EVALUATION OF HIV AND AIDS AWARENESS AMONG UPPER PRIMARY SCHOOL PUPILS WITH HEARING IMPAIRMENTS IN CENTRAL PROVINCE, KENYA

By

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Reg. E55/11192/04

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April, 2009

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Evaluation of HIV and AIDS awareness among
DECLARATION

This is my original work and has not been presented for an award in any other university or organization.

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To my wife Dinah Wangeci, daughter Yvonne Wanjiru and son Steve Mwangi who persevered through the difficult times we faced during my study.
ACKNOWLEDGEMENTS

I acknowledge and appreciate the contributions of the following people:

Dr. Rachel W. Kamau-Kang’ethe, Prof. Ted Groenewegen and Prof. Alade E., for their tireless efforts in supervision of this work and their continuous encouragement which made it possible for me to complete it.

Wanjiru Monica who typed this work. My wife Dinah who supported me through prayers, throughout the study period. Mr. A.D. Bojana who proofread the final work. Finally, the pupils with hearing impairments who co-operated in availing all the necessary information during data collection.
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ABBREVIATIONS AND ACRONYMS

AIDS - Acquired Immune Deficiency Syndrome
HI - Hearing Impairment
HIV - Human Immunodeficiency Virus
KSL- Kenyan Sign Language
MOE- Ministry of Education
NACC -National AIDS Control Council
NASCOP - National AIDS and STD’s Control Programme of Kenya
NGOs - Non-Governmental Organizations
PLWHA - People Living with HIV/AIDS
STDs - Sexually Transmitted Diseases
UNAIDS - Joint United Nations Programme on HIV/AIDS
UNESCO - United Nations Educational, Scientific and Cultural Organization
VCT - Voluntary Counselling and Testing
ABSTRACT

Despite the vigorous HIV and AIDS awareness campaigns, the dangers of this pandemic are still a matter of grave concern especially to Primary School Children with hearing impairments. Thus, relevant HIV and AIDS awareness information is key in curbing the spread and effects of this disease. This awareness information forms the basis of education and strategy for survival for both the affected and infected persons. In recognition of this situation, this study examined in its general objective, the level of awareness of HIV and AIDS among upper primary school pupils with hearing impairments in Central Province of Kenya. Specific objectives were to: Establish what pupils with hearing impairments in Central Province know about HIV and AIDS pandemic; find out awareness of modes of HIV transmission, investigate awareness of HIV and AIDS preventive measures and find out awareness of how to care for and live with persons infected and affected by HIV and AIDS. The study design used was survey. Simple random sampling technique involving lottery method was used to select 4 out of the 5 schools in the province. The four schools yielded a sample of 192 pupils who consisted of all the pupils in standards 4, 5, 6 and 7. A questionnaire consisting of 33 closed-ended items and 4 open-ended items was used. The questionnaire was administered by the researcher and two trained research assistants who helped to explain some of the items in the questionnaire, using sign language. Data obtained were analysed using descriptive statistics. Frequency distribution tables, pie charts and bar graphs were used in the presentation of the results and data were then analysed according to objectives, by percentages, so as to determine the level of HIV and AIDS awareness among the pupils. The findings revealed that the pupils' knowledge of HIV and AIDS pandemic was lower (88.02%) compared to the hearing pupils. Majority of the pupils indicated that they perceived themselves to be at risk of HIV infection (64.55%). Various misconceptions were noted regarding HIV transmission some of which were: one cannot contract HIV for the first time one engages in sexual intercourse (79.89%), one cannot contract HIV if he/she is young and healthy (23.28%), one cannot contract HIV from someone who looks young and healthy (16.84%), one can contract HIV through shaking hands (14.66%) and insect bites like mosquitoes (17.8%). Most of the respondents (74.48%) were knowledgeable that the pandemic can be contained while 25.52% indicated that it is not possible to prevent it. Negative attitudes towards people living with AIDS were noted with 47.89% indicating that pupils who are HIV positive should be confined in a class of their own. This calls for sensitization in this area. Among the recommendations made were that pupils with hearing impairments need to be educated on the need to behave responsibly on sexual matters, strengthen peer counselling on HIV/AIDS and maximize on the sense of sight like captioned television programmes, illustrations, print media and diagrams in communicating HIV and AIDS messages to them.
CHAPTER ONE

INTRODUCTION

This chapter covers the background to the study, statement of the problem, purpose, objectives, research questions, limitations, theoretical and conceptual framework, significance of the study and operational definition of terms.

1.1 Background to the Study

Barnet and Whiteside (2002) report that Acquired Immune Deficiency Syndrome (AIDS) was first identified by doctors and scientists at the beginning of the 1980s, among small groups of men in a few urban centres of North America. Since then, Human Immunodeficiency Virus (HIV) has become a global health crisis with reported cases in every country of the world. Globally, the total number of HIV positive people is 42 million and there were 20 million deaths related to HIV in 2005 (UNAIDS, 2002). Muraah and Kiarie (2001), note that worldwide, HIV and AIDS by the end of year 2000 had resulted in 21.8 million cumulative deaths. This included 9 million women, 8.5 million men and 4.3 million children.

According to UNAIDS (2002), Africa is thought to be home to 70 per cent of the total number of people of all ages infected with HIV. UNAIDS (2002b), further notes that young women and men aged 15 to 24 account for \( \frac{1}{3} \) of the total 29.4 million people living with HIV in Sub-Saharan Africa. In addition, the Ministry of Health in Kenya (2001) states that the national HIV prevalence in Kenya in the year 2000 was estimated at 14%. Prevalence rate by province in the year 2003 was as follows: North Eastern (0%), Eastern (4.0%), Central (4.9%), Western (4.9%), Rift Valley (5.3%), Coast (5.8%), Nairobi (9.9%) and Nyanza (15.1%). World Health
Organization (WHO, 2004), indicates that youths are at the epicenter of preventing the progression of HIV and AIDS pandemic and that because the youth age 15-24 comprise 50% of all new HIV infections, they must be targeted for HIV awareness. Concerning primary school pupils, WHO (2004), ascertains that literature on HIV awareness among them points to a situation where most of them are uninformed or have serious misconceptions regarding pathways of HIV transmission and also harbour negative attitudes towards the sero-positive population.

Several initiatives dealing with HIV and AIDS awareness are at work in Kenya. These include Non-Governmental Organizations (NGOs), churches, the media, the government and of late schools and other institutions of learning. Remez (1989) states that prevention programs are based on the premise that awareness of the risk and severity of HIV will lead to HIV testing and protective behaviour adoption.

A United Nations report (2002) states that most youth do not know the modes of HIV transmission and they also do not know any methods in which they can protect themselves from contracting the virus. This study, therefore, sought to find out whether this dismal level of awareness is applicable to primary school pupils with hearing impairments in Central Province of Kenya.

1.2 Statement of the Problem
A survey carried out by the Ministry of Health (2001), revealed that in Kenya, 99% of both men and women are aware of AIDS and risk behaviour. But this is doubtful of the deaf community because AIDS awareness campaigners normally target the
hearing community. Kevin (2005), for Sahaya International, notes that the deaf community in Kenya estimated at between 300,000 and 600,000 represents a significant portion of the country’s population. He conducted a study of 88 deaf students around the age of 18 that revealed that three quarters of them knew very little about HIV. He further notes that a curriculum in sign language about HIV does not exist and healthcare professionals – already overwhelmed with the pandemic find it difficult to focus on marginalized and isolated groups. Thus, despite the introduction of vigorous AIDS awareness campaigns in Kenya, there are increasing concerns regarding whether these campaigns have effectively reached pupils with hearing impairments. There was need to find out the levels of HIV and AIDS awareness among this group.

1.2.1 Purpose of the Study
Based on the above stated problem, the purpose of this study was to evaluate the level of HIV and AIDS awareness among upper primary pupils with hearing impairments in Central Province.

1.3 Objectives
The general objective of this study was to find out the level of HIV and AIDS awareness among primary school pupils with hearing impairments from Central Province.

Specific objectives were to:

i) Establish whether the pupils with hearing impairments have the knowledge of HIV and AIDS pandemic.
ii) Find out the level of awareness of modes of HIV transmission among pupils with hearing impairments.

iii) Investigate awareness of HIV and AIDS preventive measures among pupils with hearing impairments.

iv) Find out awareness among pupils with hearing impairments of how to care for and live with persons infected and affected by HIV and AIDS.

1.4 Research Questions

The research sought to address the following questions:-

i) What do pupils with hearing impairments in Central Province know about the HIV and AIDS pandemic?

ii) What level of awareness of modes of HIV transmission do the pupils with hearing impairments in Central Province have?

iii) What is the level of awareness of HIV and AIDS preventive measures among the pupils with hearing impairments in Central Province?

iv) What do the pupils with hearing impairments know about the various aspects of caring for persons infected and affected by HIV and AIDS?

v) What level of awareness of how to live with persons infected and affected by HIV and AIDS do the pupils with hearing impairments have?

vi) What are the sources of information on HIV and AIDS among the pupils with hearing impairments?

1.5 Significance of the Study

The study is of immediate benefit to the HIV and AIDS awareness campaigners like Government of Kenya, NGO’s, churches and schools because they will know
whether their campaigns have been effective to the hearing impaired pupils. It is also of significance to primary school education stakeholders in curbing the adverse effects of AIDS in this education sector through guidance and counselling programmes and HIV and AIDS workshops. Furthermore, it is of importance to curriculum developers in evaluating the effectiveness of AIDS education programmes for hearing impaired pupils. The study forms a base upon which others can develop their studies.

1.6 Limitations of the Study
The following were the limitations of the proposed study:

The study limited itself to schools of pupils with hearing impairments in only one province in Kenya. For more conclusive results, all the institutions of learners with hearing impairments in Kenya ought to be studied. However, this was not possible due to limited time and financial resources.

1.6.1 Delimitation of the Study
The proposed study confined itself to primary schools for pupils with hearing impairments in Central Province of Kenya and only the pupils in the middle and upper classes were subjected to the study. As such, pupils in regular primary schools in the province were not subjected to the study.

1.7 Assumptions of the Study
The following assumptions were made:

i) All the respondents would co-operate and provide reliable responses
ii) The middle and upper primary pupils with hearing impairments in Central Province are a susceptible group to HIV and AIDS because they have reached adolescent stage and some are sexually active.

iii) The researcher assumed that this study would increase the HIV and AIDS awareness level among the pupils with hearing impairments.

1.8.0 Theoretical Framework

1.8.1 The Health Beliefs Model (HBM)

Michael (1995) has examined the Health Beliefs Model (HBM) as the model widely used for HIV prevention studies. The Health Beliefs Model is one of the several psychological approaches to the study of health behaviour. It derives originally from the theories of the social psychologist, Kurt Lewin. It conceives of risk behaviour as arising out of the individual’s ignorance – the locus of the explanation lies with the individual rather than the group or the social situation. It is argued that for individuals to engage in healthy sexual behaviour, such as safer sex, an individual has to perceive him/herself as vulnerable or susceptible to a health threat, that health threat has to be perceived as having serious consequences, the protective action that is available has to be perceived as effective and the benefits of that action have to be perceived as outweighing the perceived costs of the action. That is why the researcher felt it is important to do research in this area.

Rosenstock (1966) grafted more sociological variables on this theory. He expressed the view that even when individuals perceived that they could and should adopt a particular course of action, some trigger or cue might be required to nudge them into action.
1.8.2 Relevance of the Health Beliefs Model to the Proposed Study

In the HIV and AIDS awareness campaigns, the pupils can be categorized into two groups: Those who campaigners have been able to reach through effective mode of communication for example sign language, and written materials and are now aware of HIV and AIDS and those who, campaigners have not been able to reach due to ineffective communication modes like failure to use a language understood by pupils or even provide written materials.

The two groups of pupils will engage in different actions as advanced by the theory. Those who are aware of HIV and AIDS will try to avoid any activity that can expose them to HIV. They already know that they are vulnerable or susceptible to a health threat and that this threat (HIV and AIDS) has serious consequences. They perceive protective action that is available to them as being effective in protecting themselves against the threat for example, use of condoms while having sex, abstinence, being faithful to their partners, among others. Through this positive behaviour, they avoid AIDS and are able to complete their education and also move on to adult life.

The second group is made up of those pupils who are ignorant of HIV and AIDS. In other words, what it is, modes of transmission, preventive measures, coping mechanisms if infected and how to live with those affected and infected by the disease. They may be ignorant because the HIV and AIDS campaigners are not able to effectively communicate with them using a language they (pupils) can understand, failure to use plenty of visual aids, gestures, finger spelling and so on. As a result of lack of awareness, pupils in this group may not perceive themselves as
vulnerable or susceptible to HIV and AIDS and may not perceive unprotected sex as a risky behaviour. And since this group has low levels of knowledge of AIDS pandemic, they may not perceive the disease as a threat to them or having serious consequences. As a result of this ignorance, they may continue in risky behaviour, which exposes them to HIV and AIDS. Figure 1.1 is a conceptual framework based on Health Beliefs Model (HBM).
1.8.3: Conceptual Framework based on Health Beliefs Model

Figure 1.1: Conceptual Framework

A. Pupils who are aware of HIV and AIDS pandemic

- Pupils embrace HIV and AIDS awareness message because it has reached them through effective modes of communication. Thus they:
  - Abstain
  - Are faithful
  - Acquires skills on coping strategies if infected or affected.
  - Visit VCT
  - Stick to one partner
  - Avoid contaminated blood

- Remains safe from HIV and opportunistic infections and are able to cope if infected or affected

- Completes primary education successfully thus enabling the government to fulfill its objectives of primary education

Campaigns against HIV and AIDS

- AIDS awareness campaigns by government agents, NGOs, churches and schools comprising the following beliefs and practices:
  - AIDS is real
  - Abstain
  - Use a condom
  - Be faithful
  - Visit VCT to know your status
  - Avoid contaminated blood through ear piercing instruments, abuse of drugs by injection, traditional circumcision rituals
  - Avoid mother to child transmission
  - Seek guidance on how to live with and care for infected and affected persons.

B. Pupils who are ignorant of HIV and AIDS Pandemic

- Do not:
  - Abstain
  - Use condom
  - Remain faithful
  - Visit VCT
  - Avoid contaminated blood
  - Know how to live with infected and affected
  - Have one sexual partner

- Contracts HIV and AIDS and opportunistic infections

- May die early, this poses a challenge to primary education

Source: Researcher
1.9: Operational Definition of terms

**AIDS** - Acquired Immune Deficiency Syndrome. This is the clinical end stage of HIV disease in an infected individual. At this stage, the person’s immune system is weakened by the virus to an extent that it is not able to fight the opportunistic infections successfully.

**Assessment** - Process of ascertaining the level of hearing loss in order to determine where to place the person for example schools for HI units, vocational centres and others.

**Awareness** - Knowledge of particular aspects in an area affecting an individual. In this study awareness is used to refer to the HIV and AIDS aspects like knowledge of disease, modes of transmission, preventive measures, coping mechanisms, caring and living with persons infected and affected.

**Evaluation** - Determining the degree of awareness of HIV/AIDS issues. In this study, 50% level of knowledge was considered acceptable as someone having adequate knowledge in the area under investigation.

**HIV** - Human Immunodeficiency Virus, the virus that causes AIDS. This happens after the virus successfully weakens the victim’s immune system.

**Opportunistic infections** - These are the various illnesses that affect an individual who has AIDS as a result of weakened immune system.

**Pupils with hearing impairments** - This refers to those pupils whose auditory system is completely or partially weakened for effective processing of auditory information. The degree of the hearing loss is measured in decibels.

**Risky behaviour** - This refers to actions that exposes one to HIV and AIDS. They include unprotected sex and exposure to contaminated blood.
CHAPTER TWO
REVIEW OF RELATED LITERATURE

2.0 Introduction
This chapter focused on the review of literature related to the following areas: HIV and AIDS in some selected regions in the World, methods of HIV transmission, HIV and AIDS awareness campaigns in Kenya, primary school pupils and HIV and AIDS vulnerability, what constitutes effective modes of HIV and AIDS awareness campaigns among hearing impaired pupils how to care for and live with persons infected and affected by HIV/AIDS and related studies on HIV and AIDS awareness.

2.1 HIV and AIDS in Some Selected Regions in the World
Norman and Gebre (2005) report that well into its third decade, the HIV and AIDS pandemic continues to pose a major public health challenge and that 40 million persons are living with the disease worldwide; with more than 20 million related deaths by year 2005. Tumwesigye (2004) notes that:

Over 50 per cent of new infections of HIV and AIDS are occurring in young people in the 10-24 age group. Young people, who are particularly vulnerable to HIV infection and affected by the AIDS epidemic, are at the same time the window of hope that could bring change.

In Europe, while initially homosexual transmission was the main route of HIV transmission, there is increasing transmission through drug injection and heterosexual routes (Hubley, 1995). Here, the region with the fastest growing HIV epidemic is Eastern Europe. Injection of illegal drugs is increasing particularly among young people such that authorities estimate that one per cent of the adult population now injects drugs (Holden, 2003).
Hubley (1995) reports that in North America, United States has the highest number of reported AIDS cases. Most of the people affected in this region have been homosexual men and injecting drug users. New cases of HIV among homosexual men have begun to decline as a result of the impact of HIV and AIDS awareness campaigns.

UNAIDS (2002) indicates that, “Africa is thought to be home to 70 per cent of the total number of people of all ages infected with HIV in the world”. Muraah and Kiarie (2001), record that, “the devastation left behind by HIV and AIDS on the African continent is far greater than that inflicted by decades of national and regional conflicts”. According to UNAIDS (2002b), young women and men aged 15 to 24 account for 1/3 of the total 29.4 million people living with HIV in sub Saharan Africa. Kenya has 2 million HIV infected people (Henderson, 2005). Muraah and Kiarie (2001) further state that in the early and mid-1980s HIV and AIDS was largely unknown in Kenya and that Kenyans viewed it as a disease of the American homosexuals and then of Ugandans. They also note that the first reported case of AIDS in Kenya was in September 1984. According to the Ministry of Health (2001), the national HIV prevalence in Kenya in year 2000 was estimated at 14 per cent and some urban areas had a higher prevalence rate of 20 to 30 per cent, for example Thika town in Central Province where prevalence was highest. Muraah and Kiarie (2001), indicate that, “Although the rate of increase of HIV prevalence is beginning to slow down, current National Aids and STD’s Control Programme of Kenya (NASCOP) projections show that the number of infected people will still be growing by the year 2010”.
Table 2.1: HIV Projections in Kenya

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<td>0.0714</td>
<td>0.5714</td>
<td>1.05</td>
<td>2.357</td>
<td>2.857</td>
<td>3.107</td>
</tr>
</tbody>
</table>

*Source: NASCOP, 1999*

WHO (2004) states that youths are at the epicenter of preventing the progression of HIV and AIDS pandemic. Evans (1994), postulates that: “In Kenya, youth aged 15 to 24 comprise 50 per cent of all new HIV infections and STDs and consequently must be targeted for HIV awareness in decreasing transmission and reducing stigmatization”. Ministry of Education (MoE) 2001) indicates that while education sector in Kenya is one of the most affected, it also offers opportunity within which the mitigation of HIV and AIDS can be pursued. Further, Henderson (2005) has observed that HIV and AIDS present a critical challenge to the viability of education in Kenya. For example, he reports that enrolment figures have declined, many pupils especially girls have to spend time out of school caring for sick relatives and many HIV positive pupils are subjected to stigmatization in the school.

Figure 2.1: Age and Sex Distribution of Reported AIDS Cases amongst Children in Kenya (1986 – 2000).

*Source: Ministry of Health (2001)*
Ministry of Health (2001) indicates that the number of AIDS orphans (a child under the age of 15 whose parents have died of AIDS) in year 2005 was estimated to be 1.5 million. Some of these orphans are in primary schools and hence the need for studying HIV and AIDS awareness amongst this group.

### 2.2 Methods of HIV Transmission

HIV is transmitted through sexual contact, infected blood and from an infected mother to a child (Kenya, Ministry of Health, 1997). The most common route for the spread of HIV is by sexual intercourse between two people when one person is carrying the virus (Hubley, 1995). The majority of infections in Kenya are transmitted through heterosexual contact (Kenya Ministry of Health, 2001).

Another way through which HIV can be transmitted is through medical procedures particularly blood transfusion and injections, where HIV from a blood donor or patient is introduced into the body of another patient (Barnet & Whiteside, 2002). Exposure to HIV infected blood may occur as a result of transfusion of unscreened contaminated blood (Tumwesigye, 2004). Due to establishment of quality control mechanisms in laboratories that ensure screening of blood before transfusion, this method of HIV transmission is no longer of much significance (Kenya, Ministry of Health, 1997).

HIV may also be passed through invasive procedures, using shared equipment during non-medical practices such as female and male circumcision, scarification of the skin and sharing ear piercing instruments (Barnet & Whiteside, 2002).
Similarly, drug users who share needles and syringes may become infected through presence of small amounts of blood containing HIV in their shared equipment during injections (Bloor, 1995).

2.3 Ways Through Which HIV Does not Spread
Tumwesigye (2004) notes that HIV is not found in sufficient quantities to be transmitted through other body fluids such as sweat, tears, saliva, urine, faeces and vomit. As a result, HIV is not transmitted through usual contact such as sharing food, utensils, towels or toilets. Barnet and Whiteside (2002) have also reported that HIV is not spread by the bite of insects such as mosquitoes or bedbugs.
Figure 2.2: Ways Through Which HIV Does not Spread

- by mosquito bites
- by kissing
- from toilet seats
- by shaking hands
- from telephones
- by sharing cups or cutlery
- by hugging
- from coughing

Source: Hubley (1995)
2.4 HIV and AIDS Awareness Campaigns in Kenya

For school children to help slow HIV and AIDS pandemic, they need first to be educated and have knowledge about the pandemic. Research literature on the subject points to a situation where most school children in the world are uninformed or have serious misconceptions regarding pathways of HIV transmission and also harbour negative attitudes towards the seropositive population (WHO, 2004).

According to Ministry of Health (1997):

90 per cent of men and women (15-49 years) are aware of sexual transmission of HIV and AIDS. However, misconceptions about the modes of HIV transmission particularly through mosquito bites and kissing are very high; this calls for intensification of HIV and AIDS awareness particularly among young people.

It is against this background that the Kenya government called for multi sectoral response in HIV and AIDS awareness. As such, several initiatives have been taken in addressing the HIV and AIDS issue. Such initiatives include non-governmental organizations (NGO) for example, Network of women Living with AIDS and HelPAge, religious organizations, the media, the government and of late, schools and other institutions of learning (MoE, 2001).

Until recently, HIV and AIDS awareness attempts have been made all over the country though in haphazard manner. To avoid duplication of efforts by the various initiatives, the Kenya Government established the National AIDS Control Council (NACC) in November 1999, which is entrusted with coordination and provision of policy on HIV and AIDS (Kenya Ministry of Health, 2001). Evans (1994), notes that mass education campaigns in Kenya against HIV started in 1987 with an aim of
making every Kenyan aware of the deadly nature of the infection and the basic facts about how it is spread and how they can avoid it. The campaigns mainly use mass media like television, radio and printed materials to convey their HIV and AIDS awareness messages.

Gordon and Tony (1989) suggest that the most helpful printed materials are likely to be those designed for and with specific groups and helping them to analyze the risk of HIV in their own lifestyle, and to explore options for reducing this risk. Commenting on usage of printed materials among the hearing impaired community in Kenya, Henderson (2005) postulates that:

Many deaf people are illiterate with regard to printed material. Rather than attempting a miracle out of print, new visual aids and a larger vocabulary in Kenyan sign language will better address the needs of the deaf community in HIV and AIDS awareness.

Peer counselling has been employed by the various initiatives. They train a few members of the target groups on HIV and AIDS awareness who then train their peers. Hubley (1995) indicates that peer counselling ensures that HIV and AIDS awareness messages are relevant and effective because people will be more easily reached and convinced by a trusted member of their own group than by an outsider.

2.5 Primary School Pupils and HIV and AIDS Vulnerability

Hubley (1995) indicates that school children, in their early years of schooling are a section of the community who are normally free from HIV and therefore, it is important to ensure that they do not become infected. He further states that this period of life normally free from HIV infection has been called 'window of
opportunity'. He notes that this window does not stay open for long before children begin experimenting with sex, thus exposing themselves to HIV infection. It is no wonder then that 50 per cent of new infections of HIV are occurring in young people in the 10-24 age group (Tumwesigye, 2004). Tumwesigye further states that globally, over 7,000 young people are infected with HIV everyday and suggests that right information on HIV and AIDS be given to them to enable them to adopt healthy behaviour.

Gordon and Klouda (1994) state that a high incidence of pregnancy, abortion and STDs among primary school pupils means that they are at high risk of contracting HIV and AIDS. Kenya Ministry of Health (2001) concurs with this by noting that:

Levels of HIV infection are alarmingly high among school children, particularly girls. Special efforts are required to protect them through equipping them with knowledge, skills and attitudes that will keep them safe from infection before they become sexually active.

The Kenya Government has recognized the vulnerability of young people. In the 1997 sessional paper on AIDS in Kenya, it has committed itself to protecting young people from HIV infection by equipping them with adequate knowledge and skills. Further, the government has stated that, as a matter of policy, it has integrated AIDS education programmes into existing school curricula.

On pupil vulnerability, Kiragu (1991) reports that, "Today's young adults are becoming sexually active at an increasingly younger ages". This results in situations such as dropping out of school, early marriages and contracting sexually transmitted diseases like HIV and AIDS (Illinigumugabo, 1995). In support of this, Sullivan
states that, "An information gap amongst pupils concerning sexuality is one of the factors resulting in premarital sex".

Parents and adults do not give them information on sex because it is not considered culturally appropriate, hence they turn to their peers who give them inappropriate and/or inaccurate advice. Sullivan (1995) further notes that adolescent pupils have no difficulty getting books, videos and magazines which may encourage sexual freedom without giving information about the risks involved with sexual intercourse. Moreover, adolescent pupils are in a critical stage if they have limited knowledge of their body functions and the anxieties or uncertainties about safe sex. The latter places them at risk of STDs and HIV infection (Suda, 1993).

The high levels of adolescent pupils' vulnerability to HIV and AIDS calls for concerted efforts by all stakeholders in creating HIV and AIDS awareness among this group. In agreement to this, Ruto (1997) indicates that:

> With rapid social changes including the advent of HIV and the onset of fertility transition in countries like Kenya, continued ignorance of the conditions influencing adolescent pupils' choices and sexual behaviour can no longer be justified. Unless society is able to accept their sexuality, issues such as STDs, HIV and AIDS infections will continue to rise and deprive these pupils of achieving their full potential.

2.6 What Constitutes Effective Modes of HIV and AIDS Awareness Campaigns among Pupils with Hearing Impairments?

All over the world, there have been concerns by stakeholders over hearing impaired persons' marginalization in HIV and AIDS awareness campaigns. For example, in USA, Determan et al (1999) comment that:
There is very little HIV or sexuality education in schools for the deaf, especially for adolescents. Because of this, deaf persons in USA have much less knowledge and awareness of HIV transmission, prevention and treatment.

USA Department of Health and Human Services adds that in 1992, the deaf population in this country was 8 years behind the hearing population in its knowledge and awareness about HIV and AIDS.

In Kenya, Ombara (2004) laments that, "I never saw any HIV and AIDS awareness programmes or anyone opening a VCT center for deaf people in mind". He further adds that, "These campaigns should have a provision for deaf people and all provincial and district hospitals as well as government dispensaries should have workers who understand sign language". Henderson (2005) concerning hearing impaired persons in Kenya also notes that the Kenya government has no HIV/AIDS curriculum in sign language. Goldenberg (2006), adds that although most Kenyans know about the AIDS scourge, which was declared a national disaster by former president Moi, the hearing impaired persons remain 10 years behind in the prevention of AIDS campaigns that have been ongoing. He further notes that:

Most of the deaf people in Kenya especially those from rural and remote areas have little or no access to information compared to other disabled people. Most of them cannot understand the sentence constructions in the print media they can only get the story from pictures which is not much.

However, with introduction of HIV curriculum in primary schools in Kenya, it is hoped that the level of HIV awareness among primary school hearing impaired pupils will be positively affected.
Nevertheless, these sentiments lead to the question, “What constitutes the best mode of HIV and AIDS awareness creation among hearing impaired persons so that they are not marginalized in awareness campaigns?” Henderson (2005) suggests that rather than attempting a miracle out of mere print and spoken media to reach the deaf community, it is better to exploit the deaf community’s high literacy in Kenya Sign Language and its vast resource of peer leaders. He further suggests that plenty of visual aids should be used in the HIV and AIDS awareness among this community. Determan, Kordus and Carlo, (1999) agree with this suggestion and add that visual tools such as captioned videos, drawings, group activities and models of how HIV attaches to cells should be developed and used to help hearing impaired pupils think through the problems posed by HIV and AIDS.
Figure 2.3: Complicated facts can be explained in a way persons with hearing impairments can understand using Visual Aids

Source: Aboriginal Medical Service co-operative Ltd, Redfern, Australia (1994)
2.7 How to Care For and Live With Persons Infected and Affected By HIV and AIDS

Kenneth, Maries and Alexandria (2005) note that caring for and living with HIV/AIDS patient is neither a simple nor singular task. This is because as HIV/AIDS disease progresses, the responsibilities related to caring for a partner can increase. They, therefore, suggest that key caregivers should be supported by friends and other family members in caring for HIV/AIDS patients.

Helpful behaviour associated with caring and living with persons infected and affected by HIV/AIDS have been discussed by Hays, Magee and Chancey (1994) as comprising the following: providing love and concern, being confident, providing encouragement, offering proactive assistance and ensuring that the patient takes the recommended medications. They further indicate that social support has been linked with improved psychological wellbeing and decreased depression and anxiety in HIV/AIDS patients.

2.8 Related Studies on HIV and AIDS Awareness and Modes of Transmission

The government of Kenya, NGOs, religious organizations and schools are in agreement that a lot needs to be done in creating awareness of HIV and AIDS among young people. However, not many studies have been done on HIV and AIDS awareness among primary school pupils and in particular hearing impaired ones. As such, not much data on HIV and AIDS awareness among Hearing Impaired learners is available. Nevertheless, a few available studies on HIV and AIDS awareness in Kenya, South America, India and Uganda will be examined.
A study conducted by Nzioka (1994) among the youth in primary and secondary schools in Nairobi, Kenya sought to find out knowledge of youths regarding safer sex as one of HIV and AIDS preventive measures. When asked what safer sex is, some said it is ‘swapping positions’ while others said it is sex with ‘clean people’. The current study intended to find out, among other things, whether these notions regarding safer sex as one of HIV/AIDS preventive measures, also existed among hearing impaired pupils in Central Kenya, more so after vigorous HIV and AIDS campaigns after Nzioka’s study from mid-1990s.

In a study carried out by Malonza (1991), among secondary school students in Kitui, Kenya, 87% of the students had knowledge of the existence of AIDS. The study findings however indicated a lot of misconceptions regarding AIDS facts. A similar study by Sindiga and Lukhado (1993), also indicated that although the students were aware of the existence of AIDS, their knowledge of HIV was vague. This study went beyond pupils’ knowledge of AIDS pandemic to try and ascertain if they were aware of how to prevent themselves from contracting HIV.

A study conducted by WHO (2001) among young people in developing countries found that relatively few young people consider themselves to be at risk of disease or unwanted pregnancy. The study further reported that awareness of safer sex practices in curbing HIV seems to be superficial, and misinformation regarding risks of unsafe sex and its consequences is widespread. With this in mind, it was important to conduct a study among one group of Kenyan youth, that is, hearing impaired pupils in upper primary schools to ascertain if these notions regarding risk of HIV and unsafe sex were also evident among them.
Another study among pupils in five South American cities showed that more than 90% of the respondents knew the three principal modes of transmission but at the same time between 31% - 63% incorrectly identified other ways for HIV transmission, such as mosquito bites and sharing of utensils, showing that such misinformation co-exists with accurate knowledge. The study also identified an "adolescent syndrome", that is, the respondents did not consider themselves to be at risk (Remez, 1989). However, the study did not consider other core areas of HIV knowledge, that is, awareness of preventive measures, awareness of how to relate with people affected by HIV and AIDS and awareness of coping mechanisms if infected. These are some of the issues the current study is critically concerned with.

A similar study conducted by Hulton et al (2000), in Mbale, Uganda, among students sought to find out perceptions of risky sexual activity. They came up with the following findings:

i) Males expressed little personal fear of AIDS and a confidence in their ability to be safe.

ii) Concern was expressed that condom use indicates infidelity or having a sexually transmitted infection. Insistence on condom use as a HIV preventive measure could break relationships.

iii) Majority of young males did not consider abstinence a realistic preventive option.

The study, however, omitted other preventive measures like faithfulness and avoidance of multiple partners and contaminated blood. This study intended to bridge this gap by examining these variables among others.
A study done by Agrawal, Rao, Chandrashekar and Couter (1999), examined the knowledge and attitudes of secondary school students and primary school pupils in India on HIV modes of transmission. A survey was used to identify attitudes and knowledge of the participants of the study. The results of this study identified many misconceptions about HIV transmission. For example, 10.9% of participants thought that HIV was airborne, and 33% thought that HIV/AIDS could be transmitted through mosquitoes. The study also revealed that 94.6% of pupils knew that HIV could be transmitted through infected syringes, and 90.0% knew that it could be passed vertically from mother to child. Eighty four per cent of pupils were aware that a virus (HIV) causes AIDS. The study found that 27% of pupils thought that there was a vaccine available for HIV and in one particular school, 47% of pupils thought there was a cure for the disease. This study however, was too general as it collected views of pupils in very many schools both in secondary and primary. The current study was more specific as it limited itself to primary schools for hearing impaired pupils in Central Province of Kenya.

Most of the above-examined studies form a quantitative study to investigate the pupils' HIV and AIDS awareness. This current study was a kind of extension of the foregoing research in Kenya and these other countries. However, the population of this study had not been adequately addressed in the previous studies.

2.9 Summary of Literature Review
The researcher reviewed literature related to HIV and AIDS in the global perspective and in Kenya; methods of HIV transmission; HIV and AIDS awareness campaigns in Kenya; primary school pupils and HIV and AIDS vulnerability; what
constitutes effective modes of HIV and AIDS awareness campaigns among hearing impaired pupils how to care for and live with persons infected with HIV and AIDS and related studies on HIV and AIDS awareness.

Globally, HIV and AIDS is a major public health challenge with more than 20 million related deaths by year 2005 and 40 million persons living with the disease worldwide (Norman & Gebre, 2002). Out of those infected, 70% live in Sub-Saharan Africa (UNAIDS, 2002). Over 50 per cent of new infections of HIV and AIDS are occurring in young people in the 10-24 age group.

Literature related to HIV and AIDS in Kenya showed that currently, Kenya has 2 million HIV infected people (Henderson, 2005). AIDS related illnesses is ranked the highest cause of mortality within the country and the Kenyan youth aged 15 to 24 comprise 50 per cent of all new HIV infection (Evans, 1994). This has a direct effect on the education sector.

Literature on methods of HIV transmission indicated that HIV is transmitted through sexual contact, infected blood and from an infected mother to a child (Kenya Ministry of Health, 1997). HIV is not transmitted through usual contact such as sharing food, utensils, towels or toilets nor is it spread by the bite of insects such as mosquitoes or bed bugs (Barnet & Whitesand, 2002). Majority of infections in Kenya are transmitted through heterosexual contact (Kenya Ministry of Health, 2001), while in Europe and North America, the major route of transmission is through anal intercourse (Detels et al 1989).
On HIV and AIDS awareness campaigns, the initiatives involved in HIV and AIDS awareness are the Kenya Government, NGOs, religious organizations, the media, schools and other institutions of learning (MoE, 2001). These initiatives mainly use the mass media to convey their HIV and AIDS awareness message. Henderson (2005) suggests that new visual AIDS and a larger vocabulary in Kenyan sign language will better address the needs of the deaf community in HIV and AIDS awareness.

In the area of primary school pupils and HIV vulnerability, Gordon and Klauda (1994) state that high incidence of pregnancy, abortion and STDs among primary school pupils means that they are at high risk of contracting HIV and AIDS. It is, therefore, important to equip young people in primary schools with HIV and AIDS knowledge in order to keep them safe from infection.

Finally, related studies on HIV and AIDS awareness indicated the importance of awareness creation in curbing the adverse effects and spread of HIV. Members sampled in these studies responded differently to HIV and AIDS aspects depending on their level of awareness of the disease. Related studies included: Nzioka (1994), Malonza et al (1991), Sindiga and Lukhado (1993), WHO (2001), Remez (1989), Hulton et al (2000), Agrawal et al (1999) and Puri et al (2003). Some of the findings of these studies included the following: A number of youth had misconceptions regarding safer sex as one of the HIV preventive measures; knowledge of HIV and AIDS was mingled with false beliefs like transmission through mosquito bites and sharing utensils; most young people did not consider themselves to be at risk of
HIV, they viewed it as a disease of gay persons and injecting drug users; condom use as one of the HIV preventive methods was interpreted by most young people to indicate infidelity; majority of males did not consider abstinence a realistic preventive option and some pupils indicated that vaccine for HIV is available.

The findings of these studies reinforced the need for the current study. However, they mainly focused on hearing community, therefore, the need for the study on deaf community in this current study. Further, these studies did not address well the issues of how to care for and live with persons infected and affected by HIV and AIDS, therefore, this current study went further to examine these gaps as it sought to evaluate the HIV and AIDS awareness among the upper primary hearing impaired pupils in Central Province of Kenya.
CHAPTER THREE

METHODOLOGY

3.0 Introduction
This chapter presents the methodology that was employed in the study. The chapter also focused on research design, location of the study, target population, sampling techniques and sample size, construction of research instruments, pilot study, data collection techniques, data analysis and logistical and ethical considerations.

3.1 Research Design
A descriptive survey design was employed to find out the level of awareness of HIV and AIDS among the hearing impaired pupils. Mutai (2000) describes survey as an attempt to correct data from members of a population in order to determine the current status of that population with respect to one or more of the variables. Descriptive survey is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals (Kombo & Tromp, 2006). This design was chosen because there was need to obtain the views of all the standard 4, 5, 6 and 7 pupils with hearing impairments in the selected schools in Central Province. The design was, therefore, suitable for this study because it helped in obtaining information that described existing phenomena on HIV/AIDS by asking the participants about their perceptions, attitudes and behaviour.

3.1.1 Variables of the study
i) Independent variables of this study were: ages of the pupils, class, gender and type of school.
ii) Dependent variables of the study comprised the level of knowledge of HIV among the pupils (that is, level of awareness of HIV/AIDS).

3.2 Location of the Study
The locale of the study was in Central Province, Kenya. This location was purposively chosen because each of the old five districts that is, Kiambu, Murang’a, Nyeri, Nyandarua and Kirinyaga have a special school for pupils with hearing impairments. New districts in the province created in the late 1990s and early 2000, that is Maragua and Thika districts, have no schools for pupils with hearing impairments and were, therefore, not subject of this study. However, the population of these new districts is covered in the study.

Thika town which is a major urban centre in Central Province is located within the vicinity of these schools and it was reported by Muraah and Kiarie (2001) to be among towns in Kenya with very high HIV prevalence rates of between 20-30% by the year 2000. There was, therefore, need to focus on this locality and establish whether pupils with hearing impairments found within this vicinity were aware of the disease and issues related to it together with its implications upon their lives.

Further, Central Province borders Nairobi Province and all the schools targeted in the study are very close to the town. This is significant because Nairobi Province had a very high HIV prevalence rate of 9.9% by province in the year 2003 (refer to Appendix II and Table 3.1). The transmission of the virus can, therefore, easily spread from Nairobi to Central Province and thus this further reinforced the need for choosing this location. Also Central Province prevalence rate of 4.9% during the
same period is equally significant consideration in choosing this location especially considering that it is higher than that of neighbouring Eastern Province which had 4.0% prevalence rate.

Table 3.1: HIV Prevalence Rate by Province in Year 2003

<table>
<thead>
<tr>
<th>Province</th>
<th>Prevalence rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastern</td>
<td>0%</td>
</tr>
<tr>
<td>Eastern</td>
<td>4.0%</td>
</tr>
<tr>
<td>Central</td>
<td>4.9%</td>
</tr>
<tr>
<td>Western</td>
<td>4.9%</td>
</tr>
<tr>
<td>Rift Valley</td>
<td>5.3%</td>
</tr>
<tr>
<td>Coast</td>
<td>5.8%</td>
</tr>
<tr>
<td>Nairobi</td>
<td>9.9%</td>
</tr>
<tr>
<td>Nyanza</td>
<td>15.1%</td>
</tr>
</tbody>
</table>

Source: Kenya Demographic Health Survey, 2003

3.3 Target Population

There are 41 schools for children with hearing impairments in the 8 provinces of Kenya with about 3,936 pupils, but this study targeted 240 pupils with hearing impairments in the 5 public schools for the pupils with hearing impairments in Central Province of Kenya. This population consisted of pupils from standards 4, 5, 6 and 7. Schools for hearing impaired persons are required by the Ministry of Education to admit a maximum of 12 pupils per class. These 5 schools are Kambui, Murang’a, Tumutumu, Kerugoya and Nyandarua schools for the deaf. The reason for choosing schools for the hearing impaired was that this group of children require a specialized kind of HIV and AIDS awareness campaign method because they are
cut off from the auditory world. The level of HIV and AIDS awareness among this group of learners indicated whether the methods employed in HIV and AIDS awareness campaigns among them have been effective.

3.4 Sampling Procedure and Sample Size

Four out of the five schools were involved in the study. The probability random sampling technique was used to select the required sample of 192 pupils out of the 240 pupils. Mugenda and Mugenda (1999) indicate that random sampling involves giving a number to every subject, placing the numbers in a container and then picking any number at random. Subjects picked are then included in the sample. Therefore, simple random sampling involving lottery method was used to select the four schools required for the study. The names of all the five schools in the province were written on identical pieces of paper and then folded, put in a tin and thoroughly mixed. Four papers were then picked and unfolded. These represented the four schools that were included in the study. The paper that was not picked represented the school that was not included in the study. This school, however, was used for piloting. All the pupils in standards 4, 5, 6 and 7 in the schools that were subjected to the study were purposively selected. Other pupils in upper primary (class 8) were not subjected to the study.

Orodho (2005) recommends that where respondents being targeted are few, it is advisable to study the whole population. In this case, schools for the hearing are required by Ministry of Education to admit 12 pupils per class, which represents a low population. The four schools that were subjected to the study yielded a sample
size of 192 respondents. All the pupils in selected classes were included in the study regardless of the class size, whether more or less than 12.

Pupils in standards 4, 5, 6 and 7 were chosen because at this level, the pupils had acquired some confidence and literacy to enable them to understand, interpret and respond to items on the questionnaire that this study employed. Moreover, most of them were at the onset of adolescence (12-14 years), which is associated with sexual experimentation, and therefore, their sexual behaviour is more likely to expose them to HIV and AIDS (Suda, 1993). Further, at this age, other forms of experimentation like abuse of drugs through injection and ear piercing are also common at this level of schooling and they too expose them to HIV and AIDS (Barnet & Whiteside, 2002). Thus, their HIV and AIDS awareness was more vital compared to that of learners in the lower classes. Pupils in standard 8 were not subjected to the study because, being a candidate class, they were busy revising for their KCPE. As such, they could not have sufficient time to respond to the items on the questionnaire.

3.5 Construction of Research Instruments

The study utilized a questionnaire adapted from Mando (2005), in gathering data from the pupils. A questionnaire was considered appropriate because it enables a researcher to collect a lot of information within a very short period of time.

The questionnaire consisted of 41 closed ended items and 8 open-ended items. It comprised sections A, B, C, D, E which were arranged according to the objectives of the study. Section A had 3 items on pupils background information, section B consisted of 7 items on knowledge of HIV and AIDS disease, section C
had 15 items on knowledge of transmission, section D had 8 items on HIV preventive measures and section E which had 5 items solicited data on knowledge of living and caring for people living with and affected by HIV and AIDS.

Pupils were required to tick the applicable responses in closed-ended items and to write the word or short statement in open-ended questions. The open-ended items required the respondent to give his/her opinion through brief explanation.

3.6 Pilot Study

A pilot study was conducted in the school that was not selected for the study during random sampling. Thus, this school did not participate in the actual study. Piloting was necessary in order to enhance the validity and reliability of the instrument chosen. The pilot study enabled the researcher to modify the research instrument before the actual study and if and where necessary deal with unclear instructions, insufficient space to write the responses among others. Piloting was done twice through a test-retest technique following the same conditions that were employed in the actual study.

3.6.1 Validity of the Research Instruments

Validity is the ability of the item to measure what it is supposed to measure. Franklin and Thracher (1976) state that content validity is determined by expert judgement. For this reason, the questionnaire was scrutinized and its content validated by the researcher and an expert from the HIV/AIDS control unit from Kenyatta University. Appraisal of what the content of the questionnaire measured was given.
3.6.2 Reliability of the Research Instruments
Reliability refers to the degree to which an instrument is consistent in producing the same results when measuring the same thing at different times (Slavin, 1984). To establish reliability, the developed questionnaire was administered on two occasions to identical respondents who were not included in the actual study, at an interval of two weeks. A comparison between responses obtained in the two durations were made using Pearson’s Product Moment Correlation Coefficient. Correlation coefficient of 0.8 was obtained; therefore, the instrument was judged to be reliable for the study.

3.7 Data Collection Techniques
During the actual data collection, the researcher was assisted by two trained research assistants. Further, the class teachers of the pupils in the respective schools assisted in the explanation, interpretation and clarification of the items, using sign language so as to ensure that no items were missed out, or misinterpreted. The respondents were assured of confidentiality and anonymity, thus they were not required to write their names on the questionnaire.

3.7.1 Data Analysis
Data collected were coded and analysed using Statistical Packages for Social Sciences (SPSS). After this, the data were edited. Descriptive statistics that is frequency distribution tables, bar graphs and pie charts were used to present the data. Analysis was then done using percentages to determine the level of HIV and AIDS awareness among the pupils by considering the objectives of the study. Fifty percent level was considered acceptable as someone having adequate knowledge in the area under investigation.
3.8 Logistical and Ethical considerations

The researcher sought permission to collect data from the Ministry of Education (MoE), the DEOs in the respective districts where the study was conducted and the headteachers of each of the schools sampled. Arrangements on the day to conduct the study were then made, in liaison with the headteachers of the schools under study. The respondents were assured that the information would be treated with utter confidentiality and used for the study only.
CHAPTER FOUR
DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction
This chapter presents the analysis and discussion of data collected for this study. The results were interpreted and discussed in relation to the research questions raised in chapter one.

The study sought to evaluate HIV and AIDS awareness among primary school pupils with Hearing Impairments in Central Province of Kenya. The study was conducted in public primary schools in five districts of the province. The districts were purposively chosen because each of the districts, that is, Kiambu, Nyeri, Murang’a, Nyandarua and Kirinyaga has each a special school for the hearing impaired. The pupil population in each school ranged from 96 and above for a single stream. The sample size which included pupils only was 192 from targeted population of about 480. The responses were tabulated. The tables bear the frequencies and percentages of the responses given. The findings were presented under the following themes:

- Establishing whether the pupils with hearing impairment in Central Province have the knowledge of HIV and AIDS pandemic.
- Finding out the level of awareness of modes of HIV transmission among pupils with hearing impairments.
- Investigating awareness of HIV and AIDS preventive measures among pupils with hearing impairments.
• Finding out awareness among pupils with hearing impairments of how to care for and live with persons infected and affected by HIV and AIDS.

4.1 Contextual Characteristics of the Respondents

Information on age and gender.

4.1.1: Gender and Age

The data were collected from 192 pupils. Their distribution by classes was as follows: 52 from standard 4, 49 from standard 5, 43 from standard 6 and 48 from standard 7.

Table 4.1: Gender and Age

<table>
<thead>
<tr>
<th>Age Range</th>
<th>MALE</th>
<th>Per cent</th>
<th>FEMALE</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-12 yrs</td>
<td>20</td>
<td>10.41</td>
<td>19</td>
<td>9.9</td>
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<tr>
<td>13-15 yrs</td>
<td>26</td>
<td>13.5</td>
<td>31</td>
<td>16.1</td>
</tr>
<tr>
<td>16-18 yrs</td>
<td>19</td>
<td>9.9</td>
<td>33</td>
<td>17.2</td>
</tr>
<tr>
<td>19-20 yrs</td>
<td>17</td>
<td>8.9</td>
<td>27</td>
<td>14.1</td>
</tr>
<tr>
<td>Total by gender</td>
<td>82</td>
<td>42.7</td>
<td>110</td>
<td>57.3</td>
</tr>
<tr>
<td>Total No. pupils</td>
<td></td>
<td></td>
<td>192</td>
<td></td>
</tr>
</tbody>
</table>
The table 4.1 and figure 4.1 show that the study sample had more females than males, that is 110 females against 82 males. Majority of the male respondents fall between ages 13-15 years which is 31.71% while majority of female respondents were in the age bracket of 16-18 years. Minority of the male and female respondents were in the age bracket of above 18 years and 10-12 years respectively.

Most of the pupils were past primary school age because of late enrolment and delay in one class as they tried to master sign language. Late enrolment was also as a result of some of the parents’ reluctance to educate children with special needs. It was also noted that the number of boys begin to decrease in the higher age groups. This could be due to the fact that some drop out to join institutions offering vocational training. The training mainly deals with manual tasks that require older boys. This, however, is not justified because they could still join these institutions after completing primary school.

4.2: Knowledge of HIV and AIDS
The first research question was; “How much do the pupils with hearing impairments in Central Province know about the HIV and AIDS pandemic?” The study sought to establish whether the pupils with hearing impairments are aware of the HIV and AIDS pandemic. All the sampled pupils responded to this question.
4.2.1: Knowledge of HIV/AIDS

The study sought to know whether pupils with hearing impairment in Central Province had the knowledge of HIV and AIDS pandemic.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>169</td>
<td>88.02</td>
</tr>
<tr>
<td>NO</td>
<td>23</td>
<td>11.98</td>
</tr>
<tr>
<td>TOTAL</td>
<td>192</td>
<td>100.0</td>
</tr>
</tbody>
</table>

According to table 4.2 above, most of the pupils (88.02%) indicated that they knew the disease named HIV/AIDS. 23 pupils (11.98%) indicated that they did not know about this disease. This means that HIV and AIDS awareness campaigns targeting pupils with hearing impairments have borne fruit. The findings, however, indicated a lower level of awareness compared to those of Mando (2005) who observed that 99.4% of his respondents in a related study among hearing primary school pupils in Thika District were aware of HIV and AIDS. This points to a serious situation where 11.98% of the pupils with hearing impairments are not aware of this disease. These should be made aware of the disease and its implications upon their lives by HIV and AIDS awareness campaigners.
4.2.2: Sources of Knowledge about HIV and AIDS

The researcher wanted to know the source(s) of their information/knowledge.

Table 4.3 Sources of HIV and AIDS

<table>
<thead>
<tr>
<th>Source</th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>RADIO</td>
<td>15</td>
<td>7.80</td>
</tr>
<tr>
<td>FRIENDS</td>
<td>42</td>
<td>21.88</td>
</tr>
<tr>
<td>PARENTS</td>
<td>50</td>
<td>26.04</td>
</tr>
<tr>
<td>SCHOOL MATE(S)</td>
<td>21</td>
<td>10.94</td>
</tr>
<tr>
<td>TEACHER(S)</td>
<td>33</td>
<td>17.19</td>
</tr>
<tr>
<td>TELEVISION</td>
<td>31</td>
<td>16.15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>192</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 4.3 and Figure 4.2 clearly indicate that the information on HIV/AIDS reaches the targeted respondents through all the various sources indicated. Parents as a source of information on HIV and AIDS took the highest, 26.04%. This was a good indicator that parents were willing to inform their children about this disease. Friends had a share in this responsibility as they accounted for 21.88%. Teachers
accounted for 17.19% which was much below parents and friends and close to the television. This indicates that most teachers were not keen in availing HIV/AIDS information despite the fact that it is incorporated in all the subjects taught. They should, therefore, be sensitized on the importance of creating awareness of this disease among the pupils. However, the mass media particularly radios and televisions which are the main mouth pieces of the campaigners accounted for relatively small percentage of information on HIV and AIDS pandemic. This is in contrast to Mando’s study (2005) among primary school hearing pupils in which television and radio as sources of HIV/AIDS information accounted for 32%. The low impact of the radio as a source of HIV and AIDS information among the hearing impaired pupils could be attributed to the fact that these pupils are cut off from the auditory world as they are mainly visually oriented. The HIV campaigners targeting the persons with hearing impairments should, therefore, replace radio with visual modes of information on HIV transmission. Determan et al (1999), in chapter 2 of this study suggest that tools such as captioned videos, drawings and group activities should be used to help hearing impaired pupils think through the problems posed by HIV and AIDS.

4.2.3: Knowledge of Preventive measures

Table 4.4: Types of HIV & AIDS Information Received

<table>
<thead>
<tr>
<th>Information</th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>On abstinence</td>
<td>55</td>
<td>28.65</td>
</tr>
<tr>
<td>On faithfulness</td>
<td>58</td>
<td>30.21</td>
</tr>
<tr>
<td>On condoms</td>
<td>79</td>
<td>41.15</td>
</tr>
<tr>
<td>Total</td>
<td>192</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 4.4 indicates that majority of respondents (41.15%) had received HIV/AIDS information on the use of condoms. Similarly, 30.21% and 28.65% of the pupils had received information on faithfulness and abstinence respectively. This indicates that HIV and AIDS awareness has gone down well especially on ABC tips, that is, abstain, being faithful and use of condom. Although condom use is a good measure against HIV, abstinence should be encouraged especially among the youth.

The fact that friends account for a significant percentage of source of information on HIV and AIDS is a pointer to the fact that HIV awareness campaigners should focus more on peer counsellors to disseminate information to the pupils.

4.2.4: Beliefs about the Existence of HIV and AIDS

Table 4.5: Beliefs on HIV and AIDS

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>159</td>
<td>83.68</td>
</tr>
<tr>
<td>NO</td>
<td>31</td>
<td>16.32</td>
</tr>
<tr>
<td>Total</td>
<td>190</td>
<td>100</td>
</tr>
</tbody>
</table>

Majority of the respondents believed that HIV/AIDS does exist, that is 159 of the respondents translating to 83.68%. 31(16.32%) provided a negative response while 2 (1.04%) failed to respond to the question.

The fact that majority of the pupils indicated that they perceived HIV/AIDS as a reality is positive in the fight against the pandemic as only when one perceives a disease to be a reality can he/she take the necessary precautions against it.
4.2.5: Do the Terms HIV and AIDS Mean the Same Thing to You?

The study wanted to establish whether the students knew the difference between the terms HIV and AIDS.

Table 4.6: Meaning of the HIV and AIDS

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>38</td>
<td>21.35</td>
</tr>
<tr>
<td>NO</td>
<td>151</td>
<td>78.65</td>
</tr>
<tr>
<td>Total</td>
<td>189</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The researcher wanted to establish whether the students knew the difference between the terms HIV and AIDS. Table 4.6 shows that the respondents knew the difference between HIV and AIDS. This is supported by the results presented in table 4.2. However, a small percentage of 21.35% do confuse the meanings of HIV and that of AIDS, meaning there is still room for more work in HIV awareness among the pupils. This awareness should be aimed at ironing out the differences in meaning of HIV and AIDS in which 21.35% indicated a misconception that the two terms mean the same thing.

4.2.6: Awareness of People Suffering from HIV and AIDS

Table 4.7: Knowledge of People Suffering from HIV and AIDS

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>136</td>
<td>71.20</td>
</tr>
<tr>
<td>NO</td>
<td>55</td>
<td>28.80</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 4.7 indicates that majority of the respondents, that is 136(71.2%) knew or had seen HIV/AIDS victims. Fifty five (28.8%) claimed that they had never seen or met a person suffering from HIV/AIDS. One (0.5%) pupil did not respond to the question.

Table 4.8: Categories of the People Suffering from the HIV and AIDS

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>RELATIVE(S)</td>
<td>78</td>
<td>40.84</td>
</tr>
<tr>
<td>FRIEND(S)</td>
<td>41</td>
<td>21.46</td>
</tr>
<tr>
<td>PARENT(S)</td>
<td>42</td>
<td>21.99</td>
</tr>
<tr>
<td>SCHOOL MATE(S)</td>
<td>30</td>
<td>15.71</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Figure 4.3: Knowledge of the people suffering from the HIV and AIDS

According to table 4.7 and figure 4.3, 136 pupils (71.2%) reported having known HIV & AIDS persons. The categories of these people include 78(40.84%) who are relatives, friends 41(21.46%), parents 42(21.99%) and school-mates 30(15.71%). One pupil (0.5%) did not respond to this question.
Majority of the pupils indicated having knowledge of people suffering from HIV and AIDS (71.20%) while 28.80% indicated they had no knowledge of anybody suffering from HIV and AIDS. The high percentage of the pupils who are knowledgeable of people suffering from HIV and AIDS may be attributed to the many people who are now going public to declare their HIV positive status some of whom are relatives, friends, parents and schoolmates. Open declaration of one’s HIV status should continue to be encouraged as it helps in removing stigmatization associated with AIDS and also makes the disease a reality among the pupils.

4.3: Level of Awareness of Modes of HIV Transmission among Pupils with Hearing Impairments

The second area of concern was about the modes of HIV transmission. The study sought to establish whether the pupils with hearing impairments knew how HIV is transmitted from one person to another.

4.3.1: Sexual Involvement

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>20</td>
</tr>
<tr>
<td>NO</td>
<td>165</td>
</tr>
<tr>
<td>Total</td>
<td>185</td>
</tr>
</tbody>
</table>

Table 4.9 clearly shows that 20(10.81%) of the respondents are sexually active, however, majority of the respondents (89.19%) stated that they were not. 7(13.44%) pupils did not answer the question.
As indicated in chapter 2, the major mode of HIV transmission is through unprotected sexual intercourse (Hubley, 1995). Table 4.9 shows that a significant number of the respondents were sexually active while majority stated that they were not.

This, therefore, means that a number of the pupils are in danger of contracting HIV because they are sexually active. According to table 4.11, some of these pupils indicated that they did not use a condom during sexual intercourse and others had the misconception that HIV does not infect primary school children. There is, therefore, need to emphasize safer sexual practices among them. However, there is a ray of hope as majority of the pupils (89.19%) did not engage in sexual intercourse. This means that if they can be helped to sustain abstinence in their lives, they could be safe from the deadly scourge of HIV/AIDS. Hubley (1995) states that young children who are free from HIV infection offer a window of opportunity. It is, therefore, important to ensure that these children do not become infected by cautioning them against engaging in sexual intercourse while they are still young because this window does not remain open for long.

It is likely that some pupils who engage in sexual activity do so to seek acceptance and compensation for their handicap from other members of society who in many cases show them open discrimination. There is, therefore, need to avoid discriminating people with disabilities in the society.
4.3.2: Risk of Contracting HIV

Table 4.10: Risk of contracting HIV & AIDS

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>122</td>
<td>64.55</td>
</tr>
<tr>
<td>NO</td>
<td>67</td>
<td>35.45</td>
</tr>
<tr>
<td>Total</td>
<td>189</td>
<td>100</td>
</tr>
</tbody>
</table>

Majority of the respondents from table 4.10 that is 122(64.55%), admitted that they are at risk of contracting HIV/AIDS. The rest of the respondents 67(35.45%) believed that they were not at risk of contracting HIV/AIDS. A total of 3(5.76%) did not respond to the question.

Majority of the respondents indicated that they were at risk. However, high level of risk perception does not necessarily indicate HIV precaution taking because some do not use condoms or practise abstinence. Thirty five point four five percent indicated that they were not at risk. This is in agreement with table 4.11 where some indicated that HIV does not infect primary school pupils.

Personal perception of risk is important in the fight against the pandemic as only when the pupils perceive themselves to be at risk will they take the necessary precautions against the HIV infection. There is, therefore, need to emphasize to the pupils that HIV knows no barriers as it can infect anybody regardless of age and status. The respondents did not give any other reason for not considering themselves to be at risk of contracting HIV therefore, ‘other’ response was left unanswered.
Table 4.11: Precautions against HIV & AIDS

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have a faithful partner</td>
<td>43</td>
<td>22.63</td>
</tr>
<tr>
<td>I abstain</td>
<td>114</td>
<td>60.0</td>
</tr>
<tr>
<td>I use condom during sexual intercourse</td>
<td>11</td>
<td>5.79</td>
</tr>
<tr>
<td>HIV/AIDS does not infect primary school pupils</td>
<td>22</td>
<td>11.58</td>
</tr>
<tr>
<td>Total</td>
<td>190</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.11 indicates that majority of the respondents 114(60%) practised abstinence. This is encouraging especially when you compare with their knowledge on condoms. It also compares favourably with responses on table 4.9 where 165(89.19%) reported that they were not sexually involved. Those who indicated to have faithful partners were 43(22.63%). The use of condoms as a way of HIV and AIDS precaution were 11(5.79%). However, some respondents amounting to 22(11.58%) believed that HIV does not infect primary school children.

In Mando's study (2005), among regular pupils, those who abstained were higher at 93.3% and therefore, this calls for more awareness creation on abstinence among hearing impaired to match their hearing counterparts. It is also evident that some fail to take any form of precaution perhaps because they do not engage in sexual intercourse but some fail to do so because of the false belief that HIV does not infect primary school children. These should be made aware that HIV can infect anybody regardless of age. As has been established in this research, many young people with hearing impairments are beginning sexual activity at a relatively early age. This, therefore, calls for thorough prevention activities long before they start engaging in
sexual intercourse. Thus, parents and teachers should be sensitized on the need to educate these children on preventive measures of HIV before they reach puberty stage, when they mainly start experimenting in sex.

### 4.3.3 Knowledge of transmission

This research question sought to find out if pupils were aware of HIV transmission routes.

**Table 4.12: Knowledge of HIV and AIDS Transmission**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Yes (+) responses</th>
<th>Per cent</th>
<th>No (-) responses</th>
<th>Per cent</th>
<th>Total per cent</th>
<th>Total frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only HIV positive people can transmit HIV</td>
<td>157</td>
<td>82.2</td>
<td>34</td>
<td>17.8</td>
<td>100</td>
<td>191</td>
</tr>
<tr>
<td>One cannot contract HIV the first time of sexual intercourse</td>
<td>38</td>
<td>20.11</td>
<td>151</td>
<td>79.89</td>
<td>100</td>
<td>189</td>
</tr>
<tr>
<td>Young and healthy people cannot contract HIV</td>
<td>44</td>
<td>23.28</td>
<td>145</td>
<td>76.72</td>
<td>100</td>
<td>189</td>
</tr>
<tr>
<td>One can be infected with HIV and fail to show any signs and symptoms</td>
<td>163</td>
<td>84.9</td>
<td>29</td>
<td>15.1</td>
<td>100</td>
<td>192</td>
</tr>
<tr>
<td>One cannot contract HIV from young and healthy looking persons</td>
<td>158</td>
<td>83.16</td>
<td>32</td>
<td>16.84</td>
<td>100</td>
<td>190</td>
</tr>
<tr>
<td>HIV can only infect homosexuals and prostitutes</td>
<td>22</td>
<td>11.52</td>
<td>169</td>
<td>88.48</td>
<td>100</td>
<td>191</td>
</tr>
<tr>
<td>Can sharing injection equipment transmit HIV?</td>
<td>52</td>
<td>27.23</td>
<td>139</td>
<td>72.77</td>
<td>100</td>
<td>191</td>
</tr>
<tr>
<td>Do you share ear piercing instruments</td>
<td>126</td>
<td>65.97</td>
<td>65</td>
<td>34.03</td>
<td>100</td>
<td>191</td>
</tr>
<tr>
<td>One can contract HIV through ear piercing instruments</td>
<td>151</td>
<td>79.89</td>
<td>38</td>
<td>20.11</td>
<td>100</td>
<td>189</td>
</tr>
<tr>
<td>HIV can be transmitted though sharing circumcision equipment</td>
<td>148</td>
<td>78.38</td>
<td>41</td>
<td>21.69</td>
<td>100</td>
<td>189</td>
</tr>
<tr>
<td>Insects bites like mosquitoes can transmit HIV</td>
<td>34</td>
<td>17.8</td>
<td>157</td>
<td>82.2</td>
<td>100</td>
<td>191</td>
</tr>
</tbody>
</table>
Table 4.12 shows that 157(82.2%) were aware that only the HIV positive people can infect others with HIV. Thirty-four (17.8%) indicated that it is not only those who are HIV positive who would infect other people with HIV. One (0.52%) pupil did not respond.

Majority of respondents (79.98%) indicated that one cannot contract HIV the first time one engages in sexual intercourse as opposed to 20.11% who were aware that one can contract HIV during the first sexual engagement. Forty-four pupils (23.28%) believed that young and healthy people cannot contract HIV. This is in line with the argument advanced in table 4.11 where some of the respondents indicated that HIV does not infect primary school children. However, majority of the respondents (76.72%) were aware that young and healthy people can contract HIV.

Results from the table indicate that 84.9% were aware that one can be infected with HIV/AIDS and yet fail to show any signs or symptoms of illness for many years. Twenty-nine (15.1%) are ignorant of this fact as they gave a negative response. The results further indicate that 158(83.16%) knew that it is possible to contract HIV from someone who looks young and healthy. This is in support of the response that one can contract HIV even if he/she is young and healthy. In which case, 32 (16.84%) of the respondents disagreed with this view.

Most of the pupils, that is, 88.48% were aware that HIV does not only infect homosexuals and prostitutes while 11.52% indicated that it can only infect these two groups of people. Majority (72.77%) of the respondents were aware that sharing of
injection equipment can transmit the virus while 27.23% were not. Majority indicated that they had shared needles with their classmates to pierce their ears as opposed to 34.03% who had not. In agreement to this, majority knew that one can get infected with HIV through such sharing but there were few (20.11%) who did not know this. Similarly, 78.38% knew that unsterilised circumcision equipment can transmit the virus but still there were few (21.69%) who were ignorant of this fact. Three pupils did not attempt this question. On transmission through insect bites, there were some who were ignorant of the fact that the bites do not transmit the virus.

These findings indicate that there were many pupils who were knowledgeable about HIV routes of transmission but still there were several of them who harboured misconceptions about the same. On the various misconceptions regarding HIV transmission, 11.58% as earlier indicated are of the opinion that HIV does not infect primary school children; 17.8% do not know that only HIV positive people can infect others with HIV; 20.11% had the misconception that one cannot contract HIV the first time one engages in sexual intercourse; 23.28% believe that one cannot contract HIV if young and healthy; 15.1% had the misconception that one cannot be infected with HIV and fail to show any signs and symptoms of illness; 16.84% of the pupils wrongly believe that one cannot contract HIV from someone who looks young and healthy; 11.52% believe that HIV can only infect homosexuals and prostitutes; 27.23% had the misconception that one cannot contract HIV through sharing injection equipment. 65.97% indicated that they shared ear piercing equipment with their classmates but despite this, 20.11% had the misconception that
one cannot contract HIV through ear piercing practice. Minority (21.69%) of the pupils were ignorant of the fact that one can contract HIV through sharing unsterilized circumcision equipment. These misconceptions among the pupils need to be urgently addressed because they are a barrier to HIV preventive efforts. The pupils should be made to understand that HIV affects all classes of people including primary school children, that one can contract HIV even during the first sexual encounter and that this can be transmitted by a healthy looking person.

The pupils should also be educated on other routes of transmission involving blood like sharing ear piercing instrument, drug injection and circumcision equipment with a view to stopping this sharing. Bloon (1995) indicates that users of such equipment may become infected through presence of small amounts of blood containing HIV in their shared equipment.

4.3.14: Ways that a Person contract HIV

Table 4.13: Ways of Contracting HIV

<table>
<thead>
<tr>
<th>方式</th>
<th>频率</th>
<th>百分比</th>
</tr>
</thead>
<tbody>
<tr>
<td>与HIV阳性人员握手</td>
<td>28</td>
<td>14.66</td>
</tr>
<tr>
<td>与HIV阳性人员共用厕所和餐具</td>
<td>31</td>
<td>16.23</td>
</tr>
<tr>
<td>与HIV阳性人员接吻</td>
<td>37</td>
<td>19.37</td>
</tr>
<tr>
<td>通过输血</td>
<td>95</td>
<td>49.74</td>
</tr>
<tr>
<td>总计</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>
According to table 4.13 and figure 4.4, 95(49.74) of the pupils indicated that HIV can be contracted through blood transfusion. The responses on other suggested ways of contracting HIV were further misconceptions and were rated as follows: Kissing a HIV positive person 37(19.37%); sharing toilet and utensils with a HIV positive person 31(16.23%) and shaking hands with a HIV positive person 28(14.66%) respectively. One person did not respond to this question. These misconceptions can affect the way the pupils may relate with HIV positive persons like avoiding their handshakes and refusing to share with and denying them facilities like toilets. This could further increase stigmatization against people living with HIV and AIDS. There is, therefore, need to iron out these misconceptions the soonest possible.
4.4: Investigating Awareness of HIV and AIDS Preventive Measures Among Pupils With Hearing Impairments

The third research question was; 'Are the pupils with hearing impairments in Central Province aware of HIV and AIDS preventive measures?'

4.4.1: Can HIV/AIDS be Prevented?

Table 4.14: Prevention of HIV & AIDS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Yes (+) responses</th>
<th>Per cent</th>
<th>No (-) responses</th>
<th>Per cent</th>
<th>Total per cent</th>
<th>Total frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention of HIV/AIDS</td>
<td>143</td>
<td>74.48</td>
<td>49</td>
<td>25.52</td>
<td>100</td>
<td>192</td>
</tr>
<tr>
<td>Care for HIV/AIDS</td>
<td>37</td>
<td>19.27</td>
<td>155</td>
<td>80.73</td>
<td>100</td>
<td>192</td>
</tr>
<tr>
<td>Precautions against HIV/AIDS</td>
<td>127</td>
<td>67.55</td>
<td>61</td>
<td>32.45</td>
<td>100</td>
<td>188</td>
</tr>
<tr>
<td>Abstinence from sexual intercourse</td>
<td>156</td>
<td>82.54</td>
<td>33</td>
<td>17.46</td>
<td>100</td>
<td>189</td>
</tr>
</tbody>
</table>

Table 4.14 indicates that 143 respondents (74.48%) are of the opinion that HIV and AIDS can be prevented. Minority of the respondents, 49 (25.52%) indicated that it is not possible to prevent HIV and AIDS. Majority of the respondents 155 (80.73%) indicated correctly that there is no cure for HIV and AIDS while 37 (19.27%) of the respondents indicated that there is cure for the pandemic. Most were of the opinion that primary school children should take precautions against HIV, that is, 127 (67.55%) while 61 (32.45%) thought otherwise. Majority, that is 156 (82.54%) of the respondents admitted that it is necessary for primary school pupils to abstain from sexual intercourse while minority (17.46%) felt abstinence was not necessary.
As has been established in this research, large numbers of young people are beginning sexual activity at a relatively early age. This underscores the importance of implementing preventive activities long before sexual intercourse if this disease is to be effectively controlled.

The fact that a significant number of the pupils believe that HIV can be contained is a positive step towards the fight against the pandemic but this group should be helped to put this knowledge into positive behaviour change for only then will this knowledge be of help to them and to the society. As indicated in chapter 1, a survey by Ministry of Health (2001) among hearing community revealed that 99% of men and women in Kenya were aware of HIV and related risk behaviour and preventive measures. This knowledge has not translated fully to positive behaviour change, for example, in a study conducted by Kenya Medical and Research Institute (KEMRI, 2007), among the Kenyan population, only 20% were found to be using condoms in their last sexual encounter.

Further, the same study found that HIV prevalence in Kenya increased to 7.8% in 2007, a slight increase from the 6.7% prevalence recorded in 2003. Hence, the need to emphasize on putting this knowledge into behaviour change among pupils with hearing impairments in terms of ABC, that is ‘Abstain; Be faithful; Use a condom’. Those who were aware that HIV can be prevented, being the majority, can be used to pass on preventive message to their counterparts who were not knowledgeable in this area, through peer counselling. This should be combined with the message that there is no cure for HIV and AIDS as some, according to the table, erroneously believe there is cure for it.
The fact that 32.45% of the pupils do not think precaution against HIV is necessary could be attributed to the finding that some pupils as indicated in table 4.10 do not perceive themselves to be at risk and others as shown in table 4.11 believe HIV does not infect primary school children. Worse still, some pupils indicated that it was not necessary to abstain from sexual intercourse. These issues need to be clarified if the fight against HIV among the primary school pupils with hearing impairments will succeed.

4.4.4: Types of Precautions

Table 4.15: Types of Precaution against HIV and AIDS

<table>
<thead>
<tr>
<th>Types of Precaution</th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstinence</td>
<td>31</td>
<td>16.15</td>
</tr>
<tr>
<td>Use of condoms during sexual contacts</td>
<td>57</td>
<td>29.69</td>
</tr>
<tr>
<td>Having one faithful partner</td>
<td>41</td>
<td>21.35</td>
</tr>
<tr>
<td>Selecting sexual partners carefully</td>
<td>38</td>
<td>19.79</td>
</tr>
<tr>
<td>Practising withdrawal during sexual intercourse</td>
<td>25</td>
<td>13.02</td>
</tr>
<tr>
<td>Total</td>
<td>192</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 4.15 indicates that of those who suggested precautions should be taken against the disease are indeed aware of some of the precautions like abstinence, use of condom and faithfulness. The rating of the listed precautions are as follows; use of condoms 57(29.69%), having a one faithful partner 41(21.35%), selecting sexual partners carefully 38(19.79%), and abstinence 31(16.15%). The responses, however, indicated some misconceptions on precaution taking regarding selecting sexual partners carefully and practising withdrawal during sex. These need to be clarified because they could offer false protection against HIV among them. It is further
noted that information received by pupils in table 4.4 seems to tally with abstinence, having one faithful partner and use of condoms in table 4.15.

4.4.5: Suggestions on How to Help Reduce Transmission of HIV

Table 4.16: Suggestions of Reducing the Transmission of HIV

<table>
<thead>
<tr>
<th>Suggestions</th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduce sex education in schools</td>
<td>27</td>
<td>14.29</td>
</tr>
<tr>
<td>Abstinence for those who are not married</td>
<td>34</td>
<td>17.99</td>
</tr>
<tr>
<td>Isolate those infected</td>
<td>15</td>
<td>7.94</td>
</tr>
<tr>
<td>Increase awareness to the general public</td>
<td>38</td>
<td>20.11</td>
</tr>
<tr>
<td>Use of condoms</td>
<td>28</td>
<td>14.80</td>
</tr>
<tr>
<td>Being faithful to one partner after marriage</td>
<td>47</td>
<td>24.87</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>189</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The rating of suggestions by pupils on ways to reduce the transmission of HIV infections were as follows; being faithful to one partner after marriage 47(24.87%); increase HIV/AIDS awareness to the general public 38(20.11%), abstinence for those who are not married 34(17.99%), use of condoms 28(14.8%), introduction of sex education in schools 27(14.29%) and isolation of those infected 15(7.94%). Three students did not attempt the question.

These ratings indicate that majority of the pupils are aware of measures that need to be taken to help reduce transmission of HIV. Only a few pupils are ignorant of the fact that isolation of HIV infected persons would not help in reduction of HIV transmission. This would only increase their stigmatization and then create false confidence that one is safe from HIV after this isolation.
4.5: Finding out Awareness Among Pupils with Hearing Impairments of How to Care for and Live with Persons Infected and Affected by HIV and AIDS

The fourth research question read; ‘Are the pupils with hearing impairments in Central Province aware of how to care for and live with persons infected and affected by HIV and AIDS? The data were obtained from all the 192 respondents. The study sought to find out whether the pupils with hearing impairment knew how persons living with HIV and AIDS should be cared for and lived with.

Table 4.17: Fate of the pupils’ infected with HIV/AIDS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Yes (+) responses</th>
<th>Per cent</th>
<th>No (-) responses</th>
<th>Per cent</th>
<th>Total per cent</th>
<th>Total frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confinement of pupils infected with HIV</td>
<td>91</td>
<td>47.89</td>
<td>99</td>
<td>52.11</td>
<td>100</td>
<td>190</td>
</tr>
<tr>
<td>Sharing of facilities like toilets and utensils</td>
<td>119</td>
<td>61.98</td>
<td>73</td>
<td>38.02</td>
<td>100</td>
<td>192</td>
</tr>
<tr>
<td>She should socially relate with HIV positive people the same way he/she relates with those not infected</td>
<td>102</td>
<td>53.13</td>
<td>90</td>
<td>46.87</td>
<td>100</td>
<td>192</td>
</tr>
<tr>
<td>AIDS patient deserve, great care by friends and relatives</td>
<td>115</td>
<td>60.53</td>
<td>75</td>
<td>39.47</td>
<td>100</td>
<td>190</td>
</tr>
<tr>
<td>Would you feel free to continue learning with HIV positive pupil after realizing he/she is infected with HIV?</td>
<td>105</td>
<td>54.97</td>
<td>86</td>
<td>45.03</td>
<td>100</td>
<td>191</td>
</tr>
</tbody>
</table>

Results of the findings on the fate of pupils infected with HIV and AIDS on confinement to one classroom indicated that respondents were on about 50-50 share. Those agreeing on the idea of quarantine were 91(47.89%) and those disagreeing being 99(52.11%). This question was not answered by two pupils who represented 1.04%.
Majority of pupils (61.98%) were of the opinion that pupils within schools in Kenya who are infected with HIV and AIDS should not be allowed to share facilities like utensils with those not infected, while 73(38.02%) disagreed with this opinion.

According to the table, 102(53.13%) of the respondents are of the opinion that one should socially relate with HIV positive people in the same way he/she relates with HIV negative people, while 90(46.87%) of the respondents did not really agree with the advanced argument. Majority of the respondents (60.53%) concurred with the argument that HIV and AIDS patients deserve great care and support by relatives and friends, while minority 75(39.47%) believed otherwise.

The results in the table indicate that 105(54.97%) of the respondents would feel free to continue learning with a pupil infected with HIV and AIDS, while 86(45.03%) of the respondents would not be comfortable to continue learning with such a pupil in the same class. This is in agreement with responses in table 4.17 where 47.89% of the respondents indicated that pupils infected with HIV and AIDS should be confined in one classroom of their own, away from those not infected.

Stigmatization of persons affected and infected by HIV and AIDS has been known to compound problems being faced by these persons. As a result of this, pupils affected or infected by the virus have been known to perform poorly academically while those in the productive sector of the economy have been known to retrogress in their performance at their places of work. As such, knowledge of how to care for and live with these people is paramount. To this end, it has been suggested that HIV
and AIDS patients and those affected by the pandemic should be provided with love, concern, encouragement and their caregivers should ensure that they take their medicines (Hays et al 1994).

On the fate of pupils infected with HIV and AIDS on confinement to one classroom, majority supported this idea. Related to this was the issue of pupils sharing facilities with their HIV and AIDS infected counterparts where 61.98% suggested there should be no sharing, while 38.02% indicated that it is alright to share the facilities. The two findings indicate a high level of ignorance in these areas by majority of the pupils hence their stigmatization of those affected and infected by AIDS. Therefore, it means campaigns among hearing impaired on how to live with persons infected and affected by HIV have been non-existent or ineffective and this calls for more work in this area.

On care and support of AIDS patients by friends and relatives, most of the pupils indicated that the patients deserve great care and support while 39.47% indicated otherwise. This indicates a slight change of heart probably because the responsibility of caring and supporting the patients does not necessarily fall directly on the pupils as is the case of sharing facilities. Nevertheless, there was a high number of pupils who were ignorant of how to care for and support AIDS patients. This was another indicator of stigmatization brought about by ignorance that needs to be addressed. The high level of those indicating that they would not be free to continue learning with pupils showing symptoms of AIDS may be as a result of baseless belief that contact while learning together with an AIDS patient can transmit the virus. This
agrees with findings of table 4.16 where some pupils ignorantly indicated that HIV and AIDS patients should be isolated to stop the spread of the virus. This is an indication that the information the pupils have been receiving with regard to living with AIDS patients and methods of HIV transmission has not been clear.

Concluding Remarks
The study sought to evaluate awareness of HIV and AIDS among pupils with hearing impairments in Central Province, Kenya. Study findings indicated that most of the pupils were aware of HIV/AIDS pandemic as indicated in table 4.2 although their awareness was lower than that of their hearing counterparts. Parents, teachers, electronic media (Radio & Television) have continued to play a key role in HIV/AIDS message dissemination. It was noted that there were many pupils who harbour misconceptions on HIV transmission routes like shaking hands, sharing facilities and kissing (table 4.13) and mosquito bites (table 4.12). As a result of some of the misconceptions like transmission through sharing facilities and shaking hands, there is likely to be stigmatization of HIV positive persons, for example, some pupils indicated that they should be confined in classes of their own (table 4.17). This calls for further interventions on transmission routes, preventive measures and on how to care for and live with people infected with the disease.
5.0 Introduction
The study set out to evaluate HIV and AIDS awareness among upper primary pupils with hearing impairments in Central Province of Kenya. The study was conducted in public primary schools for Hearing Impaired in five districts. In this chapter, the major findings of the study are discussed and interpreted. In addition, recommendations and suggestions for further studies are covered.

5.1 Demographic Characteristics of the Study Subjects
The ages of the respondents in this study ranged from 10 to 20 years. Majority of the pupils, therefore, are in their adolescent stage. This stage is associated with sexual experimentation and consequently exposure to HIV (Suda, 1993). At this stage, they have very few sources of information about sexuality and HIV and AIDS. The percentages of males and females in the study population were 57% girls and 43% boys which indicated that there were more females than males.

5.2 Summary and Conclusions
According to the findings, majority of the respondents were knowledgeable of HIV and AIDS pandemic, but their level of awareness was lower than that of hearing pupils. Parents, teachers and televisions were the major sources of information on HIV and AIDS. The major type of information received was on condom use. This unfortunately could lead to an earlier onset of sexual intercourse hence the need to guide these pupils. Other types of information were on faithfulness and abstinence.
The mass media particularly the radio account for relatively small percentage of information on HIV and AIDS among the pupils mainly because they are cut off from the auditory world. This should be a wake-up call to the HIV and AIDS campaigners to capitalize more on visual modes of conveying their HIV awareness message to pupils with hearing impairment.

Most of the pupils indicated that they were not sexually active and they should be helped to sustain abstinence from sexual intercourse so that they can remain safe from HIV. Similarly, majority of the pupils indicated that they perceive themselves to be at risk. Out of this perception, they are likely to take the necessary precautions against HIV infection. However, some of the pupils do not perceive themselves to be at risk simply because they think HIV does not infect primary school children and this is dangerous because they can easily engage in sexual intercourse. These should be helped to perceive themselves to be at risk because HIV can affect anybody regardless of age.

Various misconceptions were noted regarding HIV transmission, that is, one cannot contract HIV the first time one engages in sexual intercourse, one cannot contract HIV if he or she is young and healthy, one cannot be HIV positive and fail to show any signs and symptoms of the disease, one cannot contract HIV from someone who looks young and healthy, HIV can only infect homosexuals and prostitutes, one cannot contract HIV through sharing injection and circumcision equipment; one can contract HIV through shaking hands with a HIV positive person, kissing and sharing toilets and utensils with them. These misconceptions need to be taken very seriously
especially by campaigners against HIV because they are a barrier to HIV preventive efforts.

Majority of the pupil believe HIV can be contained and these should be assisted in adopting positive behaviour change as this belief in itself is not sufficient. Most of them are of the opinion that precautions should be taken against HIV but wrongly indicated withdrawal during sex and selecting partners carefully as precautions. This calls for clarification of precautionary measures against HIV.

Almost half of the pupils' population were of the opinion that those pupils who are HIV positive and are showing symptoms of AIDS should be confined in a class of their own away from healthy ones. Majority were against the idea of sharing facilities like toilets with HIV positive pupils. This was an indication of a high level of stigmatization and thus they should be helped to appreciate the infected and affected persons by not discriminating against them. Nevertheless, majority indicated that HIV positive people deserve great care and support. Almost half of the pupils indicated that they would not be willing to continue learning with HIV positive pupils in the same class. This could be out of fear that they could contract HIV by mixing with such pupils. This calls for clarification of methods of transmission of HIV if stigmatization of HIV infected persons will end.
Based on these findings, the following conclusions are made:

1. The primary school hearing impaired pupils need to know that HIV/AIDS has no known cure yet. However, it can be prevented by adopting appropriate sexual behaviour.

2. A significant number of the hearing impaired pupils are ignorant of HIV/AIDS issues and as a result they continue to engage in irresponsible sexual behaviour. Unless something is done urgently to arrest this trend, many pupils are likely to be infected by the virus and consequently die of AIDS.

3. There is need to expand investment services that not only provide free condoms and VCT but also attend closely to related health and social needs of pupils like professional counselling on HIV/AIDS and imparting skills and information which assist them in making bold decisions about their sexual behaviour.

5.3 Recommendations

In view of the findings of the study, the following recommendations are made:

1. There is need to reach out to the pupils who are Hearing Impaired and educate them on the need to behave responsibly in all areas of their lives and especially on matters pertaining to sex. They need to be taught how to be assertive on sexual matters and on importance of upholding chastity.

2. There is need to strengthen peer counselling on HIV/AIDS so that many Hearing Impaired pupils can be reached. This would remove the misconception still prevalent among the pupils for example, the notion in some that HIV does not infect primary school children.
3. Majority of the pupils harbour negative attitudes towards people infected with HIV. To iron out these negative perceptions, the HIV and AIDS awareness stakeholders should continue sensitizing the pupils on how to live with and care for people living with HIV/AIDS.

4. Since some of the methods used to communicate HIV and AIDS messages like radio and uncaptioned TV programmes do not reach the pupils with hearing impairments, it is recommended that methods involving the sense of sight be maximised like captioned television programmes, illustrations, diagrams, television programmes with an interpreter, print media and Kenyan Sign Language.

5.4 Suggestions for Further Research
It is suggested that further research be carried out in the following areas:

1. Impact of print media in conveying HIV/AIDS awareness message.
2. Incidence of HIV and AIDS among primary school hearing impaired persons.
3. Teenage sexuality and HIV/AIDS.
4. Ways of combating sexual exploitation of adolescents especially those who are HI.
REFERENCES


Goldenberg, T. (2006, 18th January). The untold story: They can be infected or affected by AIDS like everyone else, so why have they been ignored? Daily Nation. pp 6-8.


APPENDIX I

Questionnaire for Pupils (QP)

Introduction
This questionnaire is for research on awareness of HIV/AIDS by primary school pupils with hearing impairments in standard 4, 5, 6 and 7 in Central Province in Kenya. The findings will be used in the writing of a theses in partial fulfilment of the requirement for the degree of M.Ed in Special Education of Kenyatta University. The findings of the study will also provide crucial information in the fight against HIV/AIDS. Please answer all the questions correctly. All information provided will be handled confidentially and used for the study only.

Instructions
(a) Do not write your name on the questionnaire.
(b) Tick (✓) the correct answer on the space provided
(c) Write clearly where spaces are provided for answers
(d) Attempt all questions genuinely and honestly.

1. Indicate your sex
   Section A
   Male _____ Female _____

2. What is your age? _____ Years

3. In which class are you?
   Standard 4 _____
   Standard 5 _____
   Standard 6 _____
   Standard 7 _____
Section B

4 (a) Are you aware of the disease named HIV/AIDS?

Yes _____ No _____

(b) If your answer to 4(a) above is ‘yes’, from which source did you know of HIV/AIDS? Tick (✓) all responses applicable to you.

Radio______ School mate______
Friend______ Teacher______
Parents______ Television______
Any other source (specify)________________________

(c) What type of HIV/AIDS information did you receive? You can tick (✓) as many responses as possible.

(i) On abstinence __________
(ii) On faithfulness __________
(iii) On condoms __________
(iv) Other (specify) __________

5. (a) Do you believe that HIV/AIDS really exist?

Yes _____ No_____

(b) Do the terms AIDS and HIV mean the same thing to you?

Yes _____ No_____

(c) (i) Do you know anybody who is suffering from HIV/AIDS?

Yes _____ No_____

(ii) If ‘yes’, who? (State the relationship).

Neighbour ______
Relative______
Friend ____________
Other (specify) ____________

Section C

6. (a) Are you sexually active? Yes _____  No _____

(b) Do you consider yourself to be at risk of contracting HIV? Yes _____  No _____

(c) If no, why? Tick (✓) all applicable responses

(i) I have one faithful partner _________
(ii) I abstain _________
(iii) I use condom during sexual intercourse _________
(iv) HIV/AIDS does not infect primary school children _________
(v) Other (specify) ______________

7. Only people having AIDS can infect you with HIV

True _____  False ______

8. You cannot contract HIV the first time you engage in sexual intercourse

True _____  False ______

9. You cannot contract HIV if you are young and healthy

True _____  False ______

10. (a) You can be infected with HIV and yet not have any signs or symptoms of illness for many years.

   Yes _________  No _________

(b) Is it possible to contract HIV/AIDS from someone who looks young and healthy?

   Yes _________  No _________
11. Is it true that HIV/AIDS can only infect homosexuals and prostitutes?
   Yes ______  No ______

12. You can be infected with HIV/AIDS when sharing injection equipments.
   True ______  False ______

13. (a) Have you ever shared needles with your classmates to pierce your ears?
   Yes ______  No ______

   (b) Do you believe one can contract HIV through sharing ear-piercing instruments like needles?
   Yes ______  No ______

14. Can circumcision operation where people share circumcision equipments spread HIV?
   Yes ______  No ______

15. People can be infected with HIV if they are bitten by insects such as mosquitoes.
   Yes ______  No ______

16. From the list below, tick all the ways through which a person can contract HIV.
   (i) Shaking hands with a HIV positive person _____
   (ii) Sharing toilets and utensils with a person infected with HIV _____
   (iii) Kissing a HIV positive person _____
   (iv) Through blood transfusion where the blood has HIV virus _____
Section D

17. In your opinion, is it possible for HIV/AIDS to be prevented?
   Yes _____  No _____

18. Is there cure for HIV/AIDS?
   Yes _____  No _____

19. Do you think primary school pupils should take any form of precautions against HIV/AIDS?
   Yes _____  No _____
   (a) If yes, which precautions? (Tick all items applicable to you).
      (i) Only having sex with a partner who says he/she does not have another sexual partner ______
      (ii) Abstinence ______
      (iii) Use of condoms during sexual contacts ______
      (iv) Have one faithful partner ______
      (v) Selecting sexual partners carefully ______
      (vi) Practicing withdrawal during sex ______

20. (a) Is it necessary for primary school pupils to abstain from sexual intercourse?
   Yes _____  No _____
   (b) If your answer to 20 (a) above is 'yes' why? ____________________________

   If your answer is 'No', why?
______________________________
21. What do you suggest can be done to help reduce transmission of HIV/AIDS infection? (Tick all responses applicable to you)

(i) Introduce sex education in schools
(ii) Abstinence for those who are not married
(iii) Isolate those infected
(iv) Increase awareness to the general public
(v) Use of condom
(vi) Being faithful to one partner after marriage

Section E

22. All pupils infected with HIV should be confined in one class
Yes ________  No ________

23. Pupils within schools in Kenya who are infected with HIV/AIDS should not be allowed to share facilities like toilets and utensils with those who are not infected because through this, they can easily transmit the virus.
Yes ________  No ________

24. One should socially relate with HIV positive people in the same way as he/she relates with people not infected with HIV.
Yes ________  No ________

25. AIDS patients deserve great care and support by friends and relatives
Yes ________  No ________

26. If you knew that one of the pupils in your class was infected with HIV, would you feel free to continue learning with him/her?
Yes ________  No ________

Thank you for your co-operation.
Appendix II

HIV Prevalence by Province

Kenya: 6.7%

Greater than national average

Less than national average

No positive HIV tests

Source: Kenya Demographic Health Survey, 2003)
RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on, ‘Evaluation of HIV and Aids Awareness among Upper Primary School Pupils with Hearing impairments in Central Province, Kenya’

I am pleased to inform you that you have been authorized to carry out research in Primary Schools in Central Province for a period ending 30th August, 2008.

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

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
Central Province
NYERI

The Provincial Director of Education
Central Province
NYERI