DYNAMICS IN UTILIZATION OF VOLUNTARY COUNSELLING AND TESTING SERVICES BY PERSONS WITH HEARING IMPAIRMENTS IN NAIROBI, KENYA

BY
KAMINA ROSALINE NJOKI
E55/12487/04

A Thesis submitted in partial fulfilment for the Master of Education Degree (Special Education) in the School of Education of Kenyatta University

Kamina, Rosaline
Dynamics in utilization of

September 2009
DECLARATION

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

Kamina Rosaline Njoki
E55/12487/04

SUPERVISORS:

We confirm that the work reported in this thesis was carried out by the candidate under our supervision as the University Supervisors.

1. Sign: ........................................ Date 26/10/09

Dr. John Kabutha Mugo
Department of Special Education
Kenyatta University

2. Sign: ........................................ Date 26-10-2009

Dr. Samson Mbindyo Muthwii
Department of Educational Communication and Technology
Kenyatta University
DEDICATION

I dedicate this thesis to the good Lord for giving me the strength to complete it.

To my daughter Brenda Wairimu and my friend Titus for their encouragement.
ACKNOWLEDGEMENTS

I acknowledge my sincere gratitude to my supervisors Dr. John Mugo and Dr. Samson Muthwii for their guidance in writing this thesis. I am also grateful to all my lecturers and friends who helped, guided and gave me the advice to enable me move on.

I cannot forget my brothers and sisters who were there for me always in their encouragements to make this work a success.

Lastly, I cannot forget Mwangi Runo my cousin and his entire Kidz Computer Solutions team for providing quality typesetting and printing of this work.
# TABLE OF CONTENTS

## PRELIMINARY PAGES
- Title page .................................................. i
- Declaration ................................................ ii
- Dedication ............................................... iii
- Acknowledgement ...................................... iv
- Table of contents ..................................... v
- List of figures ......................................... viii
- List of tables ......................................... viii
- Abbreviations .......................................... ix
- Abstract ................................................. x

## CHAPTER ONE: BACKGROUND AND CONTEXT OF THE STUDY
- 1.0 Introduction ........................................ 1
- 1.1 Background of the study ......................... 1
- 1.2 Statement of the problem ........................ 4
- 1.2.1 Purpose of the study ............................. 6
- 1.3 Objectives of the study ........................... 6
- 1.4 Research questions ................................ 7
- 1.5 Significance of the study ........................ 7
- 1.6 Limitations of the study .......................... 8
- 1.7 Assumptions of the study ........................ 8
- 1.8 Conceptual model .................................. 8
- 1.9 Operational definition of terms ................ 11

## CHAPTER TWO: LITERATURE REVIEW
- 2.0 Introduction ........................................ 12
- 2.1 Global HIV/AIDS picture ........................ 12
- 2.2 HIV/AIDS in Sub-Saharan Africa ............. 16
- 2.3 HIV/AIDS in Kenya ................................ 18
- 2.4 HIV/AIDS and hearing impairments .......... 20
- 2.5 Evolution of HIV Testing and Counselling Services 23
- 2.6 Definition and role of VCT ....................... 25
- 2.7 Voluntary Counselling and Testing in Kenya .... 27
- 2.8 VCT models in Kenya .............................. 30
- 2.9 Voluntary Counselling and Testing among persons with hearing impairments in Kenya .......... 31
- 2.10 Summary of the Literature Review ............ 36

## CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY
- 3.0 Introduction ........................................ 40
- 3.1 Research Design .................................... 40
- 3.1.1 Variables ......................................... 40
- 3.2 Location of the study .............................. 41
3.3 Target population ................................................................. 41
3.4 Study sample and size -------------------------------------------- 41
3.5 Sampling techniques ............................................................ 42
3.6 Research instruments .......................................................... 42
3.6.1 Interview schedule ......................................................... 42
3.7 Pilot study ..................................................................... 42
3.8 Data collection techniques ................................................... 44
3.9 Data analysis ................................................................ 44
3.10 Logistical and Ethical considerations .................................... 45

CHAPTER FOUR: PRESENTATION AND DISCUSSION OF FINDINGS ............. 46
4.0 Introduction ................................................................ 46
4.1 Demographic Data ............................................................. 46
4.1.1 Gender ..................................................................... 47
4.1.2 Age ......................................................................... 47
4.1.3 Level of Education ....................................................... 48
4.1.4 Area of Residence ......................................................... 49
4.1.5 Marital Status .............................................................. 50
4.2 Awareness of Hearing Impaired friendly VCT Facilities ............... 50
4.2.1 Have heard of HIV/AIDS ............................................. 51
4.2.2 Knowledge of HIV/AIDS Transmission Modes ................... 51
4.2.3 Knowledge about Cure for HIV/AIDS .............................. 52
4.2.4 Awareness of Persons Living with and People who died from HIV/AIDS .................................................. 53
4.3 Utilization of VCT Facilities by Persons with Hearing Impairments ......................................................... 53
4.3.1 Knowledge of VCT for Persons with Hearing Impairments .... 54
4.3.1.1 Sources of Information ............................................. 55
4.3.2 Awareness of Services offered at the VCT Facilities ............ 56
4.3.3 Visit to a VCT Centre and Reason for Visit ....................... 57
4.3.4 Knowledge of HIV Status .............................................. 58
4.3.5 Perceived Benefits of Knowing one’s HIV status ............... 58
4.4 Barriers to Utilization of VCT Services ................................... 59
4.5 Interventional Perspectives from Informants ............................ 61
4.5.1 Public Education ............................................................ 61
4.5.2 Strategies geared at Raising number of Persons with Hearing Impairments going for VCT ......................................... 61

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS .......... 64
5.0 Introduction ................................................................ 64
5.1 Summary of the Study ......................................................... 64
5.1.1 Demographic characteristics of respondents ........................ 64
5.1.2 Level of Awareness ....................................................... 64
5.1.3 HIV/AIDS Transmission Modes ....................................... 65
5.1.4 HIV/AIDS cure ............................................................ 65
5.1.5 Utilization of VCT Services ............................................. 65
5.1.6 Barriers to Utilization of VCT Services
5.1.7 Interventional perspectives
5.2 Conclusions
5.2.1 Urban Environment and High Level of Awareness
5.2.2 High Rates of VCT Utilization
5.2.3 Weak Barriers in an Extremely Aggressive Environment
5.2.4 Perceptions of Vulnerability and the Health Belief Model
5.3 Recommendations of the Study
5.3.1 Policy Recommendations
5.3.2 Recommendations for practice
5.3.3 Media Awareness Campaigns
5.3.4 Community Empowerment
5.3.5 Job Opportunities for Persons with Hearing Impairments
5.3.6 Education
5.4 Recommendations for Further Research
REFERENCES
Appendix I Interview schedule for persons with hearing impairments in the Central Business District of Nairobi
Appendix II Interview schedule for counsellors at Nairobi Deaf VCT

KENYATTA UNIVERSITY LIBRARY
LIST OF FIGURES

Figure 1.1 Conceptual Model------------------------------------------ 10
Figure 2.1 Increase in VCT sites and clients served in Kenya, 2000-04.-- 29
Figure 4.1 Gender---------------------------------------------------------- 47
Figure 4.2 Age characteristics------------------------------------------ 48
Figure 4.3 Residence-------------------------------------------------------- 49
Figure 4.4 Knowledge of HIV/AIDS transmission modes---------------------- 51
Figure 4.5 Knowledge about cure for HIV/AIDS----------------------------- 52
Figure 4.6 knowledge PLWA----------------------------------------------- 53
Figure 4.7 Knowledge of VCT for Persons with HI-------------------------- 54
Figure 4.8 How they knew about the VCT----------------------------------- 55
Figure 4.9 Reasons for visiting VCT-------------------------------------- 57
Figure 4.10 Knowledge of HIV status-------------------------------------- 58
Figure 4.11 Factors that would prevent one from visiting a VCT---------- 60
Figure 4.12 Strategies to increase number of persons with hearing impairment to visit VCT----------------------------------------------- 62

LIST OF TABLES

Table 4.1 Distribution of respondents by marital status------------------- 50
Table 4.2 Knowledge of VCT sites---------------------------------------- 55
Table 4.3 Services offered at VCT-------------------------------------- 56
Table 4.4 Benefits of Knowing one’s HIV status---------------------------- 59
ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>ARVS</td>
<td>Antiretroviral (drugs)</td>
</tr>
<tr>
<td>CBO</td>
<td>Community Based Organization</td>
</tr>
<tr>
<td>CDC</td>
<td>Centres for Disease Control and Prevention</td>
</tr>
<tr>
<td>FBO</td>
<td>Faith Based Organization</td>
</tr>
<tr>
<td>GAP</td>
<td>Global AIDS Programme</td>
</tr>
<tr>
<td>HBM</td>
<td>Health Belief Model</td>
</tr>
<tr>
<td>HI</td>
<td>Hearing Impaired</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>IEC</td>
<td>Information Educational and Communication Materials</td>
</tr>
<tr>
<td>KANCO</td>
<td>Kenya AIDS Non-Governmental Organization Consortium</td>
</tr>
<tr>
<td>KDHS</td>
<td>Kenya Demographic and Health Survey</td>
</tr>
<tr>
<td>LVCT</td>
<td>Liverpool Voluntary Counselling Testing Centre.</td>
</tr>
<tr>
<td>MTCT</td>
<td>Mother- to - Child Transmission of HIV</td>
</tr>
<tr>
<td>NACC</td>
<td>National AIDS Control Council</td>
</tr>
<tr>
<td>NASCOP</td>
<td>National AIDS and STI Control Programme</td>
</tr>
<tr>
<td>PLWHA</td>
<td>People Living with HIV/AIDS</td>
</tr>
<tr>
<td>PMCT</td>
<td>Prevention of Mother- to – Child transmission</td>
</tr>
<tr>
<td>PWDS</td>
<td>Persons with Disabilities</td>
</tr>
<tr>
<td>STI</td>
<td>Sexually Transmitted Infection</td>
</tr>
<tr>
<td>TB</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>UNAIDS</td>
<td>Joint United Nations Programme for HIV and AIDS</td>
</tr>
<tr>
<td>VCT</td>
<td>Voluntary Counselling and Testing</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
ABSTRACT

Acquired Immuno Deficiency Syndrome (AIDS) has killed more than 25 million people since it was recognized in 1981, making it one of the most destructive epidemics in recorded history. Persons with hearing impairments have died of the disease and even more do not know enough how to protect themselves. They have been left out in education campaigns and prevention efforts. HIV/AIDS information is disseminated through mass and electronic media like radio, television and internet, video cassettes, public advertisements, public talks, seminars, health centres and counselling centres. Due to their low education, low reading ability and low economic levels, persons with hearing impairments have been unable to access the information effectively. There are no interpreters in seminars and workshops to sign for them and counsellors in Voluntary Counselling and Testing Centres who can sign are too few. The purpose of this study was to investigate the dynamics in utilization of Voluntary Counselling and Testing Centres by persons with hearing impairments in Nairobi. The major objectives of the study were: to establish the level of awareness among persons with hearing impairments about VCT facilities set for them, find out the extent to which they utilize them, analyze the barriers to the utilization of VCT Services and finally collate recommendations from them on how access to HIV/AIDS information can be enhanced for them. The study was quantitative in approach. It utilized the survey methodology to investigate the dynamics in utilization of Voluntary Counselling and Testing Centres by persons with hearing impairments in Nairobi Province, Kenya. Snowball sampling technique was used to sample thirty persons with hearing impairments, while purposive sampling technique was used to identify informants at the Nairobi Deaf VCT. Data were collected by use of an interview schedule prepared for both persons with hearing impairments and counsellors at the Nairobi Deaf VCT who were also hearing impaired. It contained socio-demographic data, knowledge data and attitude assessment. Data were analyzed using descriptive statistics. Responses received from the questionnaires were organized, tabulated and analyzed using simple frequencies and percentages and presented in form of frequency and percentage tables and figures. Conclusions of the study indicate that HIV/AIDS awareness and VCT utilization among persons with HI are still far from being achieved. Though the policy makers have supported the initiative, the measures taken are still wanting. Without a strong political will in terms of laws and policies, persons with disabilities and more so persons with HI will still lag behind in matters related to HIV/AIDS awareness and VCT utilization. The study established that communication methods for persons with hearing impairments need to be addressed so that they are brought on board in relation to HIV/AIDS awareness and Testing. It was also evident that the media needs to improve methods of passing HIV/AIDS information by using friendly Information Educational and communication materials. The study revealed that the government should review the HIV/AIDS policy to include persons with disabilities and in particular persons with hearing impairments. There is need to empower the community with skills and finance to uplift the knowledge
about HIV/AIDS among this vulnerable group. It is also paramount that the literacy levels among persons with HI be addressed to make HIV/AIDS awareness and VCT utilization a reality.
CHAPTER ONE: BACKGROUND AND CONTEXT OF THE STUDY

1.0 Introduction

This chapter discusses the origin and the spread of HIV/AIDS among other topics. Areas which are focused on include background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, limitations and delimitations of the study, assumptions of the study, conceptual model and operational definition of terms.

1.1 Background of the Study

Acquired Immune Deficiency Syndrome (AIDS) emerged in the 1980s as the most terrifying epidemic of modern times, likened to the “black death” or bubonic plague of the middle ages, in Europe when millions of people were swept away (Jackson, 2002). According to Joint United Nations Programme on HIV/AIDS (UNAIDS) and World Health Organization (WHO), (2008) 33 million people were living with HIV at the end of 2007, with more than 25 million having died from the disease since 1981. Women accounted for 50% of all adults living with HIV worldwide.

Sub-Saharan Africa which has just over 10% of the world’s population is hard hit. It is the home to more than 60% of all people living with HIV (25.8 million). In the year 2005, an estimated 3.2 million people in the region became newly infected, while 2.4 million adults and children died of AIDS (UNAIDS / WHO 2005). The Kenya Demographic and Health Survey
conducted in the year 2003 among adults aged 15 – 49 revealed that the urban residents had a significantly higher risk of HIV infection (10%) than rural residents (6%), Kenya Ministry of Health (2005).

To date there is no cure or vaccine for HIV/AIDS and therefore with such mortality rates due to the epidemic, there is need to promote preventive measures such as the Voluntary Counselling and Testing Centres (VCT) to curb the spread of the disease. Persons with disabilities are the most marginalized of all people and are ignored when it comes to AIDS. New York Times (March 28, 2004) quotes Groce, a public Professor at Yale who is studying the problem of disabled people being ignored when it comes to AIDS saying,

_The stereotype that many people have of persons with disabilities is that they aren’t sexually active. It just hasn’t occurred to many people that they get AIDS, too._ (New York Times March 28, 2004; 2)

In the same Paper, Dominic O. Majiwa, Regional Director for Africa at the world federation for the deaf is quoted to have said using a sign language interpreter,

_AIDS is talked about so much in your world. Hearing people know all about it. But we the deaf people often don’t get the information._

(New York Times March 28, 2004; 2)

According to the Global AIDS Programme (GAP), January 2005, nearly 900,000 persons with hearing impairments in Kenya were left behind when
HIV education and access to HIV/AIDS counselling and testing services in Kenya began increasing dramatically in 2000. Persons with hearing impairments, more than any other people with disability in Kenya were cut off from this vital information because radio is the prime mode of communication used for AIDS education and awareness.

There are several factors according to studies which hinder persons with hearing impairments from accessing HIV/AIDS information. In Kenya, there is no unified Sign Language because of regional differences as invention depends on the environment. There are a few agreed signs for many words related to HIV awareness (Ngongo et al cited in the International AIDS Conference, 2004). Sign Language also uses concepts as opposed to Spoken Language which uses words and expressions. This is a major hindrance to accessing HIV/AIDS prevention information. Adequacy in the number and ability of Sign Language interpreters is also a major challenge to prevention efforts.

In Kenya, HIV/AIDS information is disseminated through the mass and electronic media which include Radio, Television and Internet, Video cassettes, Public advertisements, Public talks, Seminars, Health centres and HIV/AIDS counselling centres. Widely, persons with hearing impairments have been unable to access the information effectively due to low education, low reading ability and monetary limitations.
The discrimination against persons with special needs manifests itself in numerous ways (New York Times, 28th, March 2004:3). AIDS education seminars are often held without anyone caring that persons with hearing impairments exist. There are usually no interpreters for them. Persons with hearing impairments, many of whom are literate in neither English nor Swahili are turned away from AIDS testing centres because nobody knows how to communicate with them. Hence, there is need to investigate into the extent to which persons with hearing impairments seek VCT services in Kenya, and the factors that may be influencing this access.

1.2 Statement of the problem

"What is it in the first place"?, is the answer given by Ouma, a young man with hearing loss after he was asked when he first heard about HIV/AIDS. Ouma added:

"I still do not know what to do to avoid contracting the disease, but since we have been told abstinence is the best way, then I am going to apply it. I am still bewildered that hearing people got information on Aids more than 20 years ago. How come people ignored us and failed to pass the message to us?" (The Daily Nation, 18th January 2006:7).

Groce (2005) indicates that individuals who live with permanent physical, sensory (deafness, blindness), intellectual, or mental, health disability have been almost entirely overlooked despite the fact that they are at equal or increased risk of exposure to all known factors for HIV.
Global literacy rate for adults with disabilities is only 3%; for females with disability, it is as low as 1%. Education where it exists is often sub-standard and dropout rates are double or triple those of non-disabled (Groce, 2005). Most persons with hearing impairments have severe deficits in academic achievements. Reading relies on spoken language and is an important area in academic achievement and is most affected.

According to a report on the first continental – wide HIV/AIDS sensitization workshop for deaf in Africa (2005), the reading ability of persons with hearing impairments is a 1/3 of that of hearing students. They therefore cannot access information on the print media properly. The report further asserts that in Tanzania, hardly do persons with disabilities go beyond the primary school level. About 93% of PWDS have less than Secondary level education and less than 1% have Post Secondary and University Education.

Besides, aspects of sexuality have been sidelined, especially relating HIV infection to hearing impairments.

This study therefore sought to investigate the dynamics in utilization of Voluntary Counselling and Testing Services by persons with hearing impairments in Nairobi.

1.2.1 **Purpose of the Study**

The purpose of the study was to investigate the dynamics in utilization of Voluntary Counselling and Testing Services by persons with hearing impairments in Nairobi. Crucial was the question how access to these services could be enhanced, to mitigate impact of the pandemic on this vulnerable population.

1.3 **Objectives of the Study**

The specific objectives of the study were to:

1. Establish the level of awareness among the persons with hearing impairments about the VCT facilities in Nairobi.

2. To investigate the extent to which persons with hearing impairments utilize the VCT facilities.

3. Establish the barriers to utilization of VCT services by persons with hearing impairments in Nairobi.
4. Collate recommendations from persons with hearing impairments in Nairobi, on how access to HIV/AIDS information and other services can be enhanced.

1.4 Research Questions

1. What is the level of awareness among persons with hearing impairments as regards VCT facilities in Nairobi?

2. To what extent do persons with hearing impairments utilize the VCT facilities in Nairobi?

3. What barriers hinder persons with hearing impairments in Nairobi in utilizing the VCT services?

4. What recommendations will persons with hearing impairments give on how access to HIV/AIDS information can be enhanced for them?

1.5 Significance of the Study

The results of this study would have the potential to sensitise the Ministry of Health and other health practitioners in making VCT centres friendly to persons with hearing impairments. Similarly, the study findings may also guide in disseminating HIV/AIDS information to the target population.

The process of this study is likely to influence persons with hearing impairments to seek VCT services as well as nurture help-seeking behaviour, to prevent themselves and assist the infected and affected among them.
Lastly, the findings of this study would have the potential to contribute to the ongoing scholarly discourse on HIV/AIDS and disability, and offer insights to prospective studies.

1.6 Limitations and Delimitations of the Study

The study limited itself to Nairobi Province only. For more comprehensive results, other Provinces with VCT facilities for persons with hearing impairments should have been studied. However, this was not possible due to financial and other logistical constrains. Secondly, it was not possible to cover opinions from all persons with hearing impairments in Nairobi Province because tracing them required considerable time, resources and other logistical problems that were not possible within this study.

1.7 Assumptions of the Study

The study assumed that Persons with hearing impairments are not able to access HIV/AIDS information and other services. It further assumed that hearing impairment is a barrier to accessing VCT services. It also assumed that persons with hearing impairments require HIV/AIDS services that are friendly to their impairments.

1.8 Conceptual Model

Health Belief Model

The focus of this study was to investigate the dynamics in the utilization of Voluntary Counselling and Testing Centres by persons with hearing impairments. The study was linked with the Health Belief Model by Green
The Health Belief Model (HBM) is a psychological model, originally developed as a systematic method to explain and predict preventive health behaviour, proposed by Hochbaum, Kegels and Rosenstock in the 1950's and 1960's. It focused on the relationship of health behaviours, practices and utilization of health services. The HBM is generally regarded as the beginning of systematic, theory-based research in health behaviour.

The HBM states that the perception of a personal health behaviour threat is itself influenced by at least three factors: general health values, which include interest and concern about health; specific health beliefs about vulnerability to a particular health threat; and beliefs about consequences of the health problem. Once an individual perceives a threat to his/her health and is simultaneously cued to action, and his/her perceived benefits, then that individual is most likely to undertake the recommended preventive health action. There may be some variables (demographic, socio-psychological and structural) that can influence an individual's decision.

This model applied in this study in that once persons with hearing impairments are aware of their vulnerability to HIV infection they would rationalize on the prevention measures. They would then utilise VCT services. They were likely to use them in order to prevent themselves from HIV/AIDS and be able to access care programmes. In prevention, the VCT would help them learn how HIV is transmitted, practice safer sex, get a HIV test and depending on the
result, take steps to avoid becoming infected or infecting others (UNAIDS/WHO 2002).

With care programmes, HIV test results and follow-up counselling mean they can be directed toward relevant care and support services such as treatment for tuberculosis and sexually transmitted infections, family planning and where indicated, treatment for opportunistic infection, treatment with antiretroviral and prevention of Mother-to-Child transmission (UNAIDS/WHO 2002).

Figure 1.1 Conceptual Model

The dynamics in regard to HIV/AIDS knowledge and utilization of VCT facilities for the persons with hearing impairments:
Source: The Researcher
1.9 Operational Definition of Terms

Affected - Refers to a person who experiences the impact of HIV/AIDS through loss or sickness of family members, friends or colleagues.

Barrier - Refers to the problems which impedes persons with Hearing Impairments from accessing or utilizing VCT services.

Deaf- One whose hearing ability is impaired and cannot be able to process verbal information with or without a hearing aid.

Discrimination – Refers to sideling the persons with hearing impairments in matters relating to HIV/AIDS.

Dynamics- Refers to the various factors to consider in the utilization of VCT and access to HIV/AIDS information.

Hard of Hearing - A person who with the use of a hearing aid has residual hearing sufficient to enable successful processing of linguistic information through audition.

Hearing Impairment – Is a generic term indicating a hearing disability that may range in severity from mild to profound: it includes the subsets of deaf and hard of hearing.

Sero-Status - The presence (HIV-Positive) or absence (HIV negative) of HIV in the body.

Sign Language - This is using manual communication where a word or concept is presented through a sign, which represents a complete idea.

Vulnerability – Refers to the high probability of the persons with HI being infected with the HIV virus.
CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

In the literature review, the areas which were focused on included; Global HIV/AIDS picture, HIV/AIDS in Sub-Saharan Africa, HIV/AIDS in Kenya, HIV/AIDS and hearing impairments, Evolution of HIV Counselling and Testing services, Definition and the role of VCT, Voluntary Counselling and Testing in Kenya, VCT models in Kenya and Voluntary counselling and testing among persons with hearing impairments in Kenya.

2.1 Global HIV/AIDS Picture

Acquired Immunodeficiency Syndrome (AIDS) has killed more than 25 million people since it was recognized in 1981, making it one of the most destructive epidemics in recorded history (Jackson, 2002). Despite recent improved access to antiretroviral treatment and care in many regions of the world, the AIDS epidemic claimed 3.1 million lives in 2005; more than half a million were children (UNAIDS/WHO 2005). The total number of people living with the Human Immunodeficiency Virus (HIV) reached its highest level in 2005; an estimated 40.3 million people are now living with HIV. Close to 5 million people were newly infected with the virus in 2005 (UNAIDS/WHO 2005).
National HIV infection levels in Asia are low compared with some other continents, notably Africa. However, the populations of many Asian Nations are so large that even low national HIV prevalence means many numbers of people are living with HIV. Latest estimates show some 8.3 million people, 2 million adult women were living with HIV in 2005 including 1.1 million people who became newly infected in the past year (UNAIDS /WHO 2005).

In Eastern Europe and Central Asia, the epidemic continues to grow. The number of people living with HIV in this region reached an estimated 1.6 million in 2005 an increase of almost twenty fold in less than 10 years. AIDS claimed almost twice as many lives in 2005 compared with 2003 and killed an estimated 62,000 adults and children. Some 270,000 people were newly infected with HIV in the past year. The Russian Federation has the biggest AIDS epidemics. By the end of 2004, approximately 300,000 HIV cases had been officially registered in the Russian Federation since the beginning of the epidemic (Russian Federal AIDS centre, 2005; Euro HIV, 2005 in UNAIDS/WHO 2005).

In Latin America the number of people living with HIV has risen to an estimated 1.8 million. In 2005, approximately 66,000 people died of AIDS, and 200,000 were newly infected. Among young people 15-24 years of age, an estimated 0.4% of women and 0.6% of men were living with HIV in 2005 (UNAIDS / WHO 2005). The number of people living with HIV in North America, Western and Central Europe rose to 1.9 million in 2005, with
approximately 65,000 people having acquired HIV in the year 2004. The estimated number of people living with HIV in the United States of America (USA) at the end of 2003 exceeded one million for the first time, up from the corresponding figure of 850,000 – 950,000 for 2002 (US Centres for California and New York, which have the highest number of persons living with HIV in UNAIDS/WHO 2005).

In the United Kingdom, new diagnoses of HIV are doubling. Since 2000, it has risen from 3,499 to 7,258 in 2004. Most of the approximately 4,000 heterosexually acquired HIV infections diagnosed in 2004 had occurred in Sub-Saharan Africa (Euro HIV, 2005: Dougan et al, 2005 in UNAIDS/WHO 2005). Women are especially affected. Outside London, for example prevalence of previously undiagnosed HIV infections among women was 11% at genitourinary medicine clinics in 2003 (UK collaborative Group for HIV and STI surveillance, 2004 in UNAIDS/WHO 2005).

The advance of AIDS in the Middle East and North Africa has continued with latest estimates showing that 67,000 people became infected with HIV in 2005. Approximately 510,000 people are living with HIV in this region. An estimated 58,000 adults and children in 2005 died of AIDS - related conditions (UNAIDS/WHO 2005).

HIV/AIDS is a looming problem for individuals with disabilities worldwide. Despite the rates of HIV increasing all over the world, Groce (2005) asserts
that PWDS are surprisingly one of the world’s most vulnerable populations. Individuals who live with a permanent physical, sensory (deafness; blindness), intellectual or mental disabilities have been almost entirely overlooked despite the fact that they are at equal or increased exposure to all known risk factors for HIV. It is commonly assumed that PWDS are at a low risk of HIV infection.

World Bank (2004) posits that one person in ten in 600 million individuals live with a disability significant enough to make a difference in their daily lives; 80% live in developing countries. UNICEF (1999) emphasizes that although disability is often addressed solely as a medical concern, the greatest problem facing PWDS are social inequity, poverty and lack of human rights protection.

New York (1993) in the United Nations Standard Rules on Equalisation of Opportunities for PWDS states that one can be both disabled and healthy. Groce (2005) says that a small US study found that HIV rates among deaf individuals were double those of hearing populations. World Bank (2003) also reveals that another study published in New York in 2001 revealed that AIDS was the leading cause of mortality among women with psychiatric illness in New York.

Mulindwa (2003) using sexually transmitted infections (STIs) as a proxy for potential HIV exposure, found that 38% of women and 35% of men with disabilities in her Ugandan study reported having had an STI. Johnson (2003)
asserts that the provision of rehabilitation services to disabled populations is no longer possible until HIV is addressed.

2.2 HIV/AIDS in Sub-Saharan Africa

Sub-Saharan Africa has just over 10% of the World’s population, but is the home to over 60% of all people living with HIV. In the year 2007, 22 million adults and children were living with the virus (UNAIDS/WHO 2008). At the same time, an estimated 1.9 million people in the region became newly infected, while 1.5 million adults and children died of AIDS as 11.6 million children became orphans (ibid, 2008).

Altogether, there are now 16 African countries in which more than one-tenth of the adult population aged 15-49 is infected with HIV. In seven countries, all in the Southern zone of the continent, at least one adult in five is living with the virus. In Botswana, 24% of adults are now HIV infected with 38.5% of women attending ante-natal clinics being HIV positive (UNAIDS/WHO 2006).

In Lesotho, 23% of the adult population is infected with 28.4% of women attending ante-natal clinics being HIV positive. South Africa has the largest number of people living with HIV/AIDS in the world. An estimated 5.5 million people were living with HIV in 2005. It has been reported that more than 90% of the truck drivers entering South Africa from Zimbabwe are HIV positive.

While West and Central Africa are relatively less affected by HIV infection, the prevalence rates in some large countries are creeping up: For example,
Cameroon has an infection rate of 4.9 - 5.9 %. However in some countries, the infection rate remains quite low e.g. Senegal 1% and Mali 1.7% but in these countries the rate is also increasing (UNAIDS/WHO 2006).

There has been a particularly sharp rise in the infection rate of pregnant women in Cameroon where the rate of 11.8% in 2001 has more than doubled since 1998. In Nigeria, the most populous country in Africa, over 5.8% of adults have HIV. The prevalence rates in most other West African countries remain below 3% (UNAIDS/WHO 2006).

East Africa continues to provide the most hopeful indications that serious AIDS epidemic can be reversed. Uganda’s drop in HIV prevalence among pregnant women seen in the Mid -1990's is now being mirrored in Kenya, where infection levels are dropping in some places quite steeply. Elsewhere in East Africa, though, HIV prevalence has either decreased slightly or remained stable in the past several years (UNAIDS/WHO 2006)

Despite HIV/AIDS being a major problem in many countries in Africa, striking is the lack of awareness in some of these issues on the part of AIDS advocates. Groce (2005) posits that only a handful of outreach efforts to disabled population by AIDS organisations exits at any level from grassroots to the globe. She adds that the importance of including PWDS in general AIDS campaigns or designing disability specific interventions is largely unrecognised, a gap that is well illustrated in a comment from a South African disability activist:
I see AIDS educators going door-to-door, inviting all adults to AIDS meetings. They walk by and wave to a woman sitting in her doorway in a wheel chair watching her children, but they do not invite her.

(January 8, 2003)

2.3 HIV/AIDS in Kenya

The first case of AIDS in Kenya was recognized in 1984. Since then, the human immunodeficiency virus (HIV) has spread through the entire country. With over one million Kenyans infected with the virus and another 1.5 million who have died from this disease, AIDS has had a major socio-demographic and economic impact on the country. Life expectancy has dropped by almost twenty years since the onset of this pandemic, and more than 1 million children under the age of 15 years are orphans due to HIV/AIDS. Economic status has declined and poverty has increased. As a result HIV/AIDS in Kenya was declared a national disaster in 1999 (KMOH 2004, GAP 2005 HIV/AIDS).

All Kenyans have been affected by this epidemic. Awareness concerning HIV/AIDS is almost universal among adults, and knowledge of correct methods of prevention of HIV is high (Kenya Ministry of Health 2004). The HIV epidemic is better understood today. New information on the level of HIV infection comes from the first national HIV prevalence survey, the Kenya demographic and health survey (KDHS, 2003), which estimated that 7% of adults aged 15 to 49 years in Kenya are infected with HIV and that rates in women are nearly double the rates in men (KMOH 2005).
In March 2003, President Mwai Kibaki declared war against HIV/AIDS. He mandated the National AIDS Control Council (NACC) to co-ordinate and manage the implementation of multi-sectoral approach to the national HIV/AIDS programme, to provide policy direction, and to mobilize resources, and in late 2004, the government of Kenya instituted guidelines for HIV testing in clinical sites.

GAP 2005 indicates that the United States Government participates in the Work of NACC and directly funds the National Aids and Sexually Transmitted Infection (STI) Control Programme (NASCOP) of the Ministry of Health (UNAIDS 2004).

Despite the submission of the National draft on HIV/AIDS policy being submitted to parliament and approved on 24th September 1997 (Ministry of Health 1997), no clear policies have been put up for PWDs. The Director National Council of Persons With Disabilities (NCPWD) 2006, in The Blind against AIDS: Strategy Paper for HIV/AIDS management among persons with visual impairments points out that though NCPWD an organisation established vide the Persons With Disability Act 2003 of the laws of Kenya is in existence there is need for specific HIV/AIDS management strategies that are sensitive to the lifestyle and cultures that emerge as a result of disabilities.

Omondi (2006) reveals that the disability community continues to face various cultural and traditional practises that are a contributor to the increasing rate of
infection. He adds that a lack of quality access to health facilities makes PWDS not likely to go through the traditional routine test and health education available in the health system. A communication barrier as a result of sensory disability (visual or hearing) makes many health personnel or service providers not able to provide basic preventive education information.

2.4 HIV/AIDS and Hearing Impairments

A person with hearing impairment is one who hears at a level below that of a person considered to have normal hearing. Such a person will not be able to follow normal conversation when he is more than three feet from the speaker. When we measure the level of impairment, a person's hearing is related to the hearing levels of a normally hearing, healthy young adult aged 15 – 25 years. At this age, the hearing mechanism is most sensitive to sound (KISE 1993).

Hearing Impairment is a general term used to describe persons who have hearing loss ranging from mild to profound. It includes the subsets of deaf and hard of hearing (Hallahan & Kauffman 1997). The earlier the hearing loss occurs in a child’s life, the more difficulty he or she will have developing the language of the hearing society. This means that, for those who acquire deafness at birth or before language acquisition, they need provision of support services to enable them acquire language to make communication possible. With good communication they will be able to access information about HIV/AIDS and VCT services and hence be able to prevent themselves from the disease.

Elwan (1999) emphasises that PWDS often know little about AIDS. He adds that in some societies, individuals with disabilities believe that, since they have one disease, God will not give them another; in deaf communities widespread misinformation about HIV/AIDS is reported, due to lack of accessible media and inaccurate information passed between sign language users. For example, some deaf individuals believe that “HIV+” is a good thing because positive means good.

World Bank (2004) indicates that in many countries all over the world HIV testing centres and clinics are physically inaccessible, lack sign language interpretation and do not address the needs of individuals with intellectual or mental impairments. Among those living in extreme poverty, PWDS are often unable to afford transportation to testing sites let alone the cost of testing or medical care.

Collins et al (2001) emphasize that many health professionals unaware that individuals with disabilities may be sexually active, do not offer to test them or provide services, under the assumption that they are not at risk. The result is that many PWDS are not reached by HIV/AIDS messages, are unaware of symptoms of HIV/AIDS, and do not understand the implications of these
symptoms, should they appear. Many who depend on others for transportation
or sign language interpretation report delaying seeking testing or care even
after symptoms appear because of reluctance to disclose personal sexual
histories, they therefore go to health facilities with full-blown AIDS only days
before death; others die without diagnosis or care.

UN Committee on Economic, Social and Cultural Rights (2000) noted the need
for the Right to equal access to health care for PWDS as a major component in
their General Comment on the Right to the Highest Attainable Standard of
Health. In the light of this statement the issue of the impact of HIV/AIDS
epidemic on individuals with disabilities could not be more timely or
significant.

Schmaling and Monaghan (2006) emphasize that there is an International
HIV/AIDS epidemic affecting Deaf communities in every part of the globe.
They add that few statistics exist on the extent of the problem but one study on
Maryland (US) infection rates show that Deaf people are two or ten times as
likely as their hearing counterparts to be HIV positive.

Ouma (2006) indicates his fear that the deaf people will be wiped out if no
action is taken to increase their access to information about HIV/AIDS
epidemic:

Our community faces extinction as the trend of HIV infection is rising
due to lack information on its prevention, care, treatment and even
available services. The situation is worsened when some people in the
society think deaf are safe from HIV/AIDS and flock to them to have unprotected sex. (The New Vision, Friday 2nd June, 2006: pp1)

Ombara (2004) quotes Mwikali saying that Deaf people require visual aids for anti-HIV campaign but no such materials have yet been developed in Kenya, nor is there information on AIDS for Deaf people in Educational Institutions. More so, sign language for sexuality was developed only recently in the year 2003. Hence advocacy and much effort is called for in order to alleviate the pandemic among this vulnerable group.

2.5 Evolution of HIV Testing and Counselling Services

In the 1980's the first 'VCT' model came about in developed countries in an era of high stigma and fear, when there was little or no access to HIV treatment (Family Health International 2004). The approach in the 1980's emphasized being voluntary and with informed consent and placed a strong significance on its contribution to meeting HIV prevention goals. The core components defined and endorsed by a number of agencies including WHO and US Department of Health and Human services, Centres for Disease Control and Prevention (CDC) –included pre-test counselling, HIV testing and post-test counselling (Family Health International 2004).

In 1986, CDC published VCT guidelines focusing on the need for testing and confidentiality; and in 1987 they were revised to emphasize the need to reduce barriers to counselling and testing, especially by protecting personal information (Family Health International 2004).
Despite the initiation of the first VCT model in the 1980s and the publishing of the VCT guidelines, no such models were put in place for PWDS.
2.6 Definition and Role of VCT

Voluntary Counselling and Testing (VCT) means that counselling and testing are self-initiated. Verbal consent is implicit in the uptake of the service. VCT targets behaviour change. Knowing one’s HIV status empowers people to make informed decisions about their sexual lifestyle that would otherwise predispose individuals to HIV infection (KMOH 2001).

Research in many countries has shown that people who know their sero-status, whether HIV negative or HIV positive, drastically change their behaviour. Three principles form the policy on HIV testing, namely: No person may be tested without his/her consent; Test results are confidential; Pre and post-test counselling must be provided (HIV/AIDS Tool Kit for Policy and Senior Level Decision Makers, 2002).

In recent years, demand for Voluntary Counselling and Testing (VCT) services has increased alongside understanding that seeking basic health care can extend the lives of people living with HIV/AIDS (PLWHA). VCT centres can refer clients for medical care, which has encouraged community members to seek out the services. Studies have shown that once public has accepted VCT services, more clients are likely to request VCT for social reasons, such as pre-marital testing and life planning rather than solely for medical reasons (Family Health International 2004).

Any attempt to prevent new infections and improve the quality of care for PLWHA must begin by enabling people to learn their HIV status if they so
choose. VCT is recognized as a critical entry point to prevention, care and support services. VCT prevents new infections by helping clients assess their risks and change their behaviour, and by linking clients with interventions to reduce Mother-to-Child Transmission of HIV (MTCT) (UNAIDS/WHO 2002).

VCT services contribute to improved care and support of PLHA through early appropriate referral for treating and preventing tuberculosis (TB), STI's and opportunistic infections as well as referral for nutritional services, legal aid, spiritual support, home-based care and also helps to prevent Mother –to-Child transmission. In addition, wider access to VCT may lead to greater openness about HIV/AIDS and less stigma and discrimination (UNAIDS/ WHO 2002).

VCT is a proven preventive strategy that should become an integral part of HIV prevention programmes in all countries. For example, in a recent randomized trial of individuals and couples in Africa and the Caribbean, a total of 3120 individuals and 580 couples in Kenya, Trinidad and Tobago, and the united Republic of Tanzania were randomly assigned to either a VCT group or a basic health education group, with the option of VCT provided as follow-up a year later. The VCT group self-reported a 35% reduction in unprotected sexual intercourse with both steady and casual partners during the year following the initial testing and counselling, compared with a 13% reduction in the group that received basic health information (UNAIDS/ WHO 2002). Individuals in the comparison group who accepted counselling and testing at first follow-up
visit self-reported a drop in the level of unprotected intercourse, equal to that of the initial VCT group after one year (UNAIDS/WHO 2002).

Despite the fact that VCT is a proven HIV prevention strategy; VCT for PWDS has not achieved much because many health professionals, unaware that individuals with disabilities may be sexually active, do not offer to test them or provide services under the assumption that they are not at risk.

2.7 Voluntary Counselling and Testing in Kenya

All Kenyans have been affected by the AIDS epidemic. Awareness concerning HIV/AIDS is almost universal among adults, and knowledge of correct methods of prevention of HIV is high. Knowledge of the options for care of HIV infected individuals is, however, lower. Levels of stigma are high despite the fact that most Kenyans know a relative or a friend who has HIV/AIDS or has died from this disease (Kenya Ministry of Health Guidelines for HIV testing in clinical settings, 2004).

The vast majority of Kenyans do not know their HIV status. The Kenya Demographic and Health Survey in 2003 showed that only 13% of women and 14% of men said they had been tested for HIV and knew their results, although approximately three-fourths of respondents never tested said they wanted to learn their status. Only one out of five who were HIV infected knew their HIV status.
Recent expansion of HIV services, including voluntary counselling and testing (VCT) and prevention of Mother-to-Child HIV transmission (PMCT) has provided more Kenyans with the opportunity to know their HIV status.

Joint efforts by the Kenyan government, international donors and partners, non-Governmental organizations and faith-based organizations have resulted in a rapid increase of VCT sites from 3 in the year 2000 to 555 sites by May 2005 (KMOH 2005). Over the same period, annual VCT service uptake increased from about 1000 to 380,000. Client-initiated VCT has been the predominant model of HIV testing in Kenya up to the end of 2004, although an increasing number of people are being tested through PMCT services, hospitals and other care programmes.

VCT services are offered through sites registered by the Ministry of Health after meeting prescribed standards contained in the VCT guidelines published in 2001. VCT has been a major success story in Kenya and the eagerness of Kenyans to take advantage of this service is an indication of this success (KMOH 2005).
However despite this success of VCT in Kenya Mwikali in Ombara (2004) says that she has seen many deaf and mute people perish in AIDS-related illnesses yet a number of them had no idea what hit them.

Berke (2006), talks about of HIV/AIDS Prevention for Deaf Adolescents at a Conference in Bozeman, Montana (US) where he shares with other Deaf people:

*Deaf people with limited language skills do not know much about AIDS, and this lack of knowledge is dangerous. I believe it. I myself did not learn what certain terms meant until I was 15 years old whereas hearing kids learned them in kindergarten. I did not lack language skills but I was merely deaf.* (January, 1998)
2.8 VCT Models in Kenya

The national VCT programme uses four models of service delivery: Integrated, Stand-alone, Community-based and Mobile. In Integrated sites, a VCT centre is usually located within the grounds of health facilities such as hospitals, health centres or dispensaries. Their main advantages include easier referral to medical care services and low start-up costs that allow for rapid scale-up. About 83% of registered VCT sites in Kenya are integrated sites in health facilities (KMOH 2005).

Stand-alone sites are usually not associated with any existing medical institution and usually have staff fully devoted to VCT. They are largely operated by non-governmental agencies and are usually located in densely populated urban areas. Their main advantages are that the staff can work full time on VCT services, and they may have donor funds that facilitate their work. About 17% of registered VCT sites in Kenya are stand-alone or community based sites (KMOH 2005). In the community-based approach, VCT is either integrated into other social services or implemented as the sole activity of a local community-based organization (CBO) or a faith based organization (FBO). This approach offers good opportunities for widespread scale-up of VCT at the grassroots, given the wide-spread distribution of CBOs and FBOs in Kenya (KMOH, 2005).

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. Most mobile VCT services are offered by stand-alone or community-based VCT programmes. Different models work well in different settings. In some cases, a combination of elements of different models may be most appropriate (KMOH, 2005).

In addition to these four models of service, there are also VCT services for the special target groups. Three sites serving persons with hearing impairments, with trained counsellors fluent in sign language, opened in 2004 (KMOH 2005). One is based at Nairobi, the other one is in Kisumu while the third one is located in Mombasa.

Having three VCT sites for HI in the whole country and especially in the major towns leaves all other persons with hearing impairments in other parts of Kenya at a disadvantage because they are already vulnerable and not much attention is being given to them in terms of HIV/AIDS awareness and testing.

2.9 Voluntary Counselling and Testing among persons with Hearing Impairments in Kenya

According to the Global AIDS Program (GAP) 2005 January, nearly 900,000 citizens with hearing impairments in Kenya were left behind when HIV education and access to HIV/AIDS Counselling and testing services in Kenya began increasing dramatically in 2000 (Ngongo et al 2004). Persons with hearing impairments, more than any other persons with disabilities in Kenya
were cut off from this vital information because radio is the prime mode of communication used for AIDS education and awareness (GAP 2005).

Prince N. Bahati, MBA, a consultancy services manager with Liverpool VCT and care project (LVCT), a collaboration between the Kenya medical Research Institute and the Liver Pool School of Tropical Medicine is quoted saying,

*Not only were persons with hearing impairments unaware of the HIV prevention messages that have been widely communicated to the general population in the past years, they are especially vulnerable to HIV/AIDS due to their vulnerability for abuse and violence* (GAP 2005).

In the year 2001 when the Global AIDS Program (GAP) supported a comprehensive public media campaign including print, radio, television, and billboards to promote VCT, the country was blanketed with messages encouraging Kenyans to ‘know your status’. The stunning success of this campaign led to a somewhat unintended secondary impact- it became the “in” thing to do to have your own VCT centre, as noted by Dr. Elizabeth Marum, section chief for HIV prevention with GAP in Kenya. Another unexpected benefit was that special interest groups, such as the Kenya Association of the Deaf, approached GAP in Kenya to request VCT services for individuals with special needs (GAP 2005).

To increase access for persons with hearing impairments to AIDS education and services, GAP supported collaboration between the Kenya National Association of the Deaf and Liverpool Voluntary Counselling and Testing
Centre (LVCT). The first step was to conduct a thorough needs assessment, bearing in mind that the community of persons with hearing impairments has its own culture.

Using sign language, LVCT trained six counsellors with hearing impairments and six community peer educators with hearing impairments. Bahati notes that persons with hearing impairments are affected by poverty and are largely uneducated hence rendering them to make their own signs. This creates regional differences in sign language and hence it took Bahati and other trainers energy and commitment to learn the differences in sign language (GAP 2005).

LVCT launched the first VCT centre for persons with hearing impairments at Buruburu in Nairobi in February 2004. Objectives of persons with hearing impairments HIV/AIDS / STI programme are to make quality VCT services accessible and to reduce the rate of HIV transmission in the Kenyan community of persons with hearing impairments (Washington 2004).

The hearing impaired HIV/ AIDS programme coordinator post has been established with the responsibility of overseeing the hearing impaired programme from its corresponding office (located in LVCT headquarters). The services within the hearing impaired programme are as follows:

1. HIV counselling and testing at Stand-alone sites managed by hearing impaired staff.

2. Mobilize VCT activity and community mobilization in urban and rural communities with hearing impairments.
3. Provision of support to persons with hearing impairments in need of referral and care.

4. Establishment of Post-test support groups for the community with hearing impairments.

5. Development of information, educational and communication (IEC) materials.

6. Quality assurance of VCT services for persons with hearing impairments.

7. Provision of friendly confidential services for persons with hearing impairments.

By the end of March 2004, a total of 325 clients with hearing impairments had received VCT services at the Nairobi centre; 14% of the women and 5% of the men were HIV-positive. Those clients with HIV were referred to a clinic operated by LVCT with staff knowledgeable in sign language. In mid – 2005 the Nairobi VCT for persons with hearing impairments was re-located to downtown Nairobi, Commerce House to better serve its three adjoining Provinces which include Central, Eastern and part of Rift Valley through mobile activities (Washington 2004).

Nyaweri VCT for persons with hearing impairments opened in July 2004 and is located in Kisumu District. It sits next to the Nyanza General Provincial Hospital to which it refers clients: it covers three Provinces namely Nyanza, Western, and the North part of Rift Valley.
According to the Plus News – Kisumu (13th July, 2006), the Nyaweri VCT is a purple and yellow freight container standing in the middle of a field in the Western City of Kisumu and was opened in the year 2004 in response to a need for persons with hearing impairments. Inside the container are at least five young hearing impaired counsellors and peer educators who communicate in sign language. "We opened in 2004, and are part of the Liverpool VCT, care and Treatment," said Miriam Opondo, a counsellor at the centre, as Leon, a VCT, quality control assessor, translated her signing. The centre has tested more than 1,000 people since its inception, most of them persons with hearing impairments. (Plus News, 13th July, 2006) quoted Opondo saying,

Before the centre opened, persons with hearing impairments in this area were ignorant about AIDS- many thought it was a disease only for hearing people. Most people learn about AIDS from the radio, TV or peer education, but they are left out of these messages because they cannot hear them. (Plus News, 13th July, 2006)

She noted that the rate of illiteracy in the region was exceptionally high, which meant persons with hearing impairments could not read newspapers or HIV/AIDS literature distributed by non-governmental organizations. She was quoted saying,

When they go to normal VCT centres there is a communication breakdown between them and the counsellors, but when they come here they are understood and do not feel stigmatized for being hearing
impaired, since most of us here also have problems hearing. (Plus News, 13\textsuperscript{th} July, 2006)

The Coast VCT for persons with hearing impairments is situated in Mombasa town at General Post Office (GPO) building and covers Coast Province. Despite the great efforts of putting up the VCT facilities by LVCT, there is still a big problem in that three sites are not enough to cater for HI country wide. There is need to put up similar sites in all District Hospitals in Kenya with personnel who are fluent in sign language.

2.10 Summary of the Literature Review

The literature review has covered a wide range of topics. The topics are summarised below.
Global HIV/AIDS Picture

Despite the rates of HIV/AIDS increasing globally, PWDS are surprisingly one of the most vulnerable populations. However, they are entirely overlooked despite the fact that they are at equal or increased exposure to all known risk factors for HIV.

HIV/AIDS in Sub-Saharan Africa

Despite HIV/AIDS being a major problem in many countries in Africa, striking is the lack of awareness in some of these issues on the part of AIDS advocates. Groce (2005) posits that only a handful of outreach efforts to disabled population by AIDS organizations exit at any level from grassroots to the globe. She adds that the importance of including PWDs in general AIDS campaigns or designing disability specific interventions is largely unrecognized.

HIV/AIDS in Kenya

Despite the submission of the National draft on HIV/AIDS policy being submitted to parliament and approved on 24th September 1997 (Ministry of Health 1997), no clear policies have been put up for PWDS. The Director National Council of Persons With Disabilities (NCPWD) 2006, in The Blind against AIDS: strategy paper for HIV/AIDS management among persons with visual impairments points out that though NCPWD an organisation established vide the Persons With Disability Act 2003 of the laws of Kenya is in existence
there is need for specific HIV/AIDS management strategies that are sensitive to the lifestyle and cultures that emerge as a result of disabilities.

**HIV/AIDS and Hearing Impairments**

World Bank (2004) reveals that in many countries all over the world, HIV testing centres and clinics are physically inaccessible, lack sign language interpretation and do not address the needs of individuals with intellectual or mental impairments. Among those living in extreme poverty, PWDs are often unable to afford transportation to testing sites let alone the cost of testing or medical care.

Collins et al (2001) emphasizes that many health professionals unaware that individuals with disabilities may be sexually active, do not offer to test them or provide services, under the assumption that they are not at risk. The result is that many PWDS are not reached by HIV/AIDS messages, are unaware of symptoms of HIV/AIDS, and do not understand the implications of these symptoms, should they appear.

**Evolution of HIV Testing and Counselling Services**

Despite the initiation of the first VCT model in the 1980s and the publishing of the VCT guidelines, no such models were put in place for PWDS.
Definition and Role of VCT

Despite the fact that VCT is a proven HIV prevention strategy; VCT for PWDS has not achieved much because many health professionals, unaware that individuals with disabilities may be sexually active, do not offer to test them or provide services under the assumption that they are not at risk.

Voluntary Counselling and Testing in Kenya

Despite the success of VCT in Kenya, Mwikali in Ombara (2004), says that she has seen many deaf and mute people perish in AIDS-related illnesses yet a number of them had no idea what hit them.

VCT Models

Having three VCT sites for HI in the whole country and especially in the major towns leaves all other persons with hearing impairments in other parts of Kenya at a disadvantage because they are already vulnerable and not much attention is being given to them in terms of HIV/AIDS awareness and testing.

Voluntary Counselling and Testing among persons with Hearing Impairments in Kenya

Despite the great efforts of putting up the VCT facilities by LVCT, there is still a big problem in that three sites are not enough to cater for HI country wide.

There is need to put up similar sites in all district hospitals in Kenya with personnel who are fluent in sign language.
CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter discusses the procedures and strategies that were used in gathering and analysing the data. They included research design, variables, location of the study, target population, sampling techniques and sample size, research instruments, pilot study, validity, reliability, data collection techniques, data analysis and ethical considerations.

3.1 Research Design

The study was quantitative in approach. The survey methodology was utilized to investigate the dynamics in utilization of Voluntary Counselling and Testing Centres by persons with hearing impairments in Nairobi Province. The researcher chose the survey methodology for several reasons. For one, it was possible to interact with informants face to face. Secondly, observations of the situation on the ground were also possible to enhance the success of the research work.

3.1.1 Variables

In this research the independent variables were the various barriers to VCT utilization which according to studies may include lack of unified sign language, lack of capacity for sign language among VCT staff and unavailability of interpreters. On the other hand, the dependent variable was the utilization of VCT services by persons with hearing impairments.
3.2 Location of the Study

The study targeted persons with hearing impairments who are mainly concentrated in the Central Business District of Nairobi. Kencom and Ambassador Hotel bus stops were ideal sites where persons with hearing impairments carried out small business activities. Immanuel Church at Kenbanco house and Holy Family Basilica were other places where these people worshipped. Being the capital city of Kenya, Nairobi is perceived as an immense source of livelihood and social contact for many persons, including persons with hearing impairments. As such, access to informants was likely to be easier, more than in any other location in Kenya.

3.3 Target Population

The target population for the study were persons with hearing impairments in Nairobi Province. The researcher targeted this population because these persons carry out small business activities in the Central Business District (CBD) in Nairobi and are available. They are adults of mixed gender, mostly dropouts of Karen Technical Training Institute for the deaf.

3.4 Study Sample and Size

Thirty persons with hearing impairments from the Central Business District in Nairobi were selected. This is because the target population are sparsely located and their business is mobile in nature hence it was not easy to access a larger number. Two counsellors were selected at the Nairobi Deaf VCT. The entire sample consisted of a sample size of 32 participants.
3.5 Sampling Techniques
The study employed a combination of sampling techniques. Snowball sampling technique was used to sample thirty persons with hearing impairments while purposive sampling technique was used to select two counsellors at the Nairobi Deaf VCT who were also hearing impaired.

3.6 Research Instruments
The study used an interview schedule to obtain socio-demographic data, knowledge data and attitude assessment from both persons with hearing impairments and the counsellors at the VCT who were also hearing impaired.

3.6.1 Interview Schedule
The researcher used an interview schedule to collect information from persons with hearing impairments and counsellors at the Nairobi deaf VCT. It contained socio-demographic data, knowledge assessment data as well as their attitudes towards HIV/AIDS. This tool was open for discussion and allowed the researcher to get detailed information in that structured questions were asked and probing done more deeply, using open-ended questions in order to obtain more complete data.

3.7 Pilot Study
It is usually essential to conduct a pilot study before starting the main study. A pilot study involves a small scale testing of the procedures that the researcher plans to use in the main study (Gall et al, 1996). Piloting was done on a
selected sample, similar to the actual sample used in the study. It was done at Karen Technical Training Institute for the Deaf. Interviews were conducted with four (4) persons with hearing impairments. The methods used in presenting the interview schedule were identical to those that were used during the actual study or data collection. Results from the pilot study assisted the researcher to rationalize the sign language.

Pre-testing the interview schedule helped the researcher establish whether the questions were measuring what they were supposed to (that is, validity), whether the wording was clear as well as checking for ambiguity. To ensure that the interview schedule contents were measuring what they were supposed to measure, the study relied on three persons competent in the area of hearing impairment. They were requested to assess the relevance of the contents used in the interview guide developed. They examined the interview schedule individually and provided feedback. Recommendations from the expert review were utilized to make necessary revisions.

Reliability focuses on the degree to which empirical indicators or measures of a theoretical concept are stable or consistent across two or more attempts to measure the theoretical concept. Reliability in this study was ascertained by running frequencies and editing errors. Responses were checked by the pattern in which they occurred and the errors were edited by cross checking the frequency count. This enabled to check the consistency between the sign language and the words in the items. The pre-testing was also used to help in
establishing the length of time that was needed to administer the questionnaire to the real sample.

3.8 Data Collection Techniques

Kencom and Ambassador Hotel bus stops were ideal sites where persons with hearing impairments carried out small business activities. Immanuel Church at Kenbanco house and Holy Family Basilica were other places where these people worshipped. The researcher visited every site and with the help of a sign language interpreter explained what the exercise entailed. Each informant was given an interview schedule to fill with the assistance of the researcher. The interpreter helped because it was difficult for the researcher to write and sign at the same time. The interpreter was a graduate teacher from Racecourse Deaf Unit. Persons with hearing impairments filled the questionnaires and after completion the researcher collected them. The researcher also visited Nairobi Deaf VCT and explained what the research was all about. Permission to interview the counsellors was granted by the person in charge after producing the ministry of Education permit to conduct the research.

3.9 Data Analysis

The data collected were analyzed using descriptive statistics. Responses received from the questionnaires were organized, tabulated and analyzed using simple frequencies and percentages and presented in form of frequency and percentage tables and figures. Percentages have a considerable advantage over more complex statistics (Fink, 2005). Items from the questionnaires were
arranged and grouped according to individual research questions. The information from the document analysis was analyzed qualitatively by sorting out data into various themes according to the objectives of the study. This information was discussed and this aided in drawing of conclusions and recommendations.

3.10 Logistical and Ethical Considerations

Before data collection exercise began, the researcher obtained permission from the Permanent Secretary Ministry of Education, through the dean, school of graduate studies, Kenyatta University. The researcher held a discussion with the informants where she informed them that their contributions would be treated as private and confidential and would purposely be used for the study only. The researcher also addressed the issue of openness by highlighting that the purpose of the study was to investigate the dynamics in the utilization of Voluntary Counselling and Testing Centres by persons with hearing impairments.
CHAPTER FOUR: PRESENTATION AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter is divided into two main sections. Section one presents demographic data for the subjects. The second section presents the results of the study which are organized along the research questions of the study. In this case, the results of the study will be presented by research questions. As such, the research question will be first posed and then the data relating to that research question will be presented. This will be followed by a summary statement of the conclusion of the study in regard to the question.

4.1 Demographic Data

Analysis of respondents demographic is important since it provides the description on the nature of the subjects in the sample with regard to their distribution along gender, age and educational level, among others.
4.1.1 Gender

It was important to understand the gender of the respondents.

Figure 4.1 Gender

In the study majority of the respondents were females 61% (18) while males were 39% (12).

4.1.2 Age

The ages of the respondents were categorized into various groups. The first group were those below 20 years. They were followed by those between 21-25 years, then those between 26-30 years. The other groups were those between 31-35 years followed by those between 36-40 years. The rest were those between 41-45 years, those between 46-50 years and finally those above 50 years.

The age characteristics of the respondents are presented in the figure below.
As shown in Figure 4.1 above, the largest proportion of respondents were of ages 20 – 35 years 75% (24), age associated with HIV infections. The smallest proportion was between 46- 50 years.

4.1.3 Level of Education

There was need to determine whether the respondents had attended school as education is a key factor in alleviating the HIV/AIDS scourge. People with higher education tend to protect themselves better than those with little education. This is because illiteracy is a risk factor for HIV/AIDS. UNICEF (1999) estimates that globally, 1/3 of all street children are disabled. Those who end up in the street with little education get involved in sex work and risk HIV infection.
The study findings indicate that majority of the respondents had attended school 91% (29), 3% (1) had not while 6% (2) were non-committal. 42% (13) of the respondents had attained college level of education, 24% (7) had secondary school education while 22% (6) had reached the university level and only 12% (4) had reached primary level.

4.1.4 Area of Residence

It was essential to know where the respondents lived to ascertain their knowledge and use of the available VCT services. The study findings revealed that 82% (26) of the respondents lived within Nairobi while 18% (6) lived outside perhaps by coming to do their business and going away.

Figure 4.3 Residence
4.1.5 Marital Status

It was important to know the marital status of the respondents due to the fact that, the more the sexual partners, the greater the chance of HIV infection. The marital status of the respondents is reflected in the figure below:

Table 4.1 Distribution of respondents by marital status

<table>
<thead>
<tr>
<th>STATUS</th>
<th>SINGLE</th>
<th>MONOGAMOUS</th>
<th>DIVORCED /SEPARATED</th>
<th>WIDOWED</th>
<th>POLYGAMOUS</th>
<th>CO-HABITING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Data</td>
<td>19</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Percentage</td>
<td>58</td>
<td>24</td>
<td>10</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

As shown in figure 4.4 above majority of the respondents 58% (19) were single. They were followed by those married to a single spouse 24% (8), then divorced/separated 10% (13). The widowed and polygamous were 3% (1) in each case while no respondents were co-habiting.

4.2 Awareness of Hearing-impaired-friendly VCT Facilities

The study sought to answer the question: What is the level of awareness among persons with hearing impairments as regards VCT facilities set for them in Nairobi? The responses for this research question was sought and subjected to frequency analysis to find out the indicators of the level of awareness of VCT services among the respondents in form of whether they had heard of HIV/AIDS, transmission modes, curative measures, knowledge of PLWA and knowledge of persons who died of HIV/AIDS.
4.2.1 Have Heard of HIV/AIDS

The study findings indicate that majority of the respondents 97% (31) were aware of the HIV/AIDS scourge and only 3% (1) were not. This is a sign that persons with hearing impairments in Nairobi are favoured by being in a major town with quality VCT services and easy access due to presence of counsellors who are proficient in sign language (Omondi 2003).

4.2.2 Knowledge of HIV/AIDS Transmission Modes

HIV/AIDS can be transmitted from one person to another in a number of ways. In Kenya the most common three transmission mechanisms are sexual intercourse, blood transfusion and perinatal transmission (breastfeeding) among others. The research sought to establish how the HIV/AIDS was transmitted. The figure below shows the knowledge of HIV/AIDS transmission modes among the respondents.

Figure 4.4 Knowledge of HIV/AIDS transmission modes
As shown in figure 4.5, majority of the respondents were aware of three main mode of HIV/AIDS transmission. Sexual intercourse took 93% (30), blood transmission 87% (28), contaminated needle and other sharp object 76% (24), breast feeding 50% (16), kissing 23% (7), shaking hands 13% (4) and sharing food 3% (1).

4.2.3 Knowledge about Cure for HIV/AIDS

It was essential to find out what the respondents knew about cure for HIV/AIDS. Therefore the researcher sought to know the respondents own view of existence of cure for HIV/AIDS.

The figure below shows their responses.

Figure 4.5 Knowledge about cure for HIV/AIDS

70% (22) of the respondents were aware that HIV/AIDS is a disease whose cure has not been discovered. However 27% (9) thought that there was a cure, perhaps they felt ARVS are meant to cure HIV/AIDS.
4.2.4 Awareness of Persons Living with and People who died from HIV/AIDS

Respondents were asked whether they knew of people living with HIV/AIDS (PLWA). 70% (22) of the respondents were aware of PLWA as compared to 27% (9) who were not. The study revealed that 82% (26) of the respondents were aware of persons who had died from the disease against 18% (6) who were not.

Figure 4.6 Knowledge of PLWA

4.3 Utilization of VCT facilities by persons with Hearing Impairments

VCT is an important strategy for prevention of HIV/AIDS. It is a powerful weapon in the fight against HIV/AIDS since it is associated with behaviour change that reduces HIV transmission and serves as a point of entry into care for those testing positive. The study sought to answer the question: To what extent do persons with hearing impairments utilize the VCT facilities set for them in Nairobi? Their responses were analyzed by frequency run of a number
of indicators related to utilization of VCT by persons with hearing impairments.

4.3.1 Knowledge of VCT for persons with Hearing Impairments.

There was need to determine the level of knowledge about VCT for persons with hearing impairments in Nairobi. The study findings indicate that there is a high level of awareness. 91% (29) of the respondents were aware of the existence of VCT for persons with hearing impairments against 9% (3) who were not.

Figure 4.7 Knowledge of VCT for persons with HI

The study further sought to establish if the persons with hearing impairments were aware of VCT sites. The findings showed that 48% (15) knew Nairobi deaf VCT, 24% (8) said Liverpool, 9% (3) had heard of Mombasa VCT while 18% (6) said they were not aware of any VCT site.
Table: 4.2 Knowledge of VCT Sites

<table>
<thead>
<tr>
<th>VCT Site</th>
<th>Nairobi Deaf</th>
<th>Liverpool</th>
<th>Non-committal</th>
<th>Mombasa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw data</td>
<td>14</td>
<td>7</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>percentage</td>
<td>48</td>
<td>24</td>
<td>18</td>
<td>10</td>
</tr>
</tbody>
</table>

4.3.1.1 Sources of Information

The respondents were asked to say how they came to know about the VCT services.

The researcher grouped the sources of information into three main areas; The Media 13% (4) which included pamphlets 3%, newspapers 5%, posters/signs 4% and billboards 1%. The Community 61% (20) included; the health care workers 10%, peer educators 17%, religious meetings 3%, HIV/AIDS campaigns 5%, community meetings 16% and the school 10%. Lastly was Personal contact 26% (8) which comprised of friends/relatives 21%, sex partners 0% and other VCT clients 5%.

Figure 4.8 How they knew about the VCT
The findings showed that majority of the respondents learnt of HIV/AIDS from the community 61% (20) while others had learnt from personal contact 26% (8) and a few from the media 13% (4) as in the figure above.

4.3.2 Awareness of Services offered at the VCT Facilities

This is awareness of the services offered at VCT facilities as indicated by the study and shown in the figure below.

Table 4.3 Services offered at VCT

<table>
<thead>
<tr>
<th>VCT services</th>
<th>Counseling</th>
<th>Testing</th>
<th>Referral to Health professionals</th>
<th>Medical/ Nursing care</th>
<th>At least all these services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Data</td>
<td>14</td>
<td>13</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>percentage</td>
<td>43</td>
<td>40</td>
<td>7</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>

The statistics indicate that 43% (14) knew counselling as a service offered in the VCT while 40% (13) knew of testing and 7% (2) talked of referral to other health professionals, 6% (2) medical and nursing care, 4% (1) said at least all these services. This shows that persons with hearing impairments seem not to be aware that voluntary counselling and testing go together. The overall impression is that there is generally lack of knowledge about services offered in VCT among persons with hearing impairments.
4.3.3 Visit to a VCT Centre and Reasons for the visit.

The respondents were asked to say whether they had ever visited a VCT and give reasons for the visit. 88% (28) had visited the VCT, 9% (3) had not and 3% (1) was non-committal. The reasons given by the respondents as to why they had visited a VCT are shown in the figure below.

Figure 4.9 Reasons for visiting VCT

The study revealed that there is a missing link between the visit and the reasons given. While 88% (28) of the respondents had visited the VCT, only 62% (20) gave reasons for the visit. This shows that 26% (8) had either escorted their friends to the VCT or they simply did not tell the truth.
4.3.4 Knowledge of HIV Status

Besides, the awareness of VCT and visiting them for various reasons, respondents were also asked about their HIV status and they responded as follows in the figure below.

Figure 4.10 Knowledge of HIV status

61% (20) of the respondents knew their HIV status as shown above while 36% (16) did not know. 3% (1) was non-committal.

4.3.5 Perceived Benefits of knowing one’s HIV Status

The researcher sought to know from the respondents their opinion on the benefits of knowing their status. The study indicated that persons with hearing impairments were aware of the importance of knowing their HIV status. Their responses are shown in the figure below:
Table 4.4 Benefits of knowing one's HIV status

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Protecting oneself</th>
<th>Protect for future</th>
<th>Avoid MTCT</th>
<th>Share HIV results with family/friends</th>
<th>Protect partner</th>
<th>Join support group</th>
<th>Influence others positively</th>
<th>Make a will</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Data</td>
<td>24</td>
<td>20</td>
<td>17</td>
<td>17</td>
<td>15</td>
<td>14</td>
<td>12</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>Percentage</td>
<td>73</td>
<td>64</td>
<td>52</td>
<td>52</td>
<td>48</td>
<td>45</td>
<td>36</td>
<td>33</td>
<td>9</td>
</tr>
</tbody>
</table>

73% (24) of the respondents said that the knowledge of the HIV status would assist them protect themselves from infection. This was followed by 64% (20) who said it will help them plan for the future. 52% (17) said it would help them avoid mother-to-child infection while 52% (17) thought it would help them seek for treatment. 48% (15) said they would share test results with family and friends, 45% (14) said it would help them protect one’s partner while 36% (12) said they would join a support group and 33% (11) said it would help them influence others positively. Lastly 9% (3) said it would help them make a will and 3% (1) gave other reasons.

4.4 Barriers to Utilization of VCT Services

Among the barriers that would stop persons with hearing impairments from utilizing VCT services, the most prominent were Technical factors e.g. lack of a counsellor who can sign, Social factors e.g. fear of positive results and Infrastructural factors e.g. lack of transport, lack of a VCT among others. The figure below shows factors that would prevent one from visiting a VCT.
The technical aspect took the highest percentage 46% (15); it included factors such as lack of counsellor who could sign, lack of confidentiality of services provider and lack of interpreter. Infrastructural aspect took 28% (9) and it includes factors such as lack of transport, cost of test and lack of VCT. Finally the social aspect took 26% (8) and included factors such as abandonment and abuse, fear of positive results, marital status and stigmatization among others. It is important to note that marital status took 39% (12) which means that married couples would fear taking test. This is serious considering the fact that according to the latest report in Kenya, the prevalence rate is 7.4% among adults who are married and aged 50 – 64 years (KMOH 2007).
This implies that there is need for the government and stakeholders to improve VCT for persons with HI by providing interpreters and counsellors who can sign.

4.5 Interventional Perspectives from Informants

The respondents were finally asked to give recommendations on how access to HIV/AIDS information can be enhanced to them; also on strategies to increase the number of persons with hearing impairments to visit VCT, and on policy change. They gave the following areas which need to be addressed.

4.5.1 Public Education

One hundred percent of the respondents were of the idea that there was need to educate persons with hearing impairments on issues concerning HIV/AIDS.

4.5.2 Strategies geared at raising number of Persons with Hearing Impairments going for VCT

The respondents gave the methods to be used in raising the number of persons with hearing impairments going for VCT. The figure below indicates their responses.
82% (26) of the respondents recommended that there was need to train more counsellors in sign language so as to assist in signing for persons with hearing impairments so that they could understand the information better. 67% (21) of the respondents felt that there was need to increase total communication in VCT for persons with hearing impairments while 61% (20) felt that there was need to put up VCT in social places and also increase mobile VCT to institutions of persons with hearing impairments among other recommendations.

The overall impression is that majority of the respondents advocated for better communication methods for persons with hearing impairments in VCT services. 84% (27) of the respondents expressed their concern on the economic well being of persons with hearing impairments. Groce, (2005) asserts that the
links between disability, social marginalization and HIV continue in adulthood where unemployment reaches 80%. The World Bank (2003) estimates that people with disabilities make up 20% of the World’s poor. Routinely they are the poorest of the poor. This cycle of disability and poverty is profound. Worldwide, the most common form of employment for individuals with disability continues to be begging.
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter provides the summary, conclusions and recommendations of the study.

5.1 Summary of the Study

The summary in this study have been categorized according to themes drawn from the research questions. They present the general findings on each of the variables studied.

5.1.1 Demographic characteristics of respondents

Majority of the respondents were females, 61% (20). Most of the respondents were aged 20 – 35 years 75% (24). All the respondents were literate, only 13% (4) were of primary school level. Most of the respondents resided in Nairobi, 82% (26). 55% (18) of the respondents were single; those married to a single spouse were 24% (8), divorced or separated were 12% (4) while the widowed and polygamous were 3% (1) in each case.

5.1.2 Level of Awareness

The study findings indicate that majority of the respondents 97% (31) were aware of the HIV/AIDS scourge while 3% (1) was not. The overall impression is that majority of the respondents were knowledgeable about the pandemic. Perhaps the flow of information and access to VCT with Counsellors who can sign for persons with hearing impairment in this major city has enhanced this.
5.1.3 HIV/AIDS Transmission Modes

Majority of the respondents were also able to identify the main transmission mechanisms of HIV/AIDS. 93% (29) stated sexual intercourse as a main mode, followed by blood transfusion 87% (28) and contaminated needles and other sharp objects 76% (24). This is a sign that they were knowledgeable.

5.1.4 HIV/AIDS Cure

Many respondents as the study findings indicate know HIV/AIDS as a disease whose cure is yet to be discovered 70% (22), only 27% (9) indicated that there was a cure, perhaps they thought of anti retroviral drugs as a remedy. There is therefore need to educate persons with HI on HIV/AIDS.

5.1.5 Utilization of VCT Services

VCT is an important strategy for prevention of HIV/AIDS as earlier indicated. The study findings indicate that 91% (29) of the respondents were aware of the existence of the VCT Services for persons with hearing impairments. 61% (20) of the respondents got aware of the VCT through the avenues in the community, 26% (8) of the respondents got the information through personal contact while 13% (4) of the respondents knew through the media. Majority of the respondents were aware of the services offered in VCT, Counselling 43% (14), Counselling and Testing 40% (13) among others. Most of the respondents had visited the VCT 88% (28). However only 62% (20) gave reasons for the visit like Counselling and Testing, 26% (8) had either escorted their friends to
the VCT or did not know why they had made a visit. 61% (20) of the respondents knew their status as opposed to 36% (12) who did not. The respondents were also aware of the benefits of knowing their HIV Status, majority said in order to protect themselves 73% (23) and 64% (20) to plan for future among others.

5.1.6 Barriers to Utilization of VCT Services

Factors that hinder persons with hearing impairments from accessing VCT services were in three forms: infrastructural, social and technical.

In the infrastructural aspect were factors like lack of transport, cost of test and lack of a VCT. In the technical aspect were factors like lack of a counsellor who can sign, lack of confidentiality in the service provider and lack of an interpreter. The social aspect was made up of factors such as marital breakup, abandonment and abuse, stress and depression, fear of positive results, marital status as well as stigmatization and discrimination. The technical aspect took the highest percentage at 46% (15), followed by the infrastructural aspect 28% (9) and lastly the Social aspect at 26% (8). In a nutshell, communication comes out as a major factor in VCT services for persons with hearing impairments and therefore the government and the stakeholders need to do more in this crucial area.
5.1.7 Interventional Perspectives

Majority of the respondents gave suggestions in regard to HIV/AIDS awareness and testing services among persons with hearing impairments. Communication took a large share among the suggestions. Respondents felt that there was need for the government to place counsellors who are proficient in sign language in all VCT services in the country. This means that even those persons with hearing impairments in the rural areas will have access to VCT service. Majority of persons with hearing impairments lack knowledge of services offered in VCT because the methods used to create awareness do not favour them due to their inability to hear e.g. radio, electronic media and the internet.

In relation to health service providers there is need to emphasize confidentiality and trust so that persons with hearing impairments may take up VCT services seriously. There is need to have more hearing impaired VCT counsellors in health facilities as persons with hearing impairments will feel more involved and secure once they visit such a site. Educating persons with hearing impairments about HIV/AIDS is another important area. This should be done more aggressively in schools, colleges and in the community so as to alleviate the pandemic among them. Persons with hearing impairments have low literacy levels Groce (2005), asserts that the global literacy rate for adults with disabilities is only 3%; for females with disabilities it is as low as 1%. Education where it exists is often sub-standard and dropout rates are double or triple those of non-disabled children.
5.2 Conclusions

HIV/AIDS awareness and VCT utilization among persons with HI are still far from being achieved. Though the policy makers have supported the initiative, the measures taken are still wanting. Without a strong political will in terms of laws and policies PWDS and more so persons with HI will still lag behind in matters related to HIV/AIDS awareness and VCT utilization.

5.2.1 The Urban Environment and the High Level of Awareness

As the study findings indicate, majority of the respondents (97%) were aware of the HIV/AIDS scourge. This could have been brought about by the fact that efforts between Kenya National Association of the Deaf (KNAD) and Liverpool Voluntary Counselling Testing Center (LVCT) with support from GAP led to the start of the first VCT for persons with hearing impairments at Buruburu in February 2004.

Using sign language, LVCT trained six counsellors with hearing impairments and six peer educators with hearing impairments. Again Nairobi being a major city has a high flow of information and this explains why persons with hearing impairments are highly knowledgeable in HIV/AIDS related matters.

The Buruburu VCT was later relocated to Florida 2000 building in the middle of the city and this centrality could have enhanced the flow of the respondents to the site. Most of the respondents have at least college education and this shows that literacy levels among this group are high and they can understand better than the rural folk.

HIV/AIDS awareness and VCT utilization among persons with hearing
impairments are still far from being achieved. Though the policy makers have supported the initiative, the measures taken are still wanting. Without strong political will, persons with disabilities and more so persons with hearing impairments will still lag behind in terms of HIV/AIDS awareness and VCT utilization.

5.2.2 High Rates of VCT Utilization

With the opening of VCT for persons with hearing impairments at Buruburu in February 2004, Kenya Ministry of Health (2005), indicates that by the end of March same year, a total of 325 clients with hearing impairments had received VCT services at the Nairobi centre, with 14% of the women and 5% of the men turning HIV-positive.

The study findings show that only 88% (28) of the respondents had visited VCT. Among them 62% (20) of the respondents gave genuine reasons for their visit while 26% (8) seem not to belong anywhere and therefore there is a missing gap. This leaves doubts as to whether the respondents are effectively utilizing the VCT.

5.2.3 Weak Barriers in an Extremely Aggressive Environment

The study findings reveal weak barriers in a highly aggressive zone. Among factors that take a lead are technical aspects such as lack of a counsellor who can sign, lack of an interpreter and lack of confidentiality in the service provider. The fact that the Nairobi VCT for persons with hearing impairments
is staffed with counsellors who can sign and are in fact hearing impaired themselves make the barriers given by the respondents to hold no weight at all. Infrastructural factors like lack of VCT, cost of a test and lack of transport follow. The respondents are not justified in giving lack of VCT as a factor since the Nairobi site is available and within reach. May be factors like cost of a test and lack of transport may be valid reasons for not utilizing VCT due to their low economic status as many of them are unemployed. Social factors like fear of positive results, marital status, stigma and discrimination generally apply even to the hearing community.

The overall impression is that the barriers presented by the respondents are weak given the fact that Nairobi is a major city with all favourable attributes to enhance effective utilization of VCT by persons with hearing impairments.

5.2.4 Perceptions of Vulnerability and the Health Belief Model

The Health Belief Model is a framework for motivating people to take positive health actions that uses the desire to avoid a negative health consequence as the prime motivation. It states that the perception of a personal health behaviour threat is itself influenced by at least three factors: general health values, which include interest and concern about health; specific health beliefs about vulnerability to a particular health threat; and beliefs about the consequences of the health problem. For example, HIV is a negative health consequence, and the desire to avoid HIV can be used to motivate sexually active people into practicing safe sex.
In regard to this study, persons with hearing impairments are aware of their vulnerability to HIV infection and therefore rationalize on prevention measures so as to be safe.

5.3 Recommendations of the Study

Following the study findings, the researcher would like to put forward the following recommendations:

5.3.1 Policy Recommendations

This study has established that key dynamics in utilization of VCT services revolve around communication. Subsequently, it is recommended that sign language be an official language so that persons with hearing impairments are included in all activities. The government should aim at having at least one counsellor in each major hospital trained in sign language.

The sessional paper No. 4 on AIDS in Kenya (Kenya Ministry of Health 1997) recognizes that responding effectively to the AIDS crisis will require a strong political commitment at the highest level. The Government should do more by reviewing HIV/AIDS policy to include PWDS especially persons with hearing impairments by including sign language and using information, education and communication technology (IEC) to include drama, Songs and Video shows to alleviate the HIV/AIDS pandemic among them.

The government should put in place policies that ensure persons with hearing impairments enjoy same rights and promote recognition and acceptance of persons with disabilities. It is therefore paramount that PWDS should be included in all matters related to HIV/AIDS awareness and testing. Ogden
(2001) asserts that they have a right to participate in decisions affecting their lives. They should be fully involved in the design, implementation and evaluation of the HIV policies and programmes. This will ensure the policies and programmes are responsive to the needs of PWDS.

HIV services themselves must be inclusive of PWDS. For example HI counsellors should be placed in VCT in all Districts to enhance ownership and better results. The laws should be ratified to incorporate instruments that protect and promote the human rights of persons with disabilities including the convention on the rights of persons with disabilities (UNAIDS/OHCHR 2006).

There is also need of addressing established risk factors for HIV/AIDS among PWDS such as poverty, illiteracy, stigma and marginalization among others.

5.3.2 Recommendations for Practice

The study has revealed that the practice in our Hospitals and health Centres is wanting. Following this the recommendation is that each Dispensary, Sub-district hospital, District hospital, Provincial hospital and other major hospitals should be more sensitive to persons with hearing impairments. Services of counsellors and interpreters with the skills in deafness and sign language are crucial in the above facilities. This will assist persons with hearing impairments in the rural areas to access HIV/AIDS information and VCT services. There is need therefore to put up VCT that is friendly to persons with HI in every District.

HIV/AIDS campaigns should use materials that are friendly to persons with hearing impairments.
The government and stakeholders should improve VCT for persons with hearing impairments by providing interpreters and counsellors who can sign. There is also need to put more emphasis on confidentiality in the service providers to enhance and promote a higher utilization of VCT by persons with hearing impairments.

It is important for the government to increase networking and information exchange between HIV and disability services, disability advocacy and human rights organization. There is also need to encourage free HIV testing at disability meetings in order to improve access to information and test for HIV. NACC should also make resources available for the ongoing HIV/AIDS awareness.

5.3.3 Media Awareness Campaigns

There is need for the media to improve on methods of passing HIV/AIDS information to persons with hearing impairments. Better communication methods like the use of sign language should be used for this group to understand better. Public advertisements should clearly portray the information because where HIV/AIDS campaigns have concentrated on radio, persons with hearing impairments are uninformed.

5.3.4 Community Empowerment

There is need for the government and all the stake holders to empower the community with skills and finance to uplift the knowledge of HIV/AIDS to persons with hearing impairments as it appears to be a parameter to rely on.
5.3.5 Job Opportunities for Persons with Hearing Impairments

It is paramount that the government intervenes to create jobs for persons with disabilities and in particular persons with hearing impairments. It will empower them economically to be able to afford VCT tests where it is charged.

5.3.6 Education

It is important for the government to review education policies concerning persons with hearing impairments so as to improve the literacy levels for better understanding especially in relation to the HIV scourge. Persons with hearing impairments should also take up leadership roles and develop strong networks with all collaborating partners.

5.4 Recommendations for Further Research

Further research is hereby recommended. A purely qualitative study should be done using an in-depth methodology where the researcher will have more time with the target population. The dynamics in utilization of VCT services need to be fully established for intervention purposes.

A similar study should be replicated in rural Kenya so that the rural people can also benefit from the findings. There is also need to conduct such a study among other forms of disabilities such as visual impairments, physical impairments, and mental impairments among others. This is to establish the dynamics in the utilization of VCT facilities.
REFERENCES


Daily Nation (Wednesday January 18th, 2006 pg 7). The untold story. They can be infected or affected by AIDS like everyone else. So why have they been ignored?: Here is another group of people whose level of knowledge on AIDS is nothing short of shocking.


GAP (2005) *Department of Health and Human Services/Centers for Disease Control and Prevention.*

GAP (2005) *HIV/AIDS situation in Kenya on* 


*HIV/AIDS Tool Kit for Policy and Senior Level Decision Makers* (2002).


KISE, (1993). *In-service Teacher Training in Special Education. Unit 3: Hearing Impaired Children: Distance Education Department*. Nairobi: KISE.

Retrieved on 6/7/06.


*New York Times 28th March 2004. For Africa’s Deaf and Blind, AIDS is unknown Language*

www.christian_aid.org.uk. Retrieved on 28/7/06.


*Plus News (Kisumu 13th July, 2006)*


APPENDIX I

INTERVIEW SCHEDULE FOR PERSONS WITH HEARING IMPAIRMENTS IN THE CENTRAL BUSINESS DISTRICT OF NAIROBI

SOCIO-DEMOGRAPHIC DATA

1. Sex ......................

2. Age ......................

3. Have you ever attended school?
   Yes □  No □

4. What is the highest level of school you attended?
   Primary □
   Secondary □
   College □
   University □

5. Where do you live?
   Within Nairobi □
   Outside Nairobi □

6. What is your marital status?
   Never married/Single □
   Married monogamous □
Divorced / separated  □
Widowed  □
Married polygamous  □
Cohabiting  □

KNOWLEDGE ASSESSMENT

7. Have you ever heard of HIV/AIDS?
   Yes □  No □

8. How is HIV/AIDS transmitted as far as you are concerned? (Mark all possible responses).
   Sexual intercourse  □
   sharing food  □
   Contaminated needles  □
   and other sharp objects  □
   Kissing  □
   Breast feeding  □
   Blood transfusion  □
   Shaking hands  □

9. In your own view, is there a cure for HIV/AIDS?
   Yes □  No □

10. Do you know anyone living with the HIV virus?
    Yes □  No □

11. Do you happen to know anyone who has died of HIV/AIDS?
    Yes □  No □
12. (a) Have you heard of VCT centres for persons with hearing impairments?

Yes [ ]    No [ ]

(b) Which ones? .......................... ..........................

............................. ..........................

13. If yes, how did you come to know about it?

From media (specify) [ ]
Friend/relative [ ]
Billboards [ ]
Health care workers [ ]
School [ ]
Peer educators [ ]
Community meeting [ ]
Poster/sign post [ ]
Newspapers [ ]
Pamphlets [ ]
HIV/AIDS campaigns [ ]
Sex partner/ spouse [ ]
Another VCT client [ ]
Religious meeting [ ]
Others (specify) [ ]

........................................................................................................

........................................................................................................
14. Which are the services offered at the VCT?

- Counselling
- Medical and nursing care
- Referral to other health professionals
- Financial support
- Testing
- Others

15. (a) Do you know your HIV status?

- Yes  
- No

(b) If No, would you like to know your status?

- Yes  
- No

(c) Give reasons

..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................

16. (a) Have you ever visited a VCT Centre?

- Yes  
- No

(b) If Yes, why did you go there?

- For counselling
- To be treated
- As a referral
- For counselling and Testing
In your own view, what are the benefits of knowing one's HIV status?

- Share HIV test results with family and friends.
- Protect yourself from infection.
- Be able to plan for future.
- Avoid Mother-to-Child transmission.
- Be able to influence others positively.
- Seek treatment.
- Join a support group.
- Protect your partner.
- Make a will.
- Others

What would prevent you from visiting the VCT? (Mark all possible responses)

- Stigmatization / discrimination.
- Cost of the test.
- Marital status.
- Fear of positive result.
- Lack of VCT.
- Lack of an interpreter.
- Lack of confidentiality of service provider.
- Lack of a counsellor who can sign.
- Stress and depression.
- Abandonment and abuse.
Marital break-up
Lack of transport

19. Do you think there is need to educate persons with hearing impairments on the importance of visiting VCT centres?

Yes [ ] No [ ]

20. If Yes, what do you think needs to be done in order to increase the numbers of persons with hearing impairments visiting VCT centres?

(Mark all possible responses)

Reduce cost of testing
Put up VCT services in social places
Train counsellors in sign language
Empower persons with hearing impairments economically
Increase VCT mobile services to institutions of persons with hearing impairments
Incorporate total communication in VCT to benefit persons with hearing impairments
Improve HIV/AIDS information dissemination methods

21. (a) Do you think the Kenya government needs to change its policies in relation to persons with disabilities and HIV/AIDS testing?

Yes [ ] No [ ]

(b) If Yes, what suggestions do you wish to make?

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
APPENDIX II

INTERVIEW SCHEDULE FOR COUNSELLORS AT NAIROBI DEAF

VCT

1. Age ........................................

2. Sex ........................................

3. What exactly do we mean by voluntary counselling and testing?

........................................

........................................

........................................

4. What are the core components of VCT?

........................................

........................................

........................................

5. What are the steps followed in voluntary counselling and testing?

........................................

........................................

........................................

6. Who should provide VCT services?

........................................

........................................

........................................
7. Who should receive VCT services?

8. For how long have you worked in this VCT?

9. Does your age affect your relationship with clients who seek VCT services?
   Yes [ ] No [ ]

10. If Yes, why?

11. If No, why?
12. What is your profession?

- Doctor
- Nurse
- VCT Trained Counsellor
- Social worker
- Volunteer
- Others (specify)

13. How many clients does your centre attend to daily on average?

14. What problems do you encounter at the centre? (Mark all possible responses)

- Staff shortage
- Hostility from clients
- Training issues
- Remuneration
- No response
- Others (specify)

15. Do you think VCT services are effective in the prevention of HIV/AIDS?

- Yes
- No

16. If No, give reasons

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
17. In your own assessment what makes persons with hearing impairments not to seek VCT services?

18. What measures do you think can be put in place to make VCT Centres hearing impaired- friendly?

19. What do you think can be done to make the services more attractive and effective for persons with hearing impairments?

20. Level of proficiency of the counsellors as observed.

Low □   Fair □   Good □   Very Good □
RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on, ‘Barriers to Utilization of Voluntary Counseling and Testing Services by Persons with Hearing Impairments in Nairobi’

I am pleased to inform you that you have been authorized to carry out research in Nairobi for a period ending 30th November 2008.

You are advised to report to the Provincial Commissioner and the Provincial Director of Education Nairobi before embarking on your research project.

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

M. O. ONDIEKI
FOR: PERMANENT SECRETARY

Copy to:

The Provincial Commissioner
NAIROBI

The Provincial Director of Education
NAIROBI