in time.

3.2 Variables

Independent variables were age, sex, class of the participants, type of school, perceived risk for HIV, Stigma towards HIV and AIDS, Sexual behaviour, availability and acceptability of VCT services. Dependent variables were knowledge on HIV, knowledge on VCT and its service, VCT seeking behaviour and factors limiting VCT access and utilization. Importance of VCT

3.3 Location of the Study

The study was done in Nairobi County. Nairobi County is one of the forty seven counties in Kenya. The capital city of Kenya is in this county. It is subdivided into eight districts i.e. Starehe, Lang’ata, Westlands, Dagoretti, Embakasi, Kamukunji, Kasarani and Makadara. Nairobi was chosen because it has the largest number of VCT centres
compared to other urban areas and normally access and utilization of any service is expected to be improved with its availability.

3.4 Target Population

The targeted population was all the secondary school students in Kenya irrespective of the type of schools. The study population was all the secondary school students in public schools in Nairobi County.

3.5 Sampling Technique and Samples Size Determination

Stratified random sampling technique was used. The schools were placed into categories of:

1) Public girls boarding schools
2) Public girls day schools
3) Public boys boarding schools
4) Public boys’ day schools.

Random sampling was then be used to get a school in each group for the study. A table of random numbers was used. The schools sampled were Pangani Girls (girls’ boarding school) which is in Starehe District, Saint Teresa Secondary School (girls’ day school) which is in Kamukunji District, Upper Hill Boys’ Secondary School (boys’ boarding school) which is in Dagoretti District and Parklands Boys Secondary School (boys; day school) which is in Westlands District. After which quota-sampling technique (probability proportional to size) was used to get samples from each school and form.

Fisher, et al, was used to determine the sample size as follows:-

$$n = \frac{Z^2 pq}{d^2}$$
n=desired sample size (for population >10000),

Z=standard normal deviate (set at 1.96) at 95% confidence interval level.

P=the proportion in the target population (=50%)

q=1.0-p

d=degree of accuracy desired, in this case is 0.05

\[
\frac{1.96^2 \times 0.50(0.50)}{(0.05)^2} = 384
\]

A minimum of 385 respondents was used in this study.

### 3.6 School Type

The sample population represented respondents from four categories (types) of public secondary schools namely; boys’ boarding, girls’ boarding’, boys’ day and girls’ day schools. Probability proportion to size was used to obtain respondents in each school type and thus 24.9% respondents were from boy’s boarding school, 33% from girl’s boarding school, 19.7% from boys’ day school and 22.3% from girls’ day school as shown in Table 3.1 below.

**Table 3.1 Respondent’s distribution by type of school**

<table>
<thead>
<tr>
<th>Type of school</th>
<th>Frequency</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys boarding</td>
<td>96</td>
<td>24.9%</td>
</tr>
<tr>
<td>Girls boarding</td>
<td>127</td>
<td>33.0%</td>
</tr>
<tr>
<td>Boys day</td>
<td>76</td>
<td>19.7%</td>
</tr>
<tr>
<td>Girls day</td>
<td>86</td>
<td>22.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>385</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>
3.7 Construction and Research Instruments

Research instruments used in data collection were pre-tested questionnaires. The questionnaires were constructed covering the objectives of the study and standardized and constructed in a simple language easily understood by the respondents. They were self-administered to allow information to be collected from a large number of participants and given to a study population who could easily read and answer questions. Anonymity was also possible when this instrument was used.

3.8 Pilot Study, Validity and Reliability

The questionnaires designed were used on pilot study. The pilot study was on a small representative sample identical to, but not including the group that was surveyed. The content and construct validity of study, which is based on the adequacy to which the statements, questions and indicators of the research instrument measures the attributes of the study, was ensured by subjecting the instruments to critique from experts in the Department of Public Health and peers. The items were revised and improved according to advice and suggestions made. Reliability, which is the extent to which a measure contains variable errors, was improved through a pilot study and pre-testing of the research instruments. Research assistants who helped in data collection were recruited and trained in the use of research tools prior to the execution of data collection.

3.9 Data Collection Techniques

A survey was carried out in sampled public secondary schools in Nairobi which comprised; a girls’ boarding school, a girls’ day school, a boys’ boarding school and a
boys’ day school. Pre-tested questionnaires were used to collect data. The questionnaires were issued to the sampled population who filled them and then they were collected.

3.10 Data Quality Control Measures

The questionnaires were checked for obvious errors such as entries in the wrong place. They were thoroughly scrutinised to ensure that the collected data was accurate and unambiguous. SPSS computer software was used for data entry. Numerical were then assigned to the responses in the questionnaire. Questions in the questionnaire were converted to variables such as. Q1. Became Var 1 and the questions changed into a statement form but conveyed the same meaning. The scores of all responses for each question were then tabulated. At this stage data was arranged in groups depending on the schools, and classes. Raw data was summarised and displayed in compact form, in statistical tables. Then SPSS software was used to analyse the data.

Data presentation was done using proportions, percentages, bar charts; pie-charts and histograms. The mean age, median and mode of high school VCT seekers (measure of central tendency), variance, standard deviation (measure of dispersion) was determined. Two by two contingency tables and correlation analyses were used to test the hypotheses.

3.11 Data Analysis

Data was entered, cleaned and analysed using SPSS computer software. Descriptive statistics were obtained for variables under consideration. These were age, sex, respondents’ class of study and school type, knowledge on VCT, VCT seeking
behaviour and factors limiting VCT utilization. Comparison between variables was
done mainly using Two by Two contingency tables. Hypotheses were tested using Chi
Square statistics and correlational analyses.

3.12 Logistical and Ethical Considerations

Prior to data collection, permission was obtained from Kenyatta University Graduate
School, Ministry of Education, Science and Technology, Provincial Director of
Education, Nairobi County. Before the fieldwork, meetings were arranged with all the
school administrators to explain the purpose of the study. Potential participants were
given oral explanations of the study in simple language and those willing to participate
gave oral consent. The participants were assured of anonymity; confidentiality and
informed of their ability to withdraw from the study at any time. There were no direct
benefits for participating in the study. Data was collected when school sessions were on
and not during school holidays.
CHAPTER IV: RESULTS

4.1 Introduction

This chapter deals with the interpretation and explanation of the findings of the study in regard to knowledge on VCT and its services, and comparison of VCT seeking behaviour among students across different genders and school types. It gives the description of the respondents’ characteristics, knowledge on HIV/AIDS and VCT services, use of VCT services and elucidates the factors limiting access to VCT services among public secondary school students in Nairobi province of Kenya.

4.2 Socio-Demographic Characteristics of Respondents

4.2.1 Age

The respondents were aged between 13 – 20 years. The mode was 16 years old. The mean age was 16.2 years with the standard deviation of 1.39 and variance of 1.94. The age brackets of the respondents represents the age at which most youths become sexually active and thus vulnerable to HIV infection. Table 4.1 on page 29 shows the distribution of the respondents by age.
Table 4.1: Respondents distribution by age

<table>
<thead>
<tr>
<th>Age of student</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>4</td>
<td>1.0%</td>
</tr>
<tr>
<td>14</td>
<td>47</td>
<td>12.2%</td>
</tr>
<tr>
<td>15</td>
<td>68</td>
<td>17.7%</td>
</tr>
<tr>
<td>16</td>
<td>103</td>
<td>26.8%</td>
</tr>
<tr>
<td>17</td>
<td>88</td>
<td>22.9%</td>
</tr>
<tr>
<td>18</td>
<td>56</td>
<td>14.5%</td>
</tr>
<tr>
<td>19</td>
<td>15</td>
<td>3.9%</td>
</tr>
<tr>
<td>20</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>0.8%</td>
</tr>
<tr>
<td>Total</td>
<td>385</td>
<td>100%</td>
</tr>
</tbody>
</table>

4.2.2 Sex Distribution

Of the 385 respondents, 213 were females representing 55.3% of the total respondents. 172 were males which formed 44.7% of the sample population as shown in Table 4.2 below.

Table 4.2: Respondents distribution by sex

<table>
<thead>
<tr>
<th>Sex of student</th>
<th>Frequency</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>172</td>
<td>44.7%</td>
</tr>
<tr>
<td>Female</td>
<td>213</td>
<td>55.3%</td>
</tr>
<tr>
<td>Total</td>
<td>385</td>
<td>100%</td>
</tr>
</tbody>
</table>

4.2.3 Respondents Level of Study

As shown in Table 4.3, 26.2% of the respondents were in form one, 22.6% in form two, 23.6% in form three and 27.5% were in form four at the time of this study.
Table 4.3: Respondent distribution by level of study

<table>
<thead>
<tr>
<th>Class of student</th>
<th>Frequency</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form 1</td>
<td>101</td>
<td>26.2%</td>
</tr>
<tr>
<td>Form 2</td>
<td>87</td>
<td>22.6%</td>
</tr>
<tr>
<td>Form 3</td>
<td>91</td>
<td>23.6%</td>
</tr>
<tr>
<td>Form 4</td>
<td>106</td>
<td>27.5%</td>
</tr>
<tr>
<td>Total</td>
<td>385</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

4.3.1 Knowledge on Meaning and Purpose of VCT

VCT is recognized as an effective strategy of HIV prevention since awareness of one’s HIV status helps HIV negative persons to adopt safer sexual practices. Findings from this study showed that knowledge level on VCT among secondary school students is quite high with almost all the students (99.7%) having heard of VCT. A great proportion (90.9%) knew the meaning of VCT shown by of their ability to state correctly what the acronym stands for.

When asked to state the function of VCT and mention two services offered at VCT centres, 89.8% gave the correct functions of a VCT and 82.8% correctly mentioned two services offered in VCT centres as shown in *Figure 4.1* on page 31.
Nearly all male and female students had heard of VCT but more females (92.2%) than males (89.2%) knew the meaning of VCT. There was no much difference in the class of students and age in having heard of VCT and in stating meaning of VCT except for 6.7% of form three students who reported to have not heard of VCT as shown in Table 4.13. Unlike in the knowledge on HIV and AIDS, student’s sex, school type, class of study and age did not show any significant association with knowledge on VCT.

Figure 4.1: Percent distribution by knowledge on VCT meaning and function

4.3.2 Comparison of knowledge on VCT with respondents’ characteristics
Table 4.4: Percent distribution of respondents by knowledge of VCT

<table>
<thead>
<tr>
<th>School type</th>
<th>Heard of VCT</th>
<th>Know meaning of VCT</th>
<th>Know function of VCT</th>
<th>State two uses of VCT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Boys boarding</td>
<td>100.0</td>
<td>0.0</td>
<td>90.3</td>
<td>9.7</td>
</tr>
<tr>
<td>Girls boarding</td>
<td>100.0</td>
<td>0.0</td>
<td>89.4</td>
<td>10.6</td>
</tr>
<tr>
<td>Boys day</td>
<td>98.6</td>
<td>1.4</td>
<td>87.7</td>
<td>12.3</td>
</tr>
<tr>
<td>Girls day</td>
<td>100.0</td>
<td>0.0</td>
<td>96.3</td>
<td>3.7</td>
</tr>
<tr>
<td>Age of student</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>100.0</td>
<td>0.0</td>
<td>100.0</td>
<td>0.0</td>
</tr>
<tr>
<td>14</td>
<td>100.0</td>
<td>0.0</td>
<td>84.4</td>
<td>15.6</td>
</tr>
<tr>
<td>15</td>
<td>100.0</td>
<td>0.0</td>
<td>87.7</td>
<td>12.3</td>
</tr>
<tr>
<td>16</td>
<td>100.0</td>
<td>0.0</td>
<td>92.0</td>
<td>8.0</td>
</tr>
<tr>
<td>17</td>
<td>100.0</td>
<td>0.0</td>
<td>93.8</td>
<td>6.2</td>
</tr>
<tr>
<td>18</td>
<td>100.0</td>
<td>0.0</td>
<td>94.3</td>
<td>5.7</td>
</tr>
<tr>
<td>19</td>
<td>93.3</td>
<td>6.7</td>
<td>90.0</td>
<td>10.0</td>
</tr>
<tr>
<td>20</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Sex of student</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>99.4</td>
<td>0.6</td>
<td>89.2</td>
<td>10.8</td>
</tr>
<tr>
<td>Female</td>
<td>100.0</td>
<td>0.0</td>
<td>92.2</td>
<td>7.8</td>
</tr>
<tr>
<td>Class of student</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form 1</td>
<td>100.0</td>
<td>0.0</td>
<td>86.3</td>
<td>13.7</td>
</tr>
<tr>
<td>Form 2</td>
<td>100.0</td>
<td>0.0</td>
<td>92.8</td>
<td>7.2</td>
</tr>
<tr>
<td>Form 3</td>
<td>98.9</td>
<td>1.1</td>
<td>92.9</td>
<td>7.1</td>
</tr>
<tr>
<td>Form 4</td>
<td>100.0</td>
<td>0.0</td>
<td>91.9</td>
<td>8.1</td>
</tr>
</tbody>
</table>

More students in boarding schools stated correctly two functions of VCT than their counterparts in day schools. This was lowest (71%) among students in boys’ day schools as shown on Figure 4.2.
Figure 4.2: Proportion in relation to knowledge on functions of VCT

4.3.3 Knowledge on where VCT is Located

Majority of the students seemed to know at least one VCT centre near their residence (78.9%) compared to those who knew one near school (38.8%). Many respondents (61.2%) did not know any VCT centre that was within a radius of 5 kilometres near their school compared to only 21.1% who did not know a VCT centre near home as shown in Figure 4.3 below.

Figure 4.3: Distribution by knowledge on VCT locations
It was found out that the students who knew VCT centre near home were more likely to know function of VCT \( (n=381; \chi^2_{(df=1)} = 9.153, p \leq 0.002) \) as shown in Table 4.5.

### Table 4.5: Cross tabulation on knowing VCT centre near home and functions of VCT centre

<table>
<thead>
<tr>
<th>Know VCT centre near home</th>
<th>Know function of VCT</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Total</td>
</tr>
<tr>
<td>Know VCT centre near home</td>
<td>Yes</td>
<td>72.8%</td>
<td>5.9%</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>17.2%</td>
<td>4.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>90.1%</td>
<td>9.9%</td>
</tr>
</tbody>
</table>

Knowing a VCT centre near school was closely associated with school type \( (n=385; \chi^2_{(df=3)} = 48.361, p \leq 0.000) \). Students in girls’ Day school were more likely to know a VCT centre near school than students from other school type as shown in Table 4.6 below.

### Table 4.6: Cross tabulation on knowledge of VCT centre near home and school type

<table>
<thead>
<tr>
<th>School type</th>
<th>Know VCT centre near school</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Total</td>
</tr>
<tr>
<td>Boys’ boarding</td>
<td>7.0%</td>
<td>18.2%</td>
<td>25.2%</td>
</tr>
<tr>
<td>Girls’ boarding</td>
<td>8.9%</td>
<td>24.1%</td>
<td>33.1%</td>
</tr>
<tr>
<td>Boys’ day</td>
<td>6.5%</td>
<td>12.2%</td>
<td>18.7%</td>
</tr>
<tr>
<td>Girls’ day</td>
<td>16.3%</td>
<td>6.8%</td>
<td>23.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>38.8%</td>
<td>61.2%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

There was no association between having heard of VCT, knowing meaning of VCT and knowing a VCT centre near home with the school type.

### 4.3.4 Distance to the Nearest VCT centre

The respondents were asked to estimate the distance to the nearest VCT centre they knew from their place of residence. Close to 45.9% of the students said that the nearest
VCT centre was less than 1km; another 36.3% said it was between 1-3 km and 11.2% said it was 3-5km away. Only 6.6% reported that the nearest VCT centre was more than 5km away as shown in Table 4.7.

**Table 4.7: Distribution by distance to the nearest VCT centre from residence**

<table>
<thead>
<tr>
<th>Distance to the nearest VCT</th>
<th>No. of respondents</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 km</td>
<td>152</td>
<td>45.9</td>
</tr>
<tr>
<td>Between 1 - 3 km</td>
<td>120</td>
<td>36.3</td>
</tr>
<tr>
<td>Between 3 - 5 km</td>
<td>37</td>
<td>11.2</td>
</tr>
<tr>
<td>&gt; 5 km</td>
<td>22</td>
<td>6.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>331</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Approximately 82.1% of the students know a VCT centre at 2 or less kilometres from their place of residence. There was no significant association between distance to the nearest VCT at home and VCT use.

There association between students gender and distance to the nearest VCT centre was significant (n=385; χ²(df=3) =19.132, p≤0.000). Majority of the girls seem to be aware of their surrounding environment and were therefore able to know a VCT centre located at a distance less than 1km from their residence as compared to boys. This could explain why more girls have sought VCT services than boys indicating knowledge of the nearest VCT centre may partly contribute to VCT utilisation among secondary school students.

Students in girls ’boarding, boys’ day and girls’ day schools were more likely to live less than 1km away from the nearest VCT centre, compared to the students at boys’
boarding schools. Most students in boys’ boarding schools live within 3 – 5 Km away from the nearest VCT centre while most girls both in day and boarding schools live within 1Km away from the nearest VCT centre as shown in Table 4.8 on the next page. The association between school type and distance to the nearest VCT was significant at \( p \leq 0.01 \) (n=385; \( \chi^2_{(df=9)} = 25.720, p \leq 0.002 \)).

**Table 4.8: Cross tabulation on distance to the nearest VCT by school type**

<table>
<thead>
<tr>
<th>School type</th>
<th>Distance to nearest VCT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; 1 Km</td>
<td></td>
</tr>
<tr>
<td>Boys boarding</td>
<td>6.9%</td>
<td>23.9%</td>
</tr>
<tr>
<td>Girls boarding</td>
<td>16.3%</td>
<td>31.1%</td>
</tr>
<tr>
<td>Boys day</td>
<td>7.6%</td>
<td>19.9%</td>
</tr>
<tr>
<td>Girls day</td>
<td>15.1%</td>
<td>25.1%</td>
</tr>
<tr>
<td></td>
<td>Btwn 1 - 3 Km</td>
<td></td>
</tr>
<tr>
<td>Boys boarding</td>
<td>11.8%</td>
<td></td>
</tr>
<tr>
<td>Girls boarding</td>
<td>9.7%</td>
<td></td>
</tr>
<tr>
<td>Boys day</td>
<td>6.9%</td>
<td></td>
</tr>
<tr>
<td>Girls day</td>
<td>7.9%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Btwn 3 - 5 Km</td>
<td></td>
</tr>
<tr>
<td>Boys boarding</td>
<td>3.0%</td>
<td></td>
</tr>
<tr>
<td>Girls boarding</td>
<td>3.9%</td>
<td></td>
</tr>
<tr>
<td>Boys day</td>
<td>3.0%</td>
<td></td>
</tr>
<tr>
<td>Girls day</td>
<td>1.2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 5 Km</td>
<td></td>
</tr>
<tr>
<td>Boys boarding</td>
<td>2.1%</td>
<td></td>
</tr>
<tr>
<td>Girls boarding</td>
<td>1.2%</td>
<td></td>
</tr>
<tr>
<td>Boys day</td>
<td>2.4%</td>
<td></td>
</tr>
<tr>
<td>Girls day</td>
<td>.9%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

**4.4.1 VCT Service Utilization by Respondent’s Characteristics**

It is evident from the study that majority of the youth did not seek VCT services. Findings showed that close to 81.8% (315) of the respondents have never been to a VCT centre. Only 18.2% (70) have been to VCT, representing a very small proportion of students in Nairobi where VCT services are more concentrated than any other town in Kenya.

**4.4.1.1 VCT Service Utilization by Sex**

Majority of male students (83%) and of females (81%) had never been to VCT while 19% of females and 17% of males had been to VCT as shown in Figure 4.4. A slightly higher proportion of girls had sought VCT services compared to male students.
suggesting that female youths are more concerned with their health than male youths. There was no significant difference in the respondents’ use of VCT services with sex type.

![Figure 4.4: Distribution by respondent’s use of VCT services with gender](image)

**4.4.1.2 VCT Service Utilization by Age**

As shown in *Table 4.9* below, a high percentage of students aged 13 years (50%) and 19 years (40.6%) have ever been to VCT compared to students of other ages.

<table>
<thead>
<tr>
<th>Age of student</th>
<th>Ever been to VCT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (%)</td>
<td>No (%)</td>
</tr>
<tr>
<td>13</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>14</td>
<td>17%</td>
<td>83%</td>
</tr>
<tr>
<td>15</td>
<td>10.3%</td>
<td>89.7%</td>
</tr>
<tr>
<td>16</td>
<td>23.3%</td>
<td>76.7%</td>
</tr>
<tr>
<td>17</td>
<td>13.6%</td>
<td>86.4%</td>
</tr>
<tr>
<td>18</td>
<td>19.6%</td>
<td>80.4%</td>
</tr>
<tr>
<td>19</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>20</td>
<td>0.0</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 4.9: Percent distribution of VCT use by student’s age*
4.4.1.3 VCT Service Utilization by Class of Study

More students in form one (20.8%) and form three (19.8%) had ever been to VCT than students of other levels of study. This could be due to syllabi coverage whereby they are taught reproduction later in primary school and in Biology form three. Only 13.8% of form two students have been to VCT as shown in Figure 4.5.

![Figure 4.5: Proportion by knowledge on VCT locations with class of study.](image)

4.4.1.4 VCT Service Utilization by School Type

Analysis showed that most students in day schools had ever been to VCT centre than those in boarding schools, 22% in boys’ day and 23% in girls’ day as compared to 13% in boys’ boarding and 17% in girls’ boarding. This could be because students in day schools can easily get time which they can spend to visit VCT centres compared to those in boarding schools who may not get time unless over the school holidays. Nearly an equal proportion of boys (22.0%) and girls (23.0%) in day secondary schools have sought VCT services However, a higher proportion of girls than boys have been to VCT centres. There was no significant difference in respondents’ VCT service utilization
with school type. *Figure 4.6* show the distribution of students who have ever been to VCT by school type.

*Figure 4.6: Proportion of VCT use among secondary school students*
4.4.1.5 VCT Service Utilisation by Distance to the Nearest VCT

*Figure 4.7* below shows the difference in the utilization of VCT services in relation to the distance to the nearest VCT centre.

*Figure 4.7: Difference in VCT utilization by distance to nearest VCT centre*

Though there was no difference between distance to the nearest VCT centre with students use of VCT services, it appeared that the closer the VCT centre is from the place of residence, the more likely that the students will visit. This highlights the importance of distance in seeking VCT services.

4.4.1.6 VCT Use by Students’ Knowledge on HIV/AIDS and VCT

There was no significant difference in knowledge on HIV and AIDS with VCT use among secondary school students measured by knowledge on meaning of HIV and AIDS, how it is spread and how to stop the spread; and meaning and purpose of VCT. However, students who knew a person infected with HIV were more likely to have been to VCT centres than those who did not know any (n=380; $\chi^2_{(df=1)}=13.653$, $p \leq 0.001$). Knowledge on VCT location near home was closely associated to seeking VCT services among the youth. Students who knew a VCT centre near home were more
likely to have been to VCT (n=380; $\chi^2_{(df=1)}=11.517$, $p \leq 0.001$) as compared to students who did not know VCT near home as shown on Table 4.10 below.

**Table 4.10: Cross tabulation on knowing VCT centre near home and its use**

<table>
<thead>
<tr>
<th>Know VCT centre near home</th>
<th>Ever been to VCT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
<td>17.1%</td>
<td>61.9%</td>
</tr>
<tr>
<td>No</td>
<td>1.1%</td>
<td>20.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>18.1%</td>
<td>81.9%</td>
</tr>
</tbody>
</table>

Similarly, knowledge of VCT location near (within 5km radius) school was also associated with seeking VCT services among the secondary school students. It was clear that students who knew VCT centre within 5km radius from the school were more likely to have been to the centre (n=380; $\chi^2_{(df=1)}=11.129$, $p \leq 0.001$) as shown in Table 4.11 below.

**Table 4.11: Cross tabulation on knowing VCT centre near school and it functions**

<table>
<thead>
<tr>
<th>Know VCT centre near school</th>
<th>Ever been to VCT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
<td>10.3%</td>
<td>28.5%</td>
</tr>
<tr>
<td>No</td>
<td>7.9%</td>
<td>53.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>18.2%</td>
<td>81.8%</td>
</tr>
</tbody>
</table>

This means that knowing the location of a VCT centre is in itself a motivator to use of VCT. There was no difference in utilization of VCT services with student’s sexual behaviours measured by ever had sex, number of sexual partners and last time of sexual involvement.
4.5 Factors affecting utilization of VCT services by secondary school students in Nairobi.

4.5.1 Knowledge on HIV and AIDS
A high proportion of respondents were able to give the correct meaning of AIDS (94.9%) as compared to 69.8% who correctly gave the meaning of HIV. 97.7% of the students knew how HIV is spread and 95.8% knew how to stop spread. Only 9 students did not know how HIV is spread representing 2.3% of the sampled population as shown in Figure 4.8.

![Figure 4.8: Distribution by knowledge on HIV: meaning, mode of transmission and prevention](image)

4.5.1.2 Knowledge on meaning of HIV and AIDS with respondents characteristics
Knowledge on meaning of HIV and sex of students was significant at $p \leq 0.0001$. Girls were also more likely to know meaning of HIV than boys ($n=385; \chi^2_{(df=1)} = 28.146$, $p \leq 0.000$). Similarly, knowledge on meaning of AIDS was significantly associated to
student’s sex at $p \leq 0.05$ (n=385; $\chi^2_{(df=1)} = 4.893$, $p \leq 0.027$). Table 4.12 below shows the cross tabulation on knowing meaning of HIV with sex type.

**Table 4.12: Cross tabulation on knowing meaning of HIV with sex type**

<table>
<thead>
<tr>
<th>Sex of student</th>
<th>Know meaning of HIV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (%), No (%)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>24.7, 19.6</td>
<td>44.3</td>
</tr>
<tr>
<td>Female</td>
<td>45.1, 10.6</td>
<td>55.7</td>
</tr>
<tr>
<td>Total</td>
<td>69.8, 30.2</td>
<td>100.0</td>
</tr>
</tbody>
</table>

There was a significant association between school type and knowing the meaning of HIV (n=385; $\chi^2_{(df=3)} = 55.614$, $p \leq 0.000$). A higher proportion of students in boarding schools knew the full name of HIV compared to those in day schools as shown in the Table 4.13 below. No association was seen in knowing meaning of AIDS with school type.

**Table 4.13: Cross tabulation on knowing meaning of HIV with school type**

<table>
<thead>
<tr>
<th>School type</th>
<th>Know meaning of HIV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (%), No (%)</td>
<td></td>
</tr>
<tr>
<td>Boys boarding</td>
<td>17.5, 7.7</td>
<td>25.2</td>
</tr>
<tr>
<td>Girls boarding</td>
<td>29.4, 4.0</td>
<td>33.4</td>
</tr>
<tr>
<td>Boys day</td>
<td>7.2, 11.9</td>
<td>19.1</td>
</tr>
<tr>
<td>Girls day</td>
<td>15.6, 6.6</td>
<td>22.3</td>
</tr>
<tr>
<td>Total</td>
<td>69.8, 30.2</td>
<td>100.0</td>
</tr>
</tbody>
</table>

There was no association between knowing meaning of HIV and AIDS with students’ class of study and age even though students’ knowledge on HIV and AIDS seems to increase with age as shown in the Table 4.14 below. This could be because HIV and AIDS have been incorporated into the curriculum at the lower class of study.
Table 4.14: Distribution by knowledge on meaning of HIV and AIDS

<table>
<thead>
<tr>
<th>Age</th>
<th>Know meaning of HIV</th>
<th></th>
<th>Know meaning of AIDS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>13</td>
<td>100.0</td>
<td>0.0</td>
<td>100.0</td>
<td>0.0</td>
</tr>
<tr>
<td>14</td>
<td>83.0</td>
<td>17.0</td>
<td>97.9</td>
<td>2.1</td>
</tr>
<tr>
<td>15</td>
<td>69.1</td>
<td>30.9</td>
<td>94.1</td>
<td>5.9</td>
</tr>
<tr>
<td>16</td>
<td>72.5</td>
<td>27.5</td>
<td>97.1</td>
<td>2.9</td>
</tr>
<tr>
<td>17</td>
<td>68.2</td>
<td>31.8</td>
<td>94.0</td>
<td>6.0</td>
</tr>
<tr>
<td>18</td>
<td>57.1</td>
<td>42.9</td>
<td>92.7</td>
<td>7.3</td>
</tr>
<tr>
<td>19</td>
<td>54.5</td>
<td>45.5</td>
<td>81.8</td>
<td>18.2</td>
</tr>
<tr>
<td>20</td>
<td>0.0</td>
<td>100.0</td>
<td>100.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

There was no difference in the proportion of students who knew how HIV is spread and how to stop the spread except for the 19 year old respondents. Generally, it was noticed that a high proportion of students knew how HIV is transmitted and how to stop spread as compared to the 19 year old respondents that showed limited knowledge in HIV and AIDS meaning, transmission and prevention.

4.5.2 Knowledge on how HIV is spread

Knowledge on how HIV is spread was assessed by asking students to name any two ways in which HIV is spread. Approximately 97.7% were able to mention any two ways in which HIV is spread showing a high level of knowledge among students.

While there was no significant association in knowledge on how to HIV is spread with age, the association between school type and class was significant at $p \leq 0.05$ ($n=385; \chi^2_{(df=3)} = 7.680$ and $p \leq 0.053$, $\chi^2_{(df=3)} = 7.627$, $p \leq 0.054$ respectively). The association with sex type was strong at $p \leq 0.01$ ($n=385; \chi^2_{(df=1)} = 7.247$, $p \leq 0.007$). More girls were likely
to be knowledgeable on how HIV is spread than boys as shown in the Table 4.15 below.

**Table 4.15: Cross tabulation on how HIV is spread with students’ sex type**

<table>
<thead>
<tr>
<th>Sex of student</th>
<th>Know how HIV is spread</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Male</td>
<td>42.7%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Female</td>
<td>54.9%</td>
<td>.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>97.7%</strong></td>
<td><strong>2.3%</strong></td>
</tr>
</tbody>
</table>

**4.5.3 Knowledge on how to Stop Spread of HIV**

Knowledge on how to prevent the spread of HIV was measured by asking the respondents to state any two ways of stopping the spread of HIV. Approximately 95.5% of students knew how to stop the spread of HIV. The association between knowledge on how HIV is spread and sex type was significant at \( p \leq 0.01 \) (\( n=385; \chi^2 (df=1) =9.310, p \leq 0.002 \)). Girls in secondary schools are more likely to know how to stop spread of HIV than boys as shown in Table 4.16 on page 45.

**Table 4.16: Cross tabulation on how to stop spread of HIV and sex type**

<table>
<thead>
<tr>
<th>Sex of student</th>
<th>Know how to stop spread</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Male</td>
<td>40.7%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Female</td>
<td>55.0%</td>
<td>0.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>95.8%</strong></td>
<td><strong>4.2%</strong></td>
</tr>
</tbody>
</table>

While the association with age was significant at \( p \leq 0.05 \) (\( n=385; \chi^2 (df=7) =14.454, p \leq 0.044 \)), there was a close association between knowledge on how to stop spread of HIV with school type at \( p \leq 0.01 \) (\( n=385; \chi^2 (df=3) =12.851, p \leq 0.005 \)). Students in boarding
schools were more likely to know how to stop the spread of HIV than those in day schools as shown in Table 4.17 below. There was no association between knowledge on how to stop spread of HIV with students’ class of study.

Table 4.17: Cross tabulation on knowing how to stop spread of HIV and school type

<table>
<thead>
<tr>
<th>School type</th>
<th>Know how to stop spread</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Boys boarding</td>
<td>23.5%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Girls boarding</td>
<td>33.3%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Boys day</td>
<td>17.2%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Girls day</td>
<td>21.7%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Total</td>
<td>95.8%</td>
<td>4.2%</td>
</tr>
</tbody>
</table>

The association between knowledge on how to stop spread of HIV and students’ sex was also significant at \( p \leq 0.01 \) (\( n=385; \chi^2 (df=1) =9.310, p \leq 0.002 \)). On average, girls are more knowledgeable than boys probably because girls are at higher risk of HIV than boys hence interventions have been targeting promoting knowledge among girls.

Knowledge on how to stop spread was further assessed by asking the respondents to name the various ways of stopping the spread of HIV. A proportion mentioned abstinence (35.2%). Others mostly mentioned were having protected sex (21.8%), being faithful to one uninfected partner (15.5%) and public education and awareness creation on HIV and the role of VCT (11.9%). Blood screening before transfusion (9.7%) and knowing ones status (5.9%) were the least mentioned as shown in Figure 4.9 below.
It was observed that majority of the students mentioned abstinence and using protection as ways to stop spread of HIV compared to faithfulness, blood screening, knowing ones status (VCT) and health education.

Table 4.18: Distribution on how to stop spread of HIV by school type

<table>
<thead>
<tr>
<th></th>
<th>Abstinence</th>
<th>Using Protection</th>
<th>Being Faithful</th>
<th>Blood Screening</th>
<th>VCT</th>
<th>Health Education</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys boarding</td>
<td>17.0%</td>
<td>14.8%</td>
<td>5.6%</td>
<td>3.4%</td>
<td>0.8%</td>
<td>7.0%</td>
<td>24.3%</td>
</tr>
<tr>
<td>Girls boarding</td>
<td>25.1%</td>
<td>9.2%</td>
<td>12.3%</td>
<td>8.1%</td>
<td>3.6%</td>
<td>11.2%</td>
<td>34.9%</td>
</tr>
<tr>
<td>Boys day</td>
<td>12.8%</td>
<td>10.6%</td>
<td>5.6%</td>
<td>0.6%</td>
<td>2.8%</td>
<td>1.4%</td>
<td>18.2%</td>
</tr>
<tr>
<td>Girls day</td>
<td>16.2%</td>
<td>9.5%</td>
<td>7.8%</td>
<td>7.5%</td>
<td>4.7%</td>
<td>4.5%</td>
<td>22.6%</td>
</tr>
<tr>
<td>Total</td>
<td>17.78%</td>
<td>11.03%</td>
<td>7.83%</td>
<td>4.90%</td>
<td>2.98%</td>
<td>6.03%</td>
<td>100.0%</td>
</tr>
<tr>
<td>n</td>
<td>255</td>
<td>158</td>
<td>112</td>
<td>70</td>
<td>43</td>
<td>86</td>
<td>358</td>
</tr>
</tbody>
</table>
More students in boarding schools, (17% for boys and 25.1% for girls) were more likely to state abstinence than those in day schools (12.8% for boys and 16.2% for girls) as shown in Table 4.18. Students in boarding schools (59.2) were more knowledgeable in ways of stopping spread of HIV than their counterparts in day schools (40.8). Interventions on HIV health education should also be targeted to students in day secondary schools as well.

4.5.4 Knowledge on Infected Persons

Knowledge of infected person meant knowing somebody who has taken HIV test, found HIV positive and has declared so openly. Knowing an infected person can be an asset in enabling some youth, who may still doubt, that HIV is real making them adopt behaviour which will prevent the spread of the disease. 220 (57.9%) respondents knew a person infected with HIV (those infected refer to those who have tested HIV positive and have publicly declared so), while 160 (42.1%) do not know any person infected with HIV.

Of those who knew an infected person, 35.1% (100 respondents) said the infected person was their neighbour, 22.8% (65 respondents) knew a friend, 21.4% (61 respondents) said the infected person was a relative and only 4.6% (13 respondents) said the infected person was a family member as shown in Table 4.19.

<table>
<thead>
<tr>
<th>Infected person</th>
<th>No. of respondents</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family member</td>
<td>13</td>
<td>4.6</td>
</tr>
<tr>
<td>Relative</td>
<td>61</td>
<td>21.4</td>
</tr>
<tr>
<td>Friend</td>
<td>65</td>
<td>22.8</td>
</tr>
<tr>
<td>Neighbour</td>
<td>100</td>
<td>35.1</td>
</tr>
</tbody>
</table>
With only (13 respondents) 4.6% having an infected family member means that many respondents may not see the problem of HIV as close to them and hence may not perceive themselves to be at risk of infection.

4.5.4.1 Comparison in knowledge of infected persons with respondents’ characteristics

Table 4.20 below shows the proportions on knowledge of infected person with sex and class of study. More girls (70%) than boys (42%) knew an infected person. Girls were more likely to know infected persons than boys significant at p≤0.01 (n=385; $\chi^2 (df=1) =28.910$, p ≤ 0.0001). There was no significant association between age of student and class of study with knowledge of an infected person.

<table>
<thead>
<tr>
<th>Respondents characteristics</th>
<th>Know person with HIV/AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (%)</td>
</tr>
<tr>
<td>Sex of student</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>42.5%</td>
</tr>
<tr>
<td>Female</td>
<td>70.0%</td>
</tr>
<tr>
<td>Class of student</td>
<td></td>
</tr>
<tr>
<td>Form 1</td>
<td>63.0%</td>
</tr>
<tr>
<td>Form 2</td>
<td>48.3%</td>
</tr>
<tr>
<td>Form 3</td>
<td>66.7%</td>
</tr>
<tr>
<td>Form 4</td>
<td>53.4%</td>
</tr>
</tbody>
</table>

Similarly, being in a day school was closely associated with knowing someone infected with HIV and AIDS (n=385; $\chi^2 (df=3) =36.422$, p ≤ 0.0001). The proportion of boys and girls in day schools who knew a person with HIV, were higher than of those in boarding schools as shown in Figure 4.10. Students in day schools have more opportunity to interact with everyday life than those in boarding schools. There was no association with class of study and student’s age.
4.5.5 Reasons for Going to VCT Centre

Respondents were asked to give their reasons to why they went to VCT centre. It was encouraging to note that a greater proportion of the (n=70) 18.2% who have ever been to VCT (n=57) 81.2% went in order to know their HIV status. Others were either accompanying their friends (n=2, 2.9%) or relatives (n=3, 4.3%) as shown in Figure 4.11. Approximately (n=7) 8.7% wanted to know what happens in the VCT centres, suggesting limited information among the youth which may be contributing to their fear of seek VCT services.

Figure 4.10: Distribution of students by knowledge of infected persons
Further analysis showed that while male students were more likely to go to VCT centres to know their status and to know what happens there, female students were more likely to visit VCT while taking their friends or relatives.

4.5.6 Reasons for not going to VCT Centre

Respondents who said they had never been to VCT were asked to give their reasons. Approximately (n=153) 48.5% said they do not see the need to do so while (n=62) 19.5% believe that they were not infected and so did not have to go to VCT. Close to (n=14) 4.3% said they feared to be seen going to VCT and 14.1% who feared to go or feared positive results totalling to 18.4% of students who feared going to VCT centres. This suggests that fear was one of the major hindrance to utilization of VCT services by the youth.

<table>
<thead>
<tr>
<th>Reasons for VCT visit</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know my status</td>
<td>81.2%</td>
</tr>
<tr>
<td>Took a friend</td>
<td>2.9%</td>
</tr>
<tr>
<td>Took relative</td>
<td>4.3%</td>
</tr>
<tr>
<td>Know what happens there</td>
<td>8.7%</td>
</tr>
<tr>
<td>Others</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

*Figure 4.11: Proportion of respondents by reason for VCT visit*
Only (n=8) 2.4% reported that the VCT facility and some 9.2% said they have not thought about going to VCT centres as shown in Figure 4.12 (multiple responses permitted; n=303).

![Figure 4.12: Distribution by reasons for having not gone for VCT](image)

While youth peers can encourage each other to seek VCT services, they can also discourage each other as shown by 1.9% who reported that they were discouraged by friends not to go to VCT for HIV testing. Fear and discouragement by friends seem to be the major reasons for boarding school students as seen in Table 4.21 below.
Table 4.21: Reasons of having not gone to VCT by school type

<table>
<thead>
<tr>
<th>School type</th>
<th>Reasons not gone to VCT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fear of results</td>
</tr>
<tr>
<td>Boys boarding</td>
<td>32.0%</td>
</tr>
<tr>
<td>Girls boarding</td>
<td>36.0%</td>
</tr>
<tr>
<td>Boys day</td>
<td>12.0%</td>
</tr>
<tr>
<td>Girls day</td>
<td>20.0%</td>
</tr>
</tbody>
</table>

4.5.7 Encouragers to VCT Use

In order to establish secondary school youth influences to VCT use, respondents who reported to have been to VCT centres, were asked to mention the people who encouraged them to visit VCT centre. Many of the respondents who have been to VCT to be tested reported that they were encouraged by their friends (51.4%). Only 22.9% were encouraged by their parents, only 20% were due to their own decision and only
4.3% were encouraged by relatives as shown on Figure 4.13 below.

Figure 4.13: Encouragers to VCT use

The role played by peers in encouraging each other to visit VCT seems to be the same for all types of schools. 20% of girls in day school and 27.3% of boys in boarding school would make their own decision while 18.2% boys in boarding schools would be encouraged by relatives more. Nearly 33.3% girls in boarding and 30% in day schools would be encouraged by parents more to use VCT services as shown in Table 4.22 below.

Table 4.22: Encouragers to VCT by school type

<table>
<thead>
<tr>
<th>School type</th>
<th>Encouraged by friends</th>
<th>Encouraged by relative</th>
<th>Own decision</th>
<th>Encouraged by Parent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys boarding</td>
<td>54.5%</td>
<td>18.2%</td>
<td>27.3%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Girls boarding</td>
<td>47.6%</td>
<td>4.8%</td>
<td>23.8%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Boys day</td>
<td>66.7%</td>
<td>0.0%</td>
<td>13.3%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Girls day</td>
<td>50.0%</td>
<td>0.0%</td>
<td>20.0%</td>
<td>30.0%</td>
</tr>
</tbody>
</table>
It is clear that peers or friends are great influences to VCT use among students as compared to relatives and personal initiative. The involvement of parents in encouraging the use of VCT services among youths presents an untapped opportunity. More involvement of youths and parents in IEC activities targeting the youth can greatly boost the utilization of VCT services among the youth.

4.5.8 Respondents’ Sexual Behaviours and Perceptions on Risk of Infection

4.5.8.1 Students Sexual Behaviours

Sexual behaviours among students were measured by asking students questions related to ever gotten involved in penetrative sex, last time of sexual involvement and number of sexual partners.

4.5.8.1.1 Sexual involvement with gender

It was encouraging to note that majority of the respondents were abstaining from sex. While 69.5% (266) reported that they had never been involved in sex, 30.5% (117) reported that they had been involved in sex at least once and were sexually active. Of those who had ever engaged in sexual activity, (n=86) 73% were males and (n=27) 23% were females as shown in Figure 4.14.
The findings show that male students are more sexually active than females. This was statistically significant ($n=383$, $\chi^2_{(df=1)} = 80.037$, $p \leq 0.001$).

### 4.5.8.1.2 Sexual involvement with age

It was clear that secondary school students get sexually active as they increase in age and hence class of study. Figure 4.15 shows that more students in secondary schools got involved in sexual activity as they progress in age. There was a significant difference in sexual involvement with age of students ($n=381$, $\chi^2_{(df=7)} = 50.578$, $p \leq 0.0001$)
4.5.8.1.3 Sexual involvement with class of study

Similar to age, secondary school students tend to get sexually involved more as they progress in the class of study \((n=381, \chi^2_{(df=3)} =15.609, p≤0.0001)\). It is clear from Figure 4.16 that few form one students (16%) were involved in sex compared to form two (35%) and form three students (41%). On the contrary, tendency for sexual involvement decreases with form four students.
### 4.5.8.1.4 Sexual involvement with the school type

Students in day schools 17% for girls and 61% for boys had gotten sexually involved than those in boarding schools 8% for girls and 49% for boys as shown in Figure 4.17 on the next page. Generally those in day schools were more sexually active than those in boarding schools ($n=383; \chi^2_{(df=3)} =84.911, p \leq 0.0001$).
4.5.8.2 Last time of sexual involvement

Respondents who were sexually active were asked to state the approximate dates they got involved sexually. Majority of the respondents who are sexually active are indeed very active i.e. they have sex more often than not, given the mean age at first sex for boys was 15.4 years while for girls was 16.1 years. Approximately (52) 44% who were lastly involved between 1 – 6 months prior to the study and (32) 27.1% were lastly involved one month before the study period. Close to (n=23) 19.6% and (n=11) 9.3% lastly engaged in sex in between 7 – 12 months and greater than 12 months prior to the study period respectively as shown in Figure 4.18.
4.5.9 Number of Sexual Partners

Respondents were also asked to state the number of sexual partners they had. A greater majority (30) 25.7% reported that they had one sexual partner, (13) 10.7% had two, 4.3% had three, 7.9% had four and (8) 6.3% had more than four sexual partners. The mean number of sexual partners for male students was 3.2, which is higher than that for female students which is 1.4. This shows that the young people of respondents’ age are sexually active and are at a risk of contracting HIV through sexual intercourse. Figure 4.19 shows the distribution of respondents by the number of sexual partners.
When the number of sexual partners was categorized into none, one and more than one, 29.2% were most at risk given that they had more than one sexual partner while 25.7% were also at risk given that they had one sexual partner.

More males (35.4%) than females (19.3%) and more males (55.8%) than females (7.9%) had one and more than one sexual partners respectively. The numbers of sexual partners tend to increase with increase in age among the sexually active students given that 100% of respondent’s ages 20 years had more than one sexual partners indicating increased risk. This too applies to class of study where number of sexual partners increases steadily from form one to three and decreases at form four. Approximately 26.9% of the form four student had more than one sexual partners compared to 40% of form three students and 29.1% of form two students. There was a significant difference in the student’s number of sexual partners with age (n=253; $\chi^2$ (df=14) =60.284, p≤0.0001), sex (n=253; $\chi^2$ (df=2) =113.040, p≤0.0001), and class of study (n=253; $\chi^2$ (df=6) =19.924, p≤0.003). Of the 69.5% of the respondents who had not been involved in
sexual activity, some of them seem to have boyfriends or girlfriends. This is seen by the fact that 45.1% of them reported that they do not have a sexual partner, a figure lower than the 69.5%. Such may be involved in sex at one time and are at risk of infection if they do not get the right information on HIV prevention. Table 4.23 below gives a summary of the proportion of students by number of sexual partners.

Table 4.23: Proportion of students by number of sexual partners (%)

<table>
<thead>
<tr>
<th>Sex of student</th>
<th>No. of sexual partners</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Male</td>
<td>8.8</td>
</tr>
<tr>
<td>Female</td>
<td>72.9</td>
</tr>
<tr>
<td>Age of student</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>33.3</td>
</tr>
<tr>
<td>14</td>
<td>78.6</td>
</tr>
<tr>
<td>15</td>
<td>75.0</td>
</tr>
<tr>
<td>16</td>
<td>38.6</td>
</tr>
<tr>
<td>17</td>
<td>41.1</td>
</tr>
<tr>
<td>18</td>
<td>20.9</td>
</tr>
<tr>
<td>19</td>
<td>0.0</td>
</tr>
<tr>
<td>Class of student</td>
<td></td>
</tr>
<tr>
<td>Form 1</td>
<td>63.6</td>
</tr>
<tr>
<td>Form 2</td>
<td>45.5</td>
</tr>
<tr>
<td>Form 3</td>
<td>33.8</td>
</tr>
<tr>
<td>Form 4</td>
<td>34.3</td>
</tr>
<tr>
<td>School type</td>
<td></td>
</tr>
<tr>
<td>Boys boarding</td>
<td>6.0</td>
</tr>
<tr>
<td>Girls boarding</td>
<td>85.5</td>
</tr>
<tr>
<td>Boys day</td>
<td>11.1</td>
</tr>
<tr>
<td>Girls day</td>
<td>57.8</td>
</tr>
</tbody>
</table>

Looking at the distribution by school type, a higher proportion of students in day schools seem to have more sexual partners compared to those in boarding schools for
both sexes as shown in Table 4.24 on page 61. The difference in the proportion was significant with chi-square tests \((n=253; \chi^2 (df=6) =125.086, p<0.0001)\).

**Table 4.24: Number of sexual partners of respondents by school type**

<table>
<thead>
<tr>
<th>School type</th>
<th>No. of sexual partners Category</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>One</td>
</tr>
<tr>
<td>Boys boarding</td>
<td>1.2%</td>
<td>7.1%</td>
</tr>
<tr>
<td>Girls boarding</td>
<td>25.7%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Boys day</td>
<td>2.8%</td>
<td>8.7%</td>
</tr>
<tr>
<td>Girls day</td>
<td>14.6%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Total</td>
<td>44.3%</td>
<td>26.5%</td>
</tr>
</tbody>
</table>

Generally a slightly higher proportion of students who are sexually active seem to have more than one sexual partner.

**4.5.9.1 Number of sexual partners versus visit to VCT use**

Students who had more than one sexual partner were less likely to discuss going for VCT with others as compared to students who had one partner or none. \((n=251, \chi^2 (df=2) =4.118, p \leq 0.023)\) significant at \(P \leq 0.05\). It is clear that those having one sexual partner were more confident and willing to discuss with others about visiting VCT centres to be tested unlike those having more than one partner who were less likely to discuss on VCT use probably because of fear of having been infected owing to their involvement in risk sexual behaviour. Respondents who had one sexual partner or none were more likely to discuss going to VCT centres meaning that they were more likely to take responsibility about their sexual activities compared to those who had two or more sexual partners. **Table 4.25** shows the variation between numbers of sexual partners with discussions on VCT use.
Table 4.25: Number of sexual partners and discussions on going to VCT to be tested (Cross tabulation)

<table>
<thead>
<tr>
<th>No. Of sexual partners</th>
<th>Discussed going VCT (No of respondents)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>None</td>
<td>62</td>
<td>50</td>
</tr>
<tr>
<td>One</td>
<td>41</td>
<td>26</td>
</tr>
<tr>
<td>More than one</td>
<td>33</td>
<td>41</td>
</tr>
<tr>
<td>Total</td>
<td>135</td>
<td>116</td>
</tr>
</tbody>
</table>

4.5.10 Perception of Risk of HIV Infection and respondents characteristics

In order to determine the factors influencing VCT use it was also necessary to establish student’s perceptions on risk of HIV infection. Perception of risk of infection is an important factor in ensuring that people adopt safer behaviour towards HIV. The results shows that a 68.9% of respondents think that they can get HIV and 31.1% perceive that they cannot as shown in Figure 4.20.

![Figure 4.20: Distribution by perceptions of contracting HIV](image-url)
Findings from this study show that more female students (75%) perceive that they can get HIV than male students (60.5%). This could give and explanation to the fact that male students are more likely to have more than one sexual partner than their fellow female students. The association between sex and perception of contracting HIV was significant at $p<0.01$ ($n=376$; $\chi^2$ (df=1) = 9.900, $p<0.002$). Table 4.26 shows the distribution of respondents on perceptions of risk of HIV infection with student’s characteristics.

Table 4.26: Knowledge on contracting HIV with respondents’ characteristics

<table>
<thead>
<tr>
<th>Students characteristics</th>
<th>Think can get HIV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>School type</td>
<td></td>
</tr>
<tr>
<td>Boys boarding</td>
<td>69.9%</td>
</tr>
<tr>
<td>Girls boarding</td>
<td>85.0%</td>
</tr>
<tr>
<td>Boys day</td>
<td>48.6%</td>
</tr>
<tr>
<td>Girls day</td>
<td>61.0%</td>
</tr>
<tr>
<td>Age of student</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>100.0%</td>
</tr>
<tr>
<td>14</td>
<td>80.9%</td>
</tr>
<tr>
<td>15</td>
<td>68.7%</td>
</tr>
<tr>
<td>16</td>
<td>58.0%</td>
</tr>
<tr>
<td>17</td>
<td>79.1%</td>
</tr>
<tr>
<td>18</td>
<td>70.4%</td>
</tr>
<tr>
<td>19</td>
<td>42.9%</td>
</tr>
<tr>
<td>Sex of student</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>60.5%</td>
</tr>
<tr>
<td>Female</td>
<td>75.6%</td>
</tr>
<tr>
<td>Class of student</td>
<td></td>
</tr>
<tr>
<td>Form 1</td>
<td>73.3%</td>
</tr>
<tr>
<td>Form 2</td>
<td>56.5%</td>
</tr>
<tr>
<td>Form 3</td>
<td>61.8%</td>
</tr>
<tr>
<td>Form 4</td>
<td>81.2%</td>
</tr>
</tbody>
</table>

There is a slight variation in the perception of contracting HIV with class of study. However, more form four students (81.2%) and form one students (73.3%) tend to
perceive that they can contract HIV compared to the form two (56.5%) and from three students (61.8%). The difference in proportions was significant at $p<0.01$. ($n=376; \chi^2_{(df=3)}=16.235, p<0.001$).

Age was also associated with perception of contracting HIV ($n=373; \chi^2_{(df=7)}=21.427, p<0.001$). It is clear from the above table that as students progress in age, their tendency to perceive that they can contract HIV decreases. This could go hand in hand with a student’s sexual involvement making the students to live in denial rather than embracing safer sexual practices. Findings showed that those who perceived that they can get HIV were more likely to abstain from sexual activity than those who did not as shown in Table 4.27 below. Students who thought they can get HIV were more likely to abstain from sex ($n=253; \chi^2_{(df=2)}=19.932, p\leq0.001$) or have fewer sexual partners ($n=249; \chi^2_{(df=2)}=19.719, p\leq0.0001$).

<table>
<thead>
<tr>
<th>Think can get HIV</th>
<th>Ever had sex</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
<td>16.3%</td>
<td>52.8%</td>
</tr>
<tr>
<td>No</td>
<td>14.4%</td>
<td>16.5%</td>
</tr>
<tr>
<td>Total</td>
<td>30.7%</td>
<td>69.3%</td>
</tr>
</tbody>
</table>

Table 4.27: Cross tabulation of perception of risk and sexual activeness

Similarly, being in boarding school was also closely associated with perceived risk of contracting HIV ($n=376, \chi^2_{(df=3)}=32.038, p\leq0.0001$) It was observed that students in boarding schools think that they can contract HIV than those in day school and girls perceive to be at risk more than boys as shown in Table 4.28.
Table 4.28: Cross tabulation on perceptions of getting HIV with school type

<table>
<thead>
<tr>
<th>School type</th>
<th>Think can get HIV</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Total</td>
</tr>
<tr>
<td>Boys boarding</td>
<td>17.3%</td>
<td>7.4%</td>
<td>24.7%</td>
</tr>
<tr>
<td>Girls boarding</td>
<td>28.7%</td>
<td>5.1%</td>
<td>33.8%</td>
</tr>
<tr>
<td>Boys day</td>
<td>9.6%</td>
<td>10.1%</td>
<td>19.7%</td>
</tr>
<tr>
<td>Girls day</td>
<td>13.3%</td>
<td>8.5%</td>
<td>21.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>68.9%</td>
<td>31.1%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

4.5.11 Peer Influence on VCT Use

It was encouraging to find out that close to 55.1% (207) of the respondents discuss going to VCT centres with others while 44.9% (169) do not. Of these, 49.8% discuss with their friends, 31.4% with their girlfriends or boyfriends, 26.6% with their family and 8.2% with their relatives as shown in Figure 4.21 below.

![Figure 4.21: Proportion of respondents by who they discuss VCT use with](image-url)
While there was no significant association between discussions on VCT use with age of students, there was a strong difference in proportions with sex (n=376, $\chi^2_{(df=1)} = 6.690$, p≤0.01) observed. A weak difference was noted with class of study (n=376, $\chi^2_{(df=3)} = 9.808$, p≤0.02) and school type (n=376, $\chi^2_{(df=3)} = 9.832$, p≤0.030) and distance to the nearest VCT (n=323, $\chi^2_{(df=3)} = 8.781$, p≤0.032).

4.5.12 Encouraging others to Visit VCT

Respondents were asked whether they had ever encouraged anyone to visit VCT to be tested. It was established that approximately 42.6% (161) had encouraged someone while majority 57.4% (217) had never encouraged anyone. Of those who had, majority of them had encouraged their girlfriends (59.6%) and 28.6% their boyfriends, only 5.6% had encouraged their brothers and approximately 11.8% had encouraged their sisters as shown in Figure 4.22.

![Figure 4.22: Distribution by persons encouraged for VCT use (multiple response permitted; n=161)](image-url)
More boys in day schools (8.2%) and girls in boarding schools (14.6%) have encouraged others to VCT use as shown in the Table 4.29 below. The difference in proportion between encouraging others to VCT use and school type was significant at p≤0.01 (n=378, χ² (df=3) =13.715, p≤0.003).

Table 4.29: Cross tabulation on school type and ever encouraged one for VCT

<table>
<thead>
<tr>
<th>School type</th>
<th>Ever encouraged one for VCT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Boys boarding</td>
<td>7.1%</td>
<td>17.7%</td>
</tr>
<tr>
<td>Girls boarding</td>
<td>14.6%</td>
<td>18.3%</td>
</tr>
<tr>
<td>Boys day</td>
<td>8.2%</td>
<td>11.4%</td>
</tr>
<tr>
<td>Girls day</td>
<td>12.7%</td>
<td>10.1%</td>
</tr>
<tr>
<td>Total</td>
<td>42.6%</td>
<td>57.4%</td>
</tr>
</tbody>
</table>

Discussions on VCT use revolved around sexual activeness of the students given that boys in day schools who were the most sexually active and with higher number of sexual partners were more likely to discuss VCT use. Girls on the other hand, tend to discuss more with other relatives or neighbours on VCT use than with their boyfriends.

It was noted that 11.8% of those who had encouraged others to go for VCT intended to get involved. This showed that they perceived to be at risk and were cautious not to be involved in sex without ascertaining the status of the other partner. Approximately 23% encouraged others to seek for VCT because they were involved, 16.1% did so because their friends were involved while majority of them 46% did so just to know the status of other as shown in Figure 4.23 (multiple response permitted).
Figure 4.23: Reason for encouraging others for VCT

Most students who had ever been to VCT were more likely to have encouraged others to go for VCT \((n=385; \chi^2_{(df=1)}=42.372, p\leq0.0001)\). Similarly, respondents who went to VCT to know their status were more likely to have encouraged others to visit VCT to know their status too \((n=385; \chi^2_{(df=4)}=20.936, p\leq0.00001)\), as compared to others who went for other reasons such as taking a friend or relative or who desired to know what happens there as shown on Table 4.30.

Table 4.30: Distribution of ever encouraged one for VCT by reason for visit

<table>
<thead>
<tr>
<th>Reason for VCT visit</th>
<th>Ever encouraged one for VCT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Know my status</td>
<td>49</td>
<td>7</td>
</tr>
<tr>
<td>Took a friend</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Took relative</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Know what happens there</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>17</td>
</tr>
</tbody>
</table>
Most of the respondents who had never encouraged anyone to go to VCT centre to be tested said that they did not talk about it (61.3%) while others said they did not see the need (13.8%). Some feared to speak about it (2.8%) and others feared to be ridiculed (4.1%) as shown in Table 4.31 below. The fear element is a good indicator of the level of stigma that exists in youths on HIV and AIDS.

Table 4.31: Reasons for not encouraging other (multiple response permitted)

<table>
<thead>
<tr>
<th>Reasons</th>
<th>No. of responses</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t talk about it</td>
<td>133</td>
<td>61.3</td>
</tr>
<tr>
<td>Fear speaking on it</td>
<td>6</td>
<td>2.8</td>
</tr>
<tr>
<td>Fear of ridicule</td>
<td>9</td>
<td>4.1</td>
</tr>
<tr>
<td>No urge</td>
<td>8</td>
<td>3.7</td>
</tr>
<tr>
<td>All have gone</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>No need</td>
<td>30</td>
<td>13.8</td>
</tr>
</tbody>
</table>

4.5.13 Family Reactions to VCT

Respondents were asked to state whether they thought their families would get upset and why by going to VCT centres. While 90% (332) of the respondents did not think their families would get upset, only 10% (37) thought that their families would get upset.

Among those who thought that their families would not get upset, 78.6% believed that going to the VCT centres to be tested was the right thing to do while 21.4% believed that knowing their status was their right. On the other hand those who thought their families would get upset feared suspicion (62.3%) and loss of trust (37.7%) from their parents as shown in Figure 4.24.
More students in boys’ boarding (11.8%) and those in day schools (10.8%) believed that their families would get upset if they went to VCT compared to female students; (9.5% for boarding and 8.3% for day schools) as shown in Table 4.32 below. The main reason that could be driving this is that students did not want to be known that they were sexually active by their parents, that their parents would suspect that they were sexually active. This indicates the need to promote free discussions on sexual matters, HIV and AIDS and VCT at the family level.

**Table 4.32: Students who think family get upset on going to VCT by school type**

<table>
<thead>
<tr>
<th>School type</th>
<th>family gets upset if I go for VCT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Boys boarding</td>
<td>11.8%</td>
</tr>
<tr>
<td>Girls boarding</td>
<td>9.5%</td>
</tr>
<tr>
<td>Boys day</td>
<td>10.8%</td>
</tr>
<tr>
<td>Girls day</td>
<td>8.3%</td>
</tr>
</tbody>
</table>
4.6 Students Suggestions on Control of HIV Spread among the Youth

It was encouraging to note that most respondents see abstinence (43.4%) as the best way to control the spread of HIV and AIDS. Other suggestions were enhancing IEC (20.1%), use of protection (15.6%), knowing ones status (8.8%), addressing peer pressure among youths (5.9%) and establishing youth friendly HIV services (6.3%) as shown in Figure 4.25 below.

![Figure 4.25: Suggestions on control of HIV spread (multiple responses permitted)](image)

4.7 Students Suggestions on Scaling Up VCT Uptake among the Youth.

A large proportion of respondents (64.1%) suggested education on the importance of VCT usage as the major way to scale-up its uptake among the youths in Kenya. 16.7% suggested having youth friendly VCT centres. Other suggestions included involvement
of parents (7.8%), introduction of incentives to attract the youths (7.5%) and free services at VCT centres (3.9%) as shown in Figure 4.26 below.

**Figure 4.26: Suggestions on scaling up VCT uptake among youths. (Multiple responses permitted)**
CHAPTER V: DISCUSSION

5.1 Introduction
This section discusses the findings of the study in comparison with other findings and makes suggestions on what can be done to improve VCT uptake among the youth. It discusses respondent’s characteristics, their knowledge, behaviours and perceptions on HIV and AIDS, and VCT. It also expounds the factors affecting VCT use by secondary school students.

5.2 Respondents’ characteristics
The mean of the high school students was 16.2 years which lies between the sexual debut age group in Kenyan which is 15-19 years (ROK, 2009) and corresponds with the KDHS findings on mean age for first sexual encounter of 16 years (CBS, 2003). This is the age in which most youths are vulnerable to infection due to the effects of peer pressure and desire for experimentation among many. Interventions targeting the youths should begin at an age earlier than this.

5.3 Knowledge, behaviours and perceptions on HIV and AIDS
Findings in this study showed that a greater proportion of students were knowledgeable in basic HIV knowledge of meaning, purpose, how it is spread and how to stop spread. In this study, all respondents had heard of HIV and AIDS higher than KDHS findings of 98.9% of respondents aged 15-19 years (CBS, 2003). Majority of the students knew how HIV is spread and how to stop the spread indicating a high level of awareness on HIV/AIDS transmission and how to stop transmission is high among high school students in Nairobi. It was expected that knowledge and awareness of issues of life increases as one advances in the level of study and as such the behaviours of students are likely to follow the same pattern.
Though these findings are limited to secondary school students, it is higher compared to other study findings which averages knowledge on basic HIV to be of males and of females in sub-Saharan Africa (UNAIDS, 2008) but similar to the findings of Alemu H which were done in Ethiopia on the same age group though not secondary school students (Alemu, 2008). Basic knowledge on HIV and AIDS especially how HIV is spread and how to stop spread is important in helping students understand that they are at risk of infections in order to adopt safer sexual practices. Knowledge on HIV/AIDS components increases with age. This corresponds to the KDHS findings (CBS 2003).

Girls were more knowledgeable than boys in aspects of HIV and AIDS and those students in boarding more knowledgeable than those in day schools on how HIV is spread and how to stop the spread. The fact that students in day schools were more likely to be more sexually active than those in boarding suggests that knowledge is key to safer sexual behaviours among secondary school students. In a similar manner, girls were less likely to have ever engaged in sex and to have more sexual partners compared to boys. Knowledge also goes hand in hand with perception of risk. Girls were more likely to perceive to be at risk of infection than boys and also those in boarding schools more than those in day schools. The knowledge gap between day and boarding students on HIV could be a result of the fact that day school students have less time to interact with their peers, or even and general counselling from their teachers. Future education and HIV promotional activities should target secondary school students who are day scholars.

Close to 68.9% perceive to be at risk of infection. This figure is quite high as compared to the Horizons findings that (44%) of the youths in Nairobi do not feel at risk.
(Horizons 2001). Perception of risk seemed to decrease with increase in the age and as one gets more sexually active suggesting that students who are sexually active are more likely to assume that they are not at risk and live in self-denial. With the evidence from this study that students who knew an infected person were more likely to have fewer sexual partners, perceived to be at risk and be less sexually active than those who did not know. This research found out that more boys had more sexual partners (mean of 3.2) than girls who had a mean 1.6. This corresponds to UNAIDS findings in 2009. (UNAIDS 2010).

HIV in promotional activities involving people living with HIV could be very effective in influencing safer sexual behaviours among the students. There is need to strengthen prevention education, making them aware that they are at risk and how they can protect themselves. This is necessary to reduce ignorance associated with the risk of contracting HIV among the secondary school students in Kenya. There is evidence that there are low infection rates largely due to successful prevention education (UNESCO, 2004).

It was encouraging that majority mentioned abstinence as a method of preventing spread of HIV. This is comparable to findings in Burkina Faso, where 33.9% of the youths exposed to prevention education and 40.5% of those exposed knew that abstinence protects against HIV (UNESCO 2004). Knowing ones status was the least mentioned (5.9%), suggesting that secondary school students in Nairobi did not perceive HIV testing (knowing ones status) as one of the important tools in the fight of HIV. This presents an opportunity to include VCT testing in prevention campaigns since there is evidence that people exposed to prevention campaigns are more likely to
protect themselves against HIV (UNESCO, 2004). Students in boarding schools were more likely to mention abstinence, being faithful, blood screening and health education as suggestions to stop spread of HIV and AIDS while those in day school were more likely to mention using protection and VCT as ways to stop spread. This presents students in boarding schools to be more knowledgeable and reflects the high proportions of VCT use and sexual activeness among day school students compared to boarding students.

Close to 30.5% of students were sexually active. Out of these, 23% were girls and 73% were males slightly less than Berzaucher and Baggaley (2002) findings of 31% of women aged 15-19 years and higher than 65% of young men who were sexually active. Recent findings showed that 14% of adolescent girls and 31% of adolescent boys have had sex before the age of 15 (ROK, 2005). Approximately 25.7% had one sexual partner and 29.2% had two or more partners indicating that they were most at risk of HIV infection. KDHS data shows that only 2% of women and 12% of men report having had one sexual partner in the 12 months period prior to the survey (CBS, 2003). Of the respondents’ who were sexually active, (43.9%) were lastly involved between 1–6 months prior to the study and 27.1% were lastly involved less than one month before the study period showing that they were indeed active hence at risk. The mean number of sexual partners for male students was 3.2, which is higher than female students 1.4, showing that boys had multiple sexual partners than girls. The mean age at first sex is 15.4 years for boys and 16.1 years for girls lower than the findings by Mc Cauley research done in Kenya that the mean age at first sex was 17 years for boys and for girls was 17.9 years (Mc Cauley, 2004).
The association between sexual involvement with age and class of study indicate that students are more vulnerable due to adolescence stage and thus HIV prevention interventions should be started early. Secondary school students tend to be involved in sexual activities as they progress in age and class of study. Messages of abstinence and VCT use should be passed on earlier enough to ensure that those who are not active remain so until marriage.

5.4 Knowledge and utilization of VCT services

Knowledge on VCT was also very high given that majority (90.9%) of the students knew meaning of VCT and over 89.9% were able to state two uses of VCT. These results are quite high compared to 2003 KDHS which showed that 43.9% of women and 47.1% of men aged between 15-19 years having heard of VCT (CBS, 2004). But corresponds to the research done by Sebudde S. and Nangendo F. On voluntary counselling and testing services: Breaking resistance to access and utilization among the youths in Rakai district of Uganda (Sebudde S and Nangendo F, 2009).

Many respondents (78.9%) knew a VCT centre near home. These findings differ with the Horizons findings that only (11%) knew VCT service providers in their community (Horizons 2001). This exposes the vulnerability of the students to peer pressure and the need to experiment as they enter adolescence in form two and three and the need to concentrate and be more focused as one reaches form four. This portrays form two and three as very vulnerable age thus more intervention should be targeted at this stage.

There was no significant difference between age and class of student with knowledge on VCT. However, like knowledge on HIV and AIDS, more students in boarding schools than those in day and more females than males were more likely to be more
knowledgeable on aspects of VCT. More studies were necessary to elucidate the knowledge difference on HIV and AIDS and VCT with school type and sex of students. It is expected that knowledge on VCT and HIV will ultimately lead to use of VCT services among secondary school students.

There was no significant association between sex and VCT utilisation even though a slightly higher proportion of girls (19%) have been to VCT than boys (17%). This corroborate with the Population Council findings that female youths seem to be more concerned with their health than males youths (Population Council, 2004) and with Juma et al., (2002) that more girls than boys get tested. Approximately 83.0% of male students and 81.0% of females have never been to VCT. This result represents a slightly lower figure compared to the CBS findings that 90.7% of women and 93.0% of males aged between 15-19 years who had never tested for HIV (CBS, 2004) though KDHS study was not concentrated on secondary school students as this study but presents figures within the same age brackets worth comparing.

Findings showed that higher proportions of students in day schools had been to VCT compared to their counterparts in boarding schools. The observation that students in day schools were more likely to be sexually active than those in boarding schools suggests that being sexually active among other factors could contribute to seeking VCT services. This is seen by the fact that a greater majority of the students who had been to VCT (81.2%) did so because they wanted to know their status rather than to know what happens there (8.7%). This compares to findings on male and female youths aged 14 - 21 years showed that 90% of Ugandans and 75% of Kenyans who had received VCT had sought VCT services because they wanted to be tested (YouthNet, 2002). It is clear
efforts to scale-up VCT services should go hand-in-hand with enhancing HIV/AIDS education.

It is encouraging that some youths seek VCT services just to know what happens there. This will enable them to access information relevant to health sexual living. In general, close to 18.8% of students went to VCT for other reasons rather than to know their status. This is comparable to findings from studies in Kenya and Uganda on 14-21 year-old which reported that 20% of those who undertook VCT were not sexually active (Boswell and Baggaley, 2002) meaning other reasons took them there.

Friends form a great influence to VCT services among secondary school students. Close to 43% of students and 23.5% said they encouraged their girlfriends and boyfriends respectively to seek for VCT use. Approximately (49.8%) discussed with their friends, (31.4%) discussed with their boy/girl friends. This finding corroborates other studies done in Masaka Uganda that peers are the greatest source of information on a wide range of reproductive health issues (Horizons, 2001). This fact reaffirms that the importance of peer to peer communication about HIV hence use of peers to reach students on HIV and AIDS and VCT issues. The youth learn about VCT and discuss with their peers.

Knowing one’s status was the least mentioned as way of stopping spread of HIV, suggesting that secondary school students in Nairobi do not perceive HIV voluntary counselling and testing (knowing one’s status) as one of the important tools in the fight against HIV. This shows a knowledge gap on VCT and need for the youth to know that knowing one’s status as important just as abstinence from sex before marriage. Earlier,
Information Education and Communication (IEC) on HIV prevention targeting the youth centred on abstinence, being faithful and having protected sex without mentioning knowing one’s status. The fact that 3.9% of the students could suggest that VCT services be made free, showed that they are less informed on VCT services, because these services in the country are offered free. This shows that there is need for more VCT promotional activities to educate the youths on VCT services.

Findings that only 28.6% had encouraged their boyfriends, compared to 59.6% who had encouraged their girlfriends, showed that female students do not easily initiate talks related to HIV prevention and VCT use as compared to male students. This could be due to fear and the traditional society norms which demand that male counterparts are the ones to initiate talks on sex and demonstrates the need to encourage female students and girls in general to take more responsibility in their sexual activities given that girls are more at risk of infection than boys (ROK, 2009). In Uganda, two of every three girls who had sought VCT were encouraged by their partners. Boys were more likely to decide on their own to be tested. A third of the boys were influenced by their partners, a third by partners and another third by no one (YouthNet, 2001). The fact that most of those who have been encouraged to VCT use were done so by either their girl friends or boyfriends suggests that the students could be demanding to know ones status before they get involved. This can be a good practice by the students and will ensure that they are safe.

The fact that only 26.6% of the respondents have discussed on VCT use with their families indicate that an unexploited opportunity. Family members and other relatives influence the youth to a small extent. There is also need to encourage free discussions
on HIV/AIDS and VCT between parents and their children as this will go a long way in promoting safe behaviours in the society. Though findings indicate that sexually active young people don’t openly talk with adults on sexual matters (Oberzaucher and Baggaley, 2002), it present an opportunity which will ensure that HIV/AIDS further de-stigmatised in the society but also indicates need for youth friendly VCT services.

5.5 Factors Affecting Utilization of VCT Services by the Students

5.5.1 Perception of Risk

This finding emphasizes the fact that secondary school students are among the high risk groups and therefore there is need to promote use of VCT services among them. Close to 31.1% of the students do not perceive to be at risk of infection. These findings are similar to findings by Horizons on exploratory studies in Kenya and Uganda among youths aged 14–21 years, which showed 44% of Kenyan youths and 39% of Ugandan youth who do not perceive to be at risk. It was clear from this study that students who think they are at risk of HIV were more likely visit VCT for reasons of knowing their status as compared to those who think that they cannot contract HIV. Horizons study showed that youths who have not been tested generally don’t feel to be at risk and also reported risk sexual behaviours (Horizons, 2001). Having many sexual partners was not a factor in knowledge on how to stop spread of HIV. In this study, students with more than one sexual partner were less likely to know how to stop spread of HIV meaning that they are likely to be involved in risk exposures oblivious of the danger they are exposing themselves. Similarly, being in boarding school was also closely associated with perceived risk of contracting HIV.
5.5.2 Knowledge on HIV and AIDS

There is need to demystify issues of stigma on HIV and AIDS among the youth and to enhance information dissemination so as to address the issues of fear and negative influences by peers towards seeking VCT services. Knowledge on HIV and AIDS is closely associated with seeking VCT services especially among students who were sexually active. Students who knew how HIV is spread would go for HIV test to ascertain their status in an event that they had been exposed. The fact that students who knew the meaning of HIV were more likely to discuss going for VCT suggest that knowledge on HIV is important influencing utilization of VCT services. This is because discussions revolving around use of VCT services among the youths are likely to influence those who have not been tested to seek VCT services. Though students in boarding schools appear to be more knowledgeable on all aspects of HIV, few of them have sought VCT services compared to those in day schools. This suggest that knowledge alone does not contribute to use of VCT services but other factors such as fear, knowing location of VCT centres and sexual activeness of the students. Fear was seen to be a major hindrance to VCT use by boarding school students.

5.5.3 Fear of positive results

Parents should be encouraged to talk openly with their children on sexual matters which will yield result in two fold by promoting safer sexual practices and VCT use among the youth. Enhancing IEC on VCT will ensure that more youths take personal initiatives to seek VCT services.

Fear could be a hindrance in seeking VCT services among secondary school students in Nairobi. Close to 14.1% of students gave fear of positive results as reasons for having
not gone to VCT centres for HIV test. This is strengthened by the fact that students who
had fewer or one sexual partners were more willing to discuss going to VCT than those
who had more than one sexual partner. This findings corresponds Boswell and
Baggaley (2002) findings that fear of positive results, and fear of stigma among family
members, friends and communities as barriers to VCT among the youths. This is also
consistent with research findings by Alemi in Ethiopia and those of Subedde and
Nangendo (2009) in Uganda. In Uganda close to 40% of Kampala youth and 28 % of
Masaka who want a test in the future reported that they had not done so because they feared a
positive result (Horizons Program, 2001). Fear of positive results can be addressed by
enabling the students to see the benefits of seeking the services as opposed to not
knowing your status. Demystifying HIV/AIDS or VCT associated stigmas can also help
ensure that many youth seek VCT services.

5.5.4 Confidentiality

The fact that students gave fear as the main reason for not having sought VCT services
indicates that they value confidentiality in VCT services. Close to 4.3% feared to be
seen and 6.9% feared to be ridiculed or generally feared to talk about VCT suggests
stigma on HIV/AIDS and VCT use among the youths and the need to assure them of
confidentiality. This findings correspond to those done by Alemi in Ethiopia where the
respondents stated confidentiality and youth friendly VCT centres as a major
concern.(Alemi 2008). Similar findings among youths aged 14 - 21 years in Kenya,
showed that 41% of the untested and 38% of the tested reported that they would prefer
to test at a youth facility for fear of encountering an adult they know demonstrates need
for VCT centres tailored for the youths (McCauley, 2004). A study done in Uganda
showed that youth would be attracted to VCT if the services are confidential, honest
and inexpensive (Population Council, 2004). VCT centres tailored to meet the needs of
the youth are important in scaling-up VCT use among the secondary school students.

5.5.5 Knowledge of an Infected Person

It was established from this study that knowing an infected person was a great influence to VCT use among secondary school students. In this study, approximately 57.9% (220) respondents knew a person infected with HIV while 42.1% (160) didn’t. This is comparable to KDHS findings which showed that 60.2% aged between 15-19 years knew someone personally who has or died of HIV/AIDS (CBS, 2003). Students who knew an infected person were more likely to have ever been to VCT (n=380; \( \chi^2_{(df=1)}=13.653 \), sig. \( \leq 0.0001 \)), or to have encouraged someone to go to VCT centre for HIV test (N=385, \( \chi^2_{(df=1)}=28.876 \), p \( \leq 0.0001 \)) or encouraged someone to be tested (n=380; \( \chi^2_{(df=1)}=14.859 \), p \( \leq 0.000 \)). Being in a day school was closely associated with knowing someone infected with HIV and AIDS (n=385; \( \chi^2_{(df=3)}=36.422 \), p = 0.0001). The proportion of boys and girls in day schools who knew a person with HIV, were higher than of those in boarding schools. This could be because students in day schools have more opportunity to interact with the community hence likely to encounter a person infected with HIV compared to those in boarding schools. Students who have an encounter or experience with an HIV positive person were more likely to perceive epidemic as real and hence seek VCT services to ascertain their status. This shows that involving people leaving with HIV and AIDS in campaigns on VCT use VCT use among the youth could be effective. Such individuals will not only inspire the students to safer sexual behaviors but also serve as living examples of people who have utilized the services. This is likely to make the youth see the need of protecting oneself from the scourge and thus yield results.
5.5.6 Knowledge of where VCT centre is located

Students who knew a VCT centre near home and near school were more likely to have sought VCT services. This shows that knowledge of the location of a VCT centre is also crucial in enhancing use of VCT services among the youths especially in Kenya where interventions targeting the youths are very limited. Respondents who stayed in proximity to a VCT centre near home were more likely to have discussed going to VCT to be tested with others indicating that knowledge of where a VCT centre is situated can be a motivation to seeking its services. There was a difference in the proportions of students who knew a VCT centre near school with school type. Students in boarding schools were generally more likely to get more free time during holidays which allowed them to seek VCT services compared to those in day schools. Targeted VCT utilisation campaign messages to the youths should include the exact location of a VCT centre.

5.5.7 Distance to the nearest VCT

It was observed that the number of students who had ever been to VCT decreases with increase in the distance to the nearest VCT centre. This shows that access to VCT measured by distance is key to use of VCT services among the secondary school students. Distance as a determinant of VCT access and utilization was also observed among the youth in Rakai District in Uganda by Sebudde and Nangendo (2009). VCT services should be made available to the population at places they can easily access so that they can use them when there is need. Students who knew a VCT centre near home were also more likely to discuss and encourage others about going to VCT. The fact that more girls than boys lived within 1Km away from the nearest VCT centre and the association between school type and distance to the nearest VCT was significant. This could explain the differences in VCT use between girls than boys in the different school
types. Availability of VCT services can instigate talks and discussions about VCT which is likely to promote its use.
CHAPTER VI: CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter gives a summary of the findings, conclusion and operational recommendations for the study. A total of 385 respondents aged between 13 years and 20 years were interviewed. This comprised of 172 males and 213 females distributed among selected boarding and days secondary schools in Nairobi.

6.2 Summary of the findings

From the findings, all the respondents had ever heard about HIV and AIDS, (69.8%) knew the meaning of HIV and (94.9%) knew the meaning of AIDS. A greater proportion of students were knowledgeable in basic HIV knowledge of meaning, purpose, how it is spread and how to stop the spread. Most respondents (97.7%) knew how HIV is spread and (95.8%) said they knew how the spread of HIV can be stopped. Girls are more knowledgeable than boys and those in boarding schools more than those in day school.

It was also observed that on the distribution of knowledge on key ways of stopping the spread of HIV, most secondary school students interviewed suggested abstaining from sex (66.2%), protected sex (41.0%) and very few (11.2%) knew that knowing one’s status is important in stopping the spread of HIV. There is therefore, a knowledge gap in this area. Perception of risk seemed to decrease with increase in the age and as one progresses to higher class of study suggesting that students may be getting into denial of the existence of HIV as one gets involved in sexual activities. Students who have
ever had sex were more likely to say they were not at risk. Students in boarding schools were more likely to perceive to be at risk than those in day schools for both sexes.

In this research, it was found out that most of secondary school students had ever heard of VCT (99.79 %), (90.9%) knew the meaning of VCT. (61.2) knew of a VCT centre near school and (78.9%) knew a VCT centre near home. Close to (89.8%) of the respondents knew the functions of VCT. It was also discovered that those who had knowledge on location of a VCT centre near home or school was associated to utilisation of VCT services. Higher proportions of students in day schools had been to VCT compared to their counterparts in boarding schools. They were also more sexually active with considerably high number of sexual partners, more likely to know location of VCT centres and more likely to know somebody who is suffering from HIV compared to their counterparts in boarding schools. This suggests that these factors are important in utilisation of VCT services among the secondary school students. Others factors elucidated by this study include; knowledge on HIV and AIDS, fear of positive results, distance to the nearest VCT and confidentiality. These findings compares with other study findings which have generally identified them as factors affecting VCT use in the populations. The findings also showed that knowledge on VCT was key to knowing the location of a VCT centre near school or home which could facilitate use whenever the students needed to.

The findings also showed that despite the fact that many secondary school students knew the services offered by VCT centres (89.8%), only very few (18.2%) had ever been to a VCT centre, suggesting that much is yet to be done to promote VCT seeking tenets among secondary school students because they are sexually active. Majority of
those who had been to VCT (81.2%) had gone to know their status. Peers or friends were major influencers to VCT use among students. Family members, neighbours and other relatives played a limited role in encouraging the respondents to VCT use. The fact that some students suggested fear of being seen as reasons of having not been to VCT and others believed that their families would be upset indicate suspicion, lack of trust and victimisation and suggests the need to de-stigmatise HIV and AIDS and encourage friendly and free talks on the same and VCT use at family level. Students who had ever been to VCT were more likely to have initiated talks on VCT use among their friends. Such students can play a major role in promotional activities targeting secondary school students by being real examples.

More HIV and AIDS, and VCT promotional activities targeting secondary school students is necessary in order to realise the millennium development goal (MDG)objective of reversing the spread and impact of HIV/AIDS in Kenya by 2015. Respondents suggestions to scale up VCT uptake among the youth included educating the youth on VCT (46.8%), establishment of youth friendly VCT (12.2%), free VCT (2.9%) and parents to encourage the youth to go to VCT (3.1%). Promotional activities should be well tailored to address the needs of young people. Although secondary school students equally require these promotional and awareness interventions, focus should be placed to students in day secondary schools, because they are more sexually active, less knowledgeable and which appears to have received less attention on the past. Organisations working in the fight of HIV in Kenya should put more emphasis in the youth as they are the most vulnerable due to peer pressure and desire to experiment and can be used at is suggests that it is important to involve people living with HIV AIDS in information dissemination activities targeting the youth.
6.3 Implications of the Findings

Only 18.2% of the respondents had ever visited VCT centres, this implies that the youth may not be relating the role played by VCT in control of HIV. There are many factors limiting VCT access and utilization such as fear and ignorance that need to be addressed so as to increase its uptake. This research found out that many boys have more sexual partners than girls and those students in day schools were more sexually active and less knowledgeable than those in boarding schools, thus have an increased risk of HIV infection and hence intervention measures need to be put in place targeting them.

6.4 Conclusions

Most secondary school students in public secondary schools knew what VCT is. They also knew the services offered in VCT centres but their uptake was very low (only 18.2% had used services). The uptake of VCT services by students in day schools is higher (22.4%) for boys and 23.3% for girls) than for those in boarding schools (12.5% for boys and 16.5% for girls).

Accessibility of VCT at home improved the uptake of VCT services; knowledge of infected person also improved the uptake of VCT services. Most youth discussed with and encouraged their friends to go to VCT centres be tested Those who had not gone, did not see the need (56.8%), others believed that they were not infected (22.9%) while others feared (21.6%) .Only very few (2.9%) found the facilities to be far from home.

6.5 Recommendations

- Interventions need to be put in place to promote utilization of VCT services by the secondary school students. This may include using PLWHA and those
youths who have gone for VCT in campaigns to scale-up its uptake among youth.

- Youth friendly VCT centres should be set up or their numbers increased so as to encourage the youth who fear to go or fear to be seen going. Information education and communications targeting the youth should also be used to encourage them to go to VCT be tested.

- More VCT centres around residential areas or in the estates could increase utilization by the youths, and to encourage even more to go, those who go can be given free items such as caps or T-shirts with promotional messages of VCT to the youth. Parents can also be used to encourage the youth go to VCT to be tested.

- The counsellors in the VCT centres should be youth friendly to encourage the youth and their friends to go and channels of providing support in case one is found to be HIV positive should be made clear.

- Youth group leaders and religious gatherings can also be used to encourage the youth to go to VCT centres to be tested.

6.6 Further Research

- Further research can also be done on the appropriate IEC to target the youth

- Further research should be done to design appropriate VCT centre model for the youth in secondary school.

- Further research should be done to find out ways of providing support to the youth who are already infected.
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APPENDICES

APPENDIX 1: Survey Questionnaire

Introduction

I am a post-graduate student in Kenyatta University, undertaking a master of public Health course. Currently I am carrying out a research on the above mentioned topic. Your assistance in responding honestly to all the items in the questionnaire is likely to generate information that will be used in increasing access and utilization of VCT services by secondary school students and address the challenges faced by these students when seeking the VCT services. The information collected will be strictly used for the purpose of this study.

Yours response will be of great value to this study and confidentially is assured

Yours faithfully,

Emily C Rono

1) (a) What is your age?
   14  15  16  17  18  19  other__

   (b) What is your sex/gender?
   Male__  Female___

2) Which form are you in?
   Form 1  2  3  4
3) (a) Have you ever heard about HIV and AIDS?

   Yes □      No □

   If yes, what are their full names?

   HIV________________________________

   AIDS________________________________

4) (a) Do you know how HIV is spread?

   Yes□      No□

   (b) If yes, give any two ways

   __________________________________________

   __________________________________________

5) Do you know how we can stop the spread of HIV

   Yes □      No □

   (b) If yes, give the ways in which we can stop the spread

   __________________________________________

   __________________________________________

6) (a) Have you ever heard of VCT?

   Yes □      No □

   (b) If yes, what does it mean?
7) Do you know of any VCT centre near?
   (a) Your school?
       Yes ☐ No ☐
   (b) Your home?
       Yes ☐ No ☐

8) How far is the nearest VCT centre to you?
   A few meters ☐ 1km ☐ 2km ☐ 5km ☐ other (specify) ☐

9) Do you know the functions of VCT?
   Yes ☐ No ☐
   If yes, state any two

10) Do you know of anybody with HIV/AIDS?
    Yes ☐ No ☐
    If yes who
       a) Family member
       b) Relative
       c) Friends
       d) Neighbour
       e) Other(Specify)
11) Do you think you can get HIV/AIDS?
   Yes ☐     No ☐

12) Have you ever had sex?
   Yes ☐     No ☐

   (b) If yes, how long was the last time you had sex?
   1 week ☐ 1 month ☐ 6 months ☐ 1 year ☐
   Other (specify) ________________________________

   (c) What was your age the first time you had sex?

13) How many sexual partners (girl/boy friends) do you have?
   One ☐     two ☐     three ☐     four ☐
   Other (specify) ________________________________

14) Have you ever been to a VCT centre?
   Yes ☐     No ☐

   (b) If yes,
   (i)  Why did you go?

   (ii) Who encouraged you to go?
   ▪ Parent mum/dad ☐
   ▪ Friends ☐
   ▪ Relatives ☐
   ▪ Any other (specify)
(c) If no, why haven’t you gone?

- I fear
- I’m scared of the results
- I do not want people to see me go there
- My friends discouraged me
- I just don’t want to go
- I don’t know

Any other reason (specify)

__________________________________________________________

__________________________________________________________

15) Have you ever discussed with any body about going to VCT centre to be tested?

Yes □ No □

If yes, with whom?

Family □ Relative □ Friend □ Boyfriends □

Any other (specify)

16) Have you ever encouraged some body to go VCT centre to be tested?

Yes □ No □

If yes, who

- Boyfriend □
- Friend (girl) □
- Sister □
- Brother □
- Other (specify)
If yes, why

If no why

- I don’t ever talk about it
- I fear
- My friends laugh at me
- Other specify

17 Do you think your family will get upset with you if you are tested?

Yes ☐ No ☐

Why?

18 What can the youth do to control the spread of HIV/AIDS?

19 What can be done to encourage the youth to go to VCT centres to be tested?
APPENDIX 11: Research Authorization Documents

REPUBLIC OF KENYA

MINISTRY OF HIGHER EDUCATION SCIENCE
& TECHNOLOGY

Telegrams: “SCIENCE TEC”, Nairobi
Telephone: 02-318881
E-Mail: ps@science.and.technology.go.ke

JOGOO HOUSE “B”
HARAMBEE AVENUE,
P.O. Box 9583-00200
NAIROBI

When Replying please quote
Ref. MOHEST 13/001/38c513/2

26th August 2008

Emily Chemgetich Rono
Kenyatta University
P. O. Box 43844
NAIROBI

Dear Madam

RE: RESEARCH AUTHORIZATION

Following your application for authority to conduct research on
Factors affecting utilization of VCT services; Comparison between
Public Boys and Girls Secondary Schools in Nairobi.

I am pleased to inform you that you have been authorized to
conduct research in Secondary schools in Nairobi for a period
ending 28th February, 2009.

You are advised to report to the Provincial Director of Education
and, the Provincial Medical Officer, before embarking on your field
study.

On completion, you are expected to submit two copies of your
research report to this office.

Yours faithfully,

[Signature]

[Signature]
FOR: PERMANENT SECRETARY

Copy to:
The Provincial Commissioner
NAIROBI
The Provincial Director of Education
NAIROBI
The Provincial Medical Officer
NAIROBI
APPENDIX I11: Study Area Map