HIV AND AIDS KNOWLEDGE AMONG HIGH SCHOOL PUPILS WITH HEARING IMPAIRMENMTS IN ZAMBIA

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BY

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A DISSERTATION SUBMITTED TO THE UNIVERSITY OF ZAMBIA IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF THE MASTER OF EDUCATION IN SPECIAL EDUCATION



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A dissertation submitted to the University of Zambia in partial fulfilment of the requirements for the award of the degree of the Master of Education in Special Education

The University of Zambia

2010

DECLARATION

I, **Doris Masuwa**, hereby declare that the work presented in this dissertation is my own original work and that it has not been previously submitted for a degree at this or another university.

Signed: ..Masuwa:..... Date: 28.06.10.....

DEDICATION

This dissertation is dedicated to my late father Mr P.K. Masuhwa.

0279817

APPROVAL

This dissertation of **Doris Masuwa** has been approved as fulfilling the requirements for the award of the Masters in Education in Special Education by the University of Zambia.

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ABSTRACT

The purpose of the study was to investigate the HIV and AIDS knowledge among high school pupils with hearing impairments in Zambia. Three schools in total were chosen for this purpose in three districts of Zambia – Lufwanyama, Chipata and Lusaka.

The aim of the study was to find out how much knowledge high school pupils with hearing impairments have on HIV and AIDS; to identify the sources of HIV and AIDS information such pupils use; to find out factors, if any, which hinder the access of information on HIV and AIDS to the hearing impaired pupils; and to find out if there were other ways which pupils would use to increase their knowledge of HIV and AIDS.

The study utilised a combination of quantitative and qualitative paradigms. A survey design was used in conducting this research. Data were collected through focused group discussions and questionnaires from a sample of 40 female and 40 male pupils selected to accurately represent the population under study.

Quantitative data was analysed using the Statistical Package for Social Sciences (SPSS) from which frequencies, percentages and graphs were generated while qualitative data obtained through interviews were coded and grouped by establishing the emerging themes.

The findings of the study revealed that pupils with hearing impairments are commonly overlooked in the development of materials and education programmes on HIV and AIDS. The study also showed that most pupils both males and females had limited

knowledge about HIV and AIDS. It further revealed that pupils with hearing impairments did not fully utilise the services of the Anti-AIDS club in their schools in terms of membership. Another finding was that there was no time allocated to teaching of HIV and AIDS to the hearing impairment pupils.

Arising from the findings of the study, the following recommendations have been suggested: More programmes on HIV and AIDS should be introduced in schools; the Ministry of Education should train teachers to specifically teach the component of HIV and AIDS to high school pupils with hearing impairments. The Ministry of Education should consider introducing HIV and AIDS programmes on television with the help of interpreters if the HIV and AIDS messages/information were to reach pupils with hearing impairments and should make HIV and AIDS programme part of the school subject and allocate it teaching time.

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LIST OF ACRONYMS

AIDS: Acquired Immune Deficiency Syndrome

HIV: Human Immunodeficiency Virus

IEC: Information Education Communication Programmes.

MOE: Ministry of Education

MOH: Ministry of Health

NGOs: Non-governmental organisations

NCHS: National Centre for Health Statistics

UNAIDS: United National Joint Programmes on AIDS

UNESCO: United Nations Education Scientific and Cultural Organisation.

CHAPTER ONE

INTRODUCTION

This chapter presents a background to the study. The chapter also presents the statement of the problem, the objectives of the study, research questions, significance of the study, and definition of key words in the study.

Background to the Study

HIV and AIDS have spread significantly since the first case of the new form of immune deficiency was reported in the United States of America in 1981. HIV and AIDS is one of the biggest global challenges that the world is facing today. UNAIDS (2009) estimated that 33.4 million people were living with HIV. Of these 31.3 million are adults.

The Human Immunodeficiency virus (HIV) is the virus that makes the body weak and less able to fight any form of sickness. The virus infects the blood cells known as Lymphocytes that are responsible for maintaining the immune system that protects the body against diseases. When this system has been destroyed in a person, then any disease that attacks such an individual can persist and be called AIDS (UNESCO, 2000).

According to the Ministry of Health, (MOH, 2005) the HIV virus spreads from one person to another in several ways. However, it should be noted that the major mode of HIV transmission in Zambia is heterosexual through which 78% of the country's infections is transmitted. HIV and AIDS can also be spread through transfusion of

unscreened blood, use of contaminated needles and syringes can also spread the virus, although this is very rare because measures are taken by the medical personnel before any blood transfusion takes place. HIV and AIDS can also be passed from an infected mother to her child during pregnancy, child birth and breast feeding. In order to prevent HIV infection, there are three main ways of preventing HIV transmission. These are abstinence, being faithful to your partner and condom use (ABC). It is imperative that the focus of preventive messages to the young people should emphasize the principle of suspecting everyone to be HIV positive except oneself. Such a principle may help the youth refrain from illicit sex.

Kelly (2008), stated that in order for the education system of Zambia to respond to HIV and AIDS epidemic, the programme should be targeted at schools by ensuring that every pupil is well equipped with correct information on HIV and AIDS, and its transmission. The promotion of abstinence was rated as the most certain method of preventing HIV transmission.

Odueme (2008) also stated that, as the rate of HIV and AIDS pandemic increased, it was important to provide young people especially the handicapped population, with adequate information on the deadly virus to enable them take informed preventive measures.

Statement of the problem

Many research studies (e.g. Schrincr, 2003; Groce, 2004) have indicated that people with disabilities ought to be involved in HIV and AIDS programmes to overcome the current focus on "normal "people. Presently the HIV and AIDS education

programmes in Zambia have mainly targeted the people who are considered normal. This means that information on HIV and AIDS is mainly communicated through verbal communication and print media. Odueme (2008) noted that information delivered through verbal communication and print media hardly reaches pupils with hearing impairments. There is a striking absence of attention to the risk of HIV infection in individuals who may be deaf or hard of hearing. Therefore, there is need to find out how much knowledge High School pupils with hearing impairment have and sources of this information if any.

Purpose of the Study

The purpose of the study was to assess the HIV and AIDS knowledge among high school pupils with hearing impairments in Zambia.

Objectives of the Study

The objectives of the study were the following:

1. To find out how much knowledge high school pupils with hearing impairments have on HIV and AIDS.
2. To identify the sources of HIV and AIDS information which high school pupils with hearing impairments use.
3. To find out factors, if any, which hinder the access of information on HIV and AIDS among high school pupils with hearing impairments
4. To find out if there were other ways which high school pupils with hearing impairments would use to increase their knowledge on HIV and AIDS.

Research questions

The following questions guided the study;

1. How much knowledge do high school pupils with hearing impairments have on HIV and AIDS?
2. What are the sources of HIV and AIDS information used by high school pupils with hearing impairments?
3. What factors if any, hinder the accessibility of information on HIV and AIDS to high school pupils with hearing impairments?
4. What other ways would high school pupils with hearing impairments use to increase their knowledge on HIV and AIDS?

Significance of the study

It was hoped that findings of this study could help determine the knowledge and information sources which pupils with hearing impairments have on HIV and AIDS. The information to be obtained could help the Ministry of Education and other stakeholders work out workable strategies in the fight against the pandemic for pupils with hearing impairments

Definitions of key words in the study.

HIV - Is the virus that causes AIDS.

AIDS - Disease due to infection with the human immune deficiency virus (HIV).

HIV-Prevalence - The total number of people infected with HIV in a Specified population

High School - A school that runs from Grade 10 to Grade 12

Hearing Impairment - An umbrella term which includes all terms of hearing loss

Deaf - One who cannot hear or perceive sound

Hard of Hearing - One whose hearing is impaired but have enough hearing left for practical use

Sign Language - A gestural - visual language in which speakers express or Communicate ideas by the movement of hands, fingers, head, facial features and body.

Signed English - Signing of the exact English words.

CHAPTER TWO

LITERATURE REVIEW

This chapter explores relevant literature on HIV and AIDS knowledge and sources among high school pupils with hearing impairments in Zambia, in the global context and Zambia. The literature review has been presented according to the following subheadings: HIV and AIDS knowledge among high school pupils with hearing impairments; sources of HIV and AIDS information; Factors that hinder the accessibility of HIV and AIDS information to high school pupils with hearing impairments; and other ways to increase HIV and AIDS knowledge to high school pupils with hearing impairments.

HIV and AIDS knowledge among high school pupils with hearing impairments

Mandela (2000) in his closing address at the XIII International AIDS Conference in Durban South Africa stated that, "the experience in a number of countries has taught that HIV infection can be prevented through investing in information and life skills development for the young people."

Katuta et al. (2004) acknowledged the adverse of lack of information on HIV and AIDS and revealed that in Africa, Zambia included; there were many numerous perceptions about HIV and AIDS which were incorrect. They gave an example of one such perception that held that having unprotected sex with a minor or a child who was a virgin cured HIV and AIDS.

When it comes to pupils with hearing impairments, literature showed that they stood a high chance of being infected with HIV and AIDS due to their limited knowledge on HIV and AIDS. Sangowawa et al. (2004) report on a study done in Nigeria showed that there were deficiencies in the deaf students' knowledge about HIV and AIDS. About 62% of the study respondents believed one could not get HIV if one had sex once without using a condom, while 67% said those who chose healthy looking partners would not get infected with the virus.

In a sample of deaf and hard of hearing individuals interviewed in the USA, only 15% of the respondents had knowledge of HIV transmission facts. The study stated that as early as 1992, experts estimated that the deaf population was about eight years behind the hearing population in HIV knowledge and awareness. The report concluded that deaf high school students had much less knowledge about HIV transmission than their hearing counterparts (HIV and AIDS in the Deaf and Hard of Hearing, 2001).

A study carried in Southern Vietnam by the SEED Project on STI/HIV prevention for the hearing impaired young persons of Ho Chi Min City Club (2003) revealed that the hearing impaired young persons had no much knowledge on HIV and AIDS and practiced risky behaviours. 30% of the respondents had more than one partner, 90% were not familiar with the use of condoms and almost all the respondents had no understanding of the various ways in which HIV and AIDS was transmitted.

A study carried in America on the HIV and AIDS knowledge index revealed that, undergraduate deaf college students scored significantly worse than hearing

undergraduate. One reason for this knowledge gap was that most people erroneously assumed that American sign language (ASL) and English were related and that most ASL users had high English proficiency. As a result, materials were often culturally inappropriate, and linguistically incomprehensible (HIV/ AIDS in the Deaf and Hard of Hearing, 2001).

Groce, et al (2006) in a study HIV and AIDS and Disability survey done in Nigeria indicated that the data on the knowledge about transmission and prevention of the HIV virus indicated that the deaf group was more likely to agree with incorrect ideas.

Groce, et al (2003) in a study carried on the deaf and hearing population in Swaziland, found that the deaf respondents were significantly more likely to believe that HIV could be transmitted by kissing, hugging and dirty places. It further indicated that the deaf were more unlikely to know that testing of blood prior to infection was a means of preventing HIV transmission. The study also found that some deaf people believed the HIV virus could be transmitted by germs in the air. The report further stated that the quality of the knowledge and accessibility of information for deaf population was a big concern.

Mbulamwana (2004) revealed that HIV and AIDS infection rates in Uganda had declined mainly by behavioural change mainly as a result of massive information dissemination which unfortunately had not taken into account the unique needs of the deaf thus left this group with very little knowledge on HIV and AIDS.

Malambo (2000), in trying to establish what pupils know about HIV and AIDS in a study carried out in Zambia, found out that even if knowledge of HIV and AIDS was high among the hearing pupils, some pupils were still not sure what the difference between HIV and AIDS were. The study cited an example where a grade 7 male pupil stated that HIV and AIDS were the same. However the study also showed that pupil were aware that AIDS has no cure.

Emasu (2004) cited a response where a deaf person through an interpreter indicated that AIDS was the same as fever. It was a curse from God to punish couples. It has no cure, but when one was in the good books of God, one's life would be spared.

Muyanda (2006) in an article on key AIDS education, highlighted lack of knowledge by the hearing impaired society on HIV and AIDS quoting one of the deaf Ugandan parliamentarians stated that the extent of lack of information on HIV and AIDS prevention, care, and treatment among the deaf was so apparent that the deaf society were facing extinction from HIV and AIDS.

Determan (1999) indicated that there was very little HIV or sexuality education in schools for the deaf especially adolescents. Because of this, deaf persons had much less knowledge and awareness of HIV transmission, prevention and treatment.

Sources of HIV and AIDS information for high school pupils with hearing impairments

Chola (2002) in a study done in Zambia revealed that interpersonal communication channels should be considered as vital. Among the mass media, radio was the most

perceived effective channel for disseminating various types of information including HIV and AIDS. This type of communication left pupils with hearing impairments with no information on HIV and AIDS.

A study conducted in Nigeria by Sangowawa et al.(2004) on HIV / AIDS knowledge and information sources among deaf students in Ibadan found that students' sources of information on HIV and AIDS were television, teachers, friends, family members and newspapers. While in the Zambian situation, Siatontola (2004) found out that the sources of information a teacher could use are Anti-AIDS Club, Education through entertainment such as role or dramatisation which included games for life and youth friendly health service. Other methods could include the use of posters, roads side bill boards, leaflets and T-shirts.

In another study conducted by Mwananyanda, et al (2005) on knowledge and sources for HIV and AIDS among the Zambian youth revealed that their sources of knowledge on HIV included programmes on radio, television, and discussions on AIDS with their parents, teachers and friends.

Malambo (2000) stated that the Ministry of Education in Zambia adopted an integrated approach to the teaching of HIV and AIDS. This followed along the heels of policy enacted in 1992 that encouraged the formation of Anti – AIDS clubs in primary and secondary schools, teacher training colleges and other institutions of higher learning. Extra curricular activities including drama and cultural clubs were also expected to incorporate HIV and AIDS awareness messages and mandated to be offered in primary and secondary schools and teacher training colleges. On the

same Chiwala and Siamwiza (1999) revealed that much as there was a policy for Zambian schools on formation of Anti-AIDS clubs to supplement the teaching of HIV and AIDS in schools, few teachers and pupils were members and these clubs do not even exist in some schools.

Groce et al. (2006) in a study done in Nigeria on HIV and AIDS and disability indicated that the radio which was the most significant source of information was inaccessible to the deaf. The religious (church) organisations which was by far the main source of information for the deaf group, showed some inadequacies in reaching the deaf (50%). The survey further revealed that despite a reported literacy rate of 86% for the deaf respondents, information accessed was poor, posters (17%), magazines (22%) and newspapers (20%).

The other information source for the deaf on HIV and AIDS information was from family, the general community, events and meeting places, which however was significantly low at about 8% for community.

Ofule and Uwakwe (2004) argued that the massive HIV and AIDS programmes in Nigeria had not benefited the deaf in terms of information on HIV and AIDS. He proposed therefore the adaptation of Information Education Communication Programmes (IEC) materials, radio and TV messages to the needs of the hearing impaired.

Groce, et al. (2003) in a study conducted in Swaziland on HIV and AIDS and disability found out that the top three sources of HIV/AIDS information for deaf were posters, Disabled People's Organisation (DPOs) and television.

In a Newsletter, A Call for Equal Opportunities for the Deaf, Volume1, Issue 1, (2009) discussing information flow for the deaf in Zambia, it was stated that print and electronic media, television in particular, is the only electronic media apart from the print that the deaf community can use to access information. The article went on further to point out that radio as a major communication medium in the fight against HIV and AIDS was of no use to the deaf because they could not hear.

Factors that hinder the accessibility of HIV and AIDS information to high school pupils with hearing impairments

Groce et al. (2006) noted that the World Bank's recent global survey on HIV and AIDS and disability identifies people with disabilities as a significantly overlooked high risk population; specifically cited was the lack of data on disabled populations and HIV throughout the Developing World.

Groce (2003) also argues that there are no data on the prevalence of HIV infection in any disabled population in Africa. People with perceptual disabilities are commonly overlooked in the development of materials and education programmes on HIV and AIDS. Individuals with disability are routinely left out of HIV prevention efforts and service delivery systems. Many HIV and AIDS professionals incorrectly assume that people with disability are sexually inactive and therefore at a lower risks for HIV infection. Because of this HIV and AIDS intervention programmes have done little to

ensure that such individuals with disability are included (Groce etal, 2003). This is of particular concern for individuals whose specific disability like hearing impairments may decrease or block access to general AIDS education and outreach efforts.

Groce et al. (2004) stated that individuals with disability have equal or greater exposure to all known risk factors for HIV infection. They further state that, however, currently interventions that include individuals with disability are rare, if any, most of them are short term and lack monitoring or evaluation.

Several studies (e.g. The American Social Health Association, 2001) revealed that, deaf people showed a sense of inability to care for their health because many HIV education materials were incomprehensive to them. This might be so, because, Sleek (1998) quoted Marcus (1994) as saying research showed that the average deaf persons read at a fourth or fifth grade level, often because sign language was so structurally and grammatically different from written English. Further, Kauffman and Hallaham (1994) have presented evidence of numerous studies which had painted a bleak picture for reading achievement of students with hearing impairments.

Herlihy, Thibeult and Meyers (2005) reported in their pilot study 'on cultural factors in Zambia that currently HIV and AIDS intervention strategies employed in Lusaka were inappropriate and inaccessible to persons with disabilities. They stated that this was due to the cultural assumptions of low HIV risks for disabled persons that resulted in a lack of targeted education materials and accessible services.

Another study in the Zambian situation was conducted by Malambo (2000) in five schools in Lusaka to find out how HIV and AIDS prevention was being taught in schools. The study showed that, there were no teaching and learning materials provided and teachers were not trained and the training manuals were not being used. The study further observed that teachers received inadequate training in preparing them for teaching HIV and AIDS. Teachers in the study also cited shortage of time and rare opportunities to go into detail when teaching HIV and AIDS in class.

Banda (2009) revealed that the campaign awareness in Zambia on diseases such as HIV and AIDS did not reach the deaf children because of the language barrier. Mbulamwana (2004) also revealed that one hindrance to HIV and AIDS information among the deaf was that though there was a lot of information available on HIV and AIDS, it was 'deaf unfriendly' making it inaccessible by the majority of the deaf. He stated that most of the available literature was in English in a country (Uganda) where 90% of the deaf could not even write their names. He further highlighted that the daily messages on radios did not benefit the deaf because they could not hear no matter the good presentation made. The numerous HIV and AIDS talk shows on television excluded the deaf because no sign language interpreter was provided to make the required translations.

MOH (2005) revealed that, that there were many myths about HIV and AIDS in Zambia. It stated that myths were unreliable information based on non-existing phenomena. They become widely known and were believed to be true but often inaccurate or false. Among the notably myths are; you can be cleansed of HIV if you

have sex with a minor or a virgin, through a mosquito bite and sharing food, cups, spoons and plates with an HIV infected individual. From experience as the teacher for the hearing impaired pupils, myths were very common among the "deaf grape vine" where the tight network of stories and gossip were part of all deaf communities. To support this observation, James and Peinkofer (1994:39), in their health report revealed that, "Gossip and hearsay travels quickly within the deaf community. Those who are anxious about sensitive topics (such as HIV transmission) will tend toward rumour promulgation". There was need therefore to explode these myths and liberate this sub-group from these myths that put them in situation of vulnerability to contract the virus that causes AIDS.

National Centre for Health Statistics (NCHS – 2008) explained that, the deaf and hard of hearing existed within a unique and vibrant culture, a fact not always appreciated by hearing individuals who were in most cases the advocates of HIV and AIDS campaigns. As a result, HIV prevention and treatment materials were often culturally inappropriate and linguistically incomprehensible for the deaf and hard of hearing. It further continued to explain that it was unclear how many people in this subpopulation were living with HIV and AIDS. National AIDS surveillance data did not include information on hearing status, thus little was known about the transmission of HIV among the deaf.

Groce et al. (2006) in a study on HIV and AIDS and Disability survey done in Nigeria indicated that studies of the deaf population were usually limited by sample size making results less generalisable and reliable to the deaf population without a significant margin of error. In other words, sample size emerges as a hindrance to

getting correct information on HIV and AIDS among the deaf. They further stated that one of the hindrances to accurate HIV and AIDS information among the deaf population was poor access to HIV information in print material.

Emasu (2004) in discussing barriers or factors that hinder the accessibility of HIV and AIDS information to people with hearing impairments pointed out effective communication. She cited lack of national language in Uganda as a communication barrier which had perpetuated the vulnerability of the deaf to HIV and AIDS. She argued further that few deaf people understood sign language and yet there was very little effort by the Ugandan government to utilise services of those few to train the deaf. In the same study, Emasu stated that families of the deaf people were a hindrance to information on HIV and AIDS by the deaf as the family members, especially their parents, thought they were not sexually active.

The discrimination of the deaf was also a stumbling block in the fight against HIV and AIDS. The report revealed that society did not address the deaf people by their names, but by the stigmatised name *kasuri*, (the daft) in Uganda.

The governments in most countries had not taken a lead in the sensitisation of the deaf in the fight against HIV and AIDS. In Kampala, for example a plea to incorporate the deaf people into the HIV and AIDS programmes was rejected by the City Council. Reactions like these all pose as a hindrance to a more focused and more interest on HIV and AIDS. (http://www.deftoday.com/v3/archive/2004/12/who-tells-them d html, 2004)

Malambo (2000), on the subject of teaching HIV and AIDS put it that teachers were shy and did not discuss issues on sex openly. She cited another study by Chiwela and Mwape (1999), which justified teachers' shyness and lack of openness by indicating that teachers, just like any other adults, felt embarrassed to deal with matters related to sex with their pupils. This was attributed to the Zambian culture, which saw it as inappropriate to discuss sex with younger people. In the same study it was established that teachers were against the use of charts showing sex acts and demonstrations on how to put on a condom because parents hold them of exposing young people to sexual information and related images, which stimulate them to practice what they see.

Groce et al. (2003) in a study HIV and AIDS in Swaziland indicated that due to low literacy levels amongst the deaf, they were not benefiting from awareness programmes using commonly media of communication such as newspapers, magazines and billboards. The study was further supported by the observations made in yet another related study in Nigeria by Odueme (2006) where it was stated that even when educated individuals who were deaf had significantly lower levels of literacy, a circumstance that hindered their ability to understand AIDS information. The study also showed that other sources of information, such as HIV and AIDS messages carried over television and radio, often did not reach the deaf individuals. It further went to say even translation of HIV and AIDS messages into sign language without understanding of the local sign language was of major concern. Posters and billboards do not contain in depth information while sign language was seen only once in a week on television. The study concluded that difficulties in communication were the key factor in blocking deaf people's access to HIV information.

Groce et al. (2006), in another related study carried in Nigeria supports the argument above by further stating that the deaf individuals who relied on sign language as their primary means of communication often faced substantial communication barriers. The mass media was largely inaccessible to them.

James and Peinkofer (1994) in a study on HIV education for the deaf stated that large number of deaf and hard-of-hearing people were in danger of becoming infected with the human immunodeficiency virus (HIV). The deaf were particularly vulnerable because of language barrier and their unique culture. They also cited incompatibility of the English grammar taught to deaf children in America and the American Sign Language which was different from English in the syntactical sense as a contributing barrier to HIV and AIDS information among the deaf pupils. Hundreds of concepts and idiomatic meanings of the words in the English language were difficult to translate into sign language.

In a study carried by the Ministry of Health in Zambia (2007) under effects of HIV and AIDS lessons on pupils sub section, it was stated out that change in behaviour was directly related to many television and radio campaigns organised by NGOs targeting adolescents in and out of school. The above was supported by Mbulamwana (2004) in where he stated that in Uganda, the decline in HIV and AIDS infection rates had been brought about mainly by behavioural change as a result of massive information dissemination. Such efforts had however, not taken into account the unique needs of the deaf.

In most of the societies, the hearing impaired had been left out in the national campaign programmes against HIV and AIDS and this severely affected the levels of knowledge on HIV and AIDS by the deaf thus exposing them to the risks that go with HIV and AIDS. In Deaf TODAY (2006) it was pointed out that the deaf had not been involved in the national campaign, which was credited with lowering Uganda's HIV prevalence from more than 15 percent in the 1990s to about 6 percent in 2006 and that there was urgent need for them to be included in such campaigns.

On the Zambian scene, the Deaf Newsletter (2009) acknowledged television as the only media that could benefit the deaf community in terms of accessing information. While appreciating this, the article quickly pointed out that despite this opportunity, television broadcasters did not include sign language on its regular programmes in Zambia. It further stated that the young deaf people in Zambia were not availed information on the deadly disease. The general campaign awareness on HIV and AIDS did not reach them because of the language barrier and that there were very little deliberate campaigns in this area that targeted the deaf community in Zambia. This remains the case up to now. No HIV and AIDS programmes involving sign language are shown on television thus the hearing impaired children stand exposed to the risks associated with HIV and AIDS.

Other ways to increase HIV and AIDS knowledge to high school pupils with hearing impairments

The American Social Health Association (2001) carried out a study in America where it was observed that the messages required to reach unique population groups were as diverse as the population themselves. For the deaf and hard of hearing the best

method of communication was through graphics, photographs and diagrams. To support the finding by the American Social Health Association, Sleek (1998) argued that, because of the nature of the disability the deaf and hard of hearing have, they need teaching and learning materials that were modified to their disability. The reading materials should not be the same as those given to the ordinary children because their reading levels were different.

In the same view, Dyk (2003) advised that HIV and AIDS preventive programmes could only be successful if people living with HIV and AIDS were involved. It was argued that a personal story of someone living with HIV presented a powerful message. This meant that a successful peer education programme ought to help in transferring the control of knowledge from the hands of experts to lay members, thereby making the education more accessible and less intimidating. He further supported the above by stating that interviews with HIV infected people would help learners grasp the concepts of HIV and AIDS easily. He stated that an open interview with an HIV infected person would be a very powerful learning experience for most learners. Not only would such learners get first hand information, but they also would get challenged on their own stereotypes and prejudices.

A study conducted in Kenya by Karen (2006) on HIV prevention through sign language at Machakos School for the deaf observed that, deaf students were now more curious and open about sexuality and its relationship to HIV and AIDS knowledge. This was due to the teaching techniques and strategies in teaching HIV and AIDS education through improved sign language, visual aids such as video material and posters, and persuasive communication.

Dyk (2003) also emphasised the importance of visual and learning aids. He itemised posters, photographs, pictures, projections and models as some of visual and learning aids that could increase the pupils' knowledge of HIV and AIDS. He emphasised that models of anatomy in particular could help learners to understand how HIV was transmitted from one person to another. He picked a model as one aid that could be used to show the correct usage of a condom.

With such improved strategies for teaching learners with hearing impairments, it would help them have access to HIV and AIDS knowledge which would enable them to protect themselves from the scourge.

National Centre for Health Statistics (NCHS – 2008) stated that recognition by the hearing public that a deaf culture existed was a crucial first step towards educating the nation about the needs of the deaf and hard of hearing who were living with HIV and AIDS.

Developing communication methods appropriate for the deaf and hard for hearing may help reduce the risk behaviours in this population and ensure equal access to health services. These methods may include peer-to-peer communication, as a research suggested that the deaf were more likely to learn from each other rather than from formal information sources.

Groce et al. (2006), in a study HIV and AIDS and disability done in Nigeria revealed that documented educational materials indicated that AIDS education for the young people with learning impairments and deaf adolescents, though available, such

materials were not effective. They observed that such materials needed to be re-packed to be culturally sensitive to the needs of the deaf if HIV and AIDS knowledge among the deaf was to increase. They went further to state that HIV and AIDS knowledge could be increased by developing interventions that included people with disabilities in public health and HIV and AIDS strategies that addressed specific vulnerabilities of the deaf. Also training and supporting deaf individuals themselves to become AIDS education and outreach workers, capable of providing increasingly better and more accurate AIDS information and services to the deaf community would be a workable solution.

Dyk (2003) put excursions as one way of increasing knowledge of HIV and AIDS by learners. He stated that excursions to facilities that care for people with HIV and AIDS such as hospices are very valuable experiences for students. The students would be able to see the effects of HIV and AIDS in a real situation and this would help them understand the HIV and AIDS better. This might lead to the deaf build an appropriate strategy to guard themselves against HIV and AIDS.

Malambo (2000) stated that children need to be given information on HIV and AIDS so that they could share it amongst themselves, their families and communities. Teaching needed to start early so that children grew up enlightened on the issues of HIV and AIDS. In the same study, 66% of teachers indicated that getting all the teachers more involved, training them and letting HIV and AIDS to be part of the school syllabus and a deliberate mention of HIV in every subject could improve HIV and AIDS information in schools. In the same study, it was suggested that views suggesting as pornographic on some materials used for increasing HIV and AIDS

knowledge in schools, could be removed in the Zambian society by incorporating the use of more of such materials so that people became more used to seeing them and might then be able to discuss sex with less reservations.

Chiwela and Mwape (1999) in a study conducted in Zambia established that pupils generally felt teaching of HIV and AIDS in schools could be improved by teachers to start teaching HIV and AIDS in schools; parents should ask teachers to start teaching HIV and AIDS in schools; and teachers should feel free to discuss HIV and AIDS.

Malambo (2000), in tackling school activities covering topics on HIV and AIDS stated that the main activities cited by both teachers and pupils as improving the coverage of HIV and AIDS in schools were establishment of extra-curricular clubs where the technique of children teaching other children using 'child to child' messages would be employed. Such clubs would include the Anti-AIDS and Red Cross Clubs. A few pupils also mentioned singing clubs, debate clubs, and biology and science clubs as options for learning about HIV and AIDS.

Dyk (2003) stated that story telling and sharing one's experiences was an important source of HIV and AIDS needed by the pupils. He pointed out that story telling and narrating of one's experiences promoted effective learning of HIV and AIDS. To defend this he argued that people like to hear about the experiences of others and related more easily to these than when trying to grasp facts which seemed to have very little relevance with them. This was supported by WHO (1993) in their AIDS care Handbook which argued that the story telling concept was a very effective means of explaining difficult issues in such a way that individuals could relate to it.

WHO supported their argument with a story of how HIV came into Yulia and Mukasa's family.

Summary

The reviewed literature shows that there is lack of information for the hearing impaired pupils on HIV and AIDS in Africa, Zambia included. The few local studies referred to were not specific to the hearing impaired pupils in Zambia though relationships could be deduced. The foreign literature on the other hand was mostly focused on the hearing impaired pupils. The literature showed that there were deficiencies in the deaf pupils' knowledge about HIV and AIDS. It also established that the hearing impaired pupils had less knowledge and awareness of HIV and AIDS.

In terms of sources of HIV and AIDS information, the reviewed literature was evenly distributed between local and foreign sources. The local literature was general and mostly covered the sources among the youth and pupils with no hearing impairments. It was noted that most of the information on HIV and AIDS was not in a form accessible to the deaf community. The foreign literature covered the deaf in general. However, since the hearing impaired pupils are part of the deaf community, the literature can extend to the hearing impaired pupils in high school in Zambia. The common denominator in all these was that the deaf were disadvantaged in as far as sources of information for HIV and AIDS were concerned. The massive HIV and AIDS programmes, including those by TV and radio, have not benefited the deaf in terms of information on HIV and AIDS.

As for the factors that hinder the accessibility of HIV and AIDS information to high school pupils with hearing impairments, most of the local literature covered HIV and AIDS in general. However, the few that were specific to the hearing impaired pupils pointed out that in Zambia, the HIV and AIDS campaigns did not reach the deaf children because of language barrier. The foreign literature stated that very little was known about the transmission of HIV among the deaf. It indicated that even educated deaf individuals had significantly low literacy levels on understanding HIV and AIDS.

In covering the Other Ways to increase awareness of HIV and AIDS knowledge to high school pupils with hearing impairments, both local and foreign literature were referred to. The Zambian set up was general, mostly talking about the HIV and AIDS among the pupils. It cited the establishment of extra-curriculum clubs to pupils as a way of covering topics on HIV and AIDS in schools. It also stated that teaching of HIV and AIDS in schools could be improved if the teachers began teaching HIV and AIDS.

As for the foreign literature, it was observed that for the deaf and hard of hearing, the best methods of increasing HIV and AIDS knowledge were through graphics, photographs and diagrams. The literature stated that the deaf and hard of hearing needed teaching and learning materials modified to their disability and suggested repackaging teaching materials to be cultural sensitive to the needs of the deaf. The literature reviewed thus can be replicated to the Zambia situation and to the study in particular.

CHAPTER THREE

METHODOLOGY

This chapter outlines how the study was conducted. Various aspects are dealt with under the following headings; research design, study population, sample size sampling procedure, piloting of the research instruments and making adjustments, research instruments, data collection procedure, data analysis and ethical consideration.

Research design

The study utilised a combination of quantitative and qualitative paradigms .A paradigm is a framework that organises broadly view. The paradigms were used due to their ability to create boundaries within which the search for answers occurs. Using these paradigms a researcher can circumscribe or delimit what is important to examine in a given field of inquiry (Ulin, et al, 2002).

Achola and Bless (1988) perceive a research design as a programme that guides a researcher in a data collection, analysis and interpretation of observed facts. It anables one to arrange and analyse data and interpret observed facts in a manner that combines relevance and accuracy to a given study (Ghosh, 2002)

This study used a survey design. The survey allows a researcher to describe the nature of existing conditions or identifying standards which the existing conditions can be compared with or to determine the relationship that exists between specific events once data or information is collected (Cohen and Manson1994).

Study population

The study population comprised 182 high school pupils with hearing impairments in grades 10, 11 and 12 in Zambia.

Sample size

Sample size is a small proportion of the population that is selected for observation and analysis(Best and Kahn ,2008).The sample comprised of 80 pupils with hearing impairments.

Characteristics of respondents

The respondents were drawn from High schools with pupils of hearing impairments at Magwero - Chipata district; St Joseph - Lufwanyama District; and Munali - Lusaka district in Zambia. The respondents were distributed as follows: 40 male and 40 female pupils of whom 19 were from grade 10, 24 from grade 11 and 37 from 12, bringing the total to 80 pupils as shown in the table below:-

Table 1: Characteristics of Respondents

School/District	Grade						Total
	10		11		12		
	Male	Female	Male	Female	Male	Female	
Magwero -Chipata	2	1	4	2	5	7	21
St Josephs – Lufwanyama	6	4	6	4	7	4	31
Munali –Lusaka	3	3	2	6	5	9	28
Total	11	8	12	12	17	20	80

Sampling procedure

Sampling procedure is the process of selecting a sample from the population. Simple random sampling was used. The simple random sampling has been chosen because individuals are chosen in such a way that each one has an equal and independent chance of being selected. Each population member was assigned a number. After assigning consecutive numbers, a number was read and the one which corresponded with that written on a unit card was chosen for the sample. This went on until the required sample was met.

Piloting of the research instruments and making adjustments

In order to prove if the research instruments were suitable for this kind of study or for pupils with hearing impairments, i piloted them before they were finally administered to the sample population. During the pilot study, i made some adjustments to make the instruments more suitable and easy to administer. From the pilot study a member of issues emerged that led to make some adjustment to the initial questionnaire. Among the key issues that emerged were the following:-

- Certain questions were found to be a repetition of the other questions that were already asked in the same questionnaire despite being in a different way. Such questions were removed from the questionnaire and numbering was rearranged.
- Some questions lacked clarity as such they were confusing to the pupils. Such questions were revised to reduce them to the level of their understanding as pupils with hearing impairments can only read at fourth or fifth grade.

- There were also questions that were identified to be double barred questions, where a pupil, may agree with one part of the question, while at the same time completely or totally disagree with the other part of the question. Such questions were separated to make sure that each element stood independently.

Research instruments

The tools for data collection were questionnaires and focus group discussion guide for pupils. A Questionnaire had been chosen because they it was presented to each respondent in exactly the same way to minimise the role and influence of the researcher and to make a more objective comparison of results. Close form of a questionnaire was used in this study because it was easy to fill out, takes less time, keeps the respondent on the subject, is relatively more objective and fairly to tabulate and analyse. They provided for marking of yes or no, a short response or checking an item out of a list of given responses. It restricts the choice of response for the respondents (Sidhu, 2003; Best and Kahn, 2008). This restriction worked to the advantage of pupils with hearing impairments, who have difficulties in expressing themselves in English or through writing. Further pupils with hearing impairments found it much easier to deal with response concepts that are familiar to them such as Yes or No, and a short response. While the focus group discussion guide had been selected to enable the researcher produce in-depth information. (Kombo and Tromp, 2006).

Data collection procedure

Different research procedures were used for different research instruments.

i. Procedure in administering the questionnaire.

   Questionnaire was administered to a group of 31, 21, and 28 pupils at the three schools. The pupils simply selected a response out of the supplied responses or wrote brief sentences. Since the average deaf pupil reads at fourth or fifth grade, the researcher read through the questionnaire using sign and signed language to help them understand the questions and to give the correct response

ii. Procedure in administering the focused group discussions.

   Data collection started with formal discussions to create rapport between pupils and the researcher. The sessions were conducted using sign language and signed English. The sessions had an average of five pupils of the same sex, to allow for free discussions. The pupils sat in semi-circle to facilitate eye contact and group work.

Data analysis

Both qualitative and quantitative methods were used in the analysis of findings, although most of the analysis was done qualitatively. Descriptive statistics were used to analyse the findings, that is, using frequency distribution, percentages and graphic representation in form of tables. Non-structured questions were analysed through categorization or coding of themes.

Ethical consideration

The researcher obtained permission from the District Education Board Secretaries of Chipata, Lufwanyama , and Lusaka districts , and the school Head teachers of st.Josephs, Magwero and Munali School. The pupils were assured of confidentiality by not, writing their names or identifying numbers on the questionnaires to be completed. They were informed that information to be obtained will be used for academic purposes only.

CHAPTER FOUR

PRESENTATIONS OF THE FINDINGS

The essence of any study is to collect data that will invariably present the problem under study. However, it is important that data collected is not only analysed and tabulated, but it should also present the responses of the population under study. This chapter presents the findings of the study. It gives the information that was gathered in the field in an organised manner in order to provide meaning. The results are presented according to the objectives of the study. The objectives of the study were: To find out how much knowledge high school pupils with hearing impairments have on HIV and AIDS; To identify the sources of HIV and AIDS information which High pupils with hearing impairments use; To find out factors, if any, which hinder the access of information on HIV and AIDS among high school pupils with hearing impairments; To find out if there were other ways which high School Pupils with hearing Impairments could use to increase their knowledge on HIV and AIDS.

Responses on Knowledge of HIV and AIDS among High School Pupils with Hearing Impairments

Knowledge of HIV by gender

Pupils were asked to indicate whether they knew what HIV is. Table 2 below shows their responses. For the respondents who said 'Yes', 54.0% were males and 46.0% were females. On the other hand, for those who said 'No' 65% were female and 35% were male.

Table 2: Knowledge of HIV by Gender

Response	Gender		Total
	Male	Female	
Yes	34 (54.0%)	29 (46.0%)	63 (100.0%)
No	6 (35.3%)	11 (64.7%)	17 (100.0%)
Total	40 (50.0%)	40 (50.0%)	80 (100.0%)

For the respondents who answered in the affirmative, a further question was asked to them to explain what they understood about HIV. Their responses varied. 11 (61.1%) male and 7 (38.9%) female pupils said it was a virus which causes AIDS. One female pupil said HIV was a disease like AIDS which kills, while 29 (47.5%) males and 32 (52.5%) females did not responding to this question, an indication that they did not know what actually HIV was.

Knowledge of HIV by grade level

As regards knowledge of HIV by grade level most of the respondents who said they knew what HIV was, were from grade 12 classes (41.3%) followed by those in grade 11 classes (35.0%). The rest of the responses are shown in Table 3 below.

Table 3: Knowledge of HIV by Grade Level

Response	Grade level			Total
	10	11	12	
Yes	15 (23.8%)	22 (34.9%)	26 (41.3%)	63 (100.0%)
No	4 (23.5)	2 (11.8%)	11 (64.7%)	17 (100.0%)
Total	19 (23.8%)	24 (30.0%)	37 (46.3%)	80 (100.0%)

Knowledge of AIDS by gender

Pupils were asked to indicate whether they knew what AIDS was. Table 4 below shows their responses. For the respondents who said 'Yes' 53.0% were males and 47.1% were females. On the other hand, for those who said 'No', 70 .0% were females while 30.0% them were males.

Table 4: Knowledge of AIDS by Gender

Response	Gender		Total
	Male	Female	
Yes	37 (52.9%)	33 (47.1%)	70 (100.0%)
No	3 (30.0%)	7 (70.0%)	10 (100.0%)
Total	40 (50.0%)	40 (50.0%)	80 (100.0%)

For the respondents who answered in affirmative, a further question was asked to them to explain what they understood about AIDS. Their responses varied with 6 (42.2%) male and 7 (53.8%) female pupils saying AIDS is a disease without a cure, 8 (57.1%) male and 6 (42.9%) female pupils said it was a disease with many diseases. The rest, 27 (52.9%) male and 24 (47.1%) are female did not respond to this question

Knowledge of AIDS by grade level

As regards knowledge of AIDS by grade level most of the respondents who said they knew what AIDS was, were from grade 12 classes (43.0%) followed by those in grade 11 classes (33.0%). The rest of the responses are shown in Table 5.

Table 5: Knowledge of AIDS by Grade Level

Response	Grade level			Total
	10	11	12	
Yes	17 (24.3%)	23 (32.9%)	30 (42.9%)	70 (100.0%)
No	2 (20.0%)	1 (10.0%)	7 (70.0%)	10 (100.0%)
Total	19 (23.0%)	24 (30.0%)	37 (46.3%)	80 (100.0%)

Knowledge of what comes first between HIV and AIDS by gender

Pupils were asked to state which one came first between HIV and AIDS. Table 6 below shows their responses. For the respondents who said 'AIDS comes first', the 55.0% were males while 45.0% females. On the other hand, for those who said 'HIV comes first', 61.0% were females and 39.0% were males. Two male pupils said HIV and AIDS were the same, while one female pupil did not respond to the question.

Table 6: Knowledge of what comes first between HIV and AIDS by gender

Response	Gender		Total
	Male	Female	
HIV	11 (39.3%)	17 (60.7%)	28 (100.0%)
AIDS	27 (55.1%)	22 (44.9%)	49 (100.0%)
They are the same	2 (100.0%)	-	2 (100.0%)
No response	-	1 (100.0%)	1 (100.0%)
Total	40 (50.0%)	40 (50.0%)	80 (100%)

According to grade level most of the respondents who said AIDS comes first were from grade 12 classes (61.0%) followed by those in grade 11classes (25.0%). The rest of the responses are shown in table 7 below.

Table 7: Knowledge of what comes first between HIV and AIDS by grade level

Response	Grade Level			Total
	10	11	12	
HIV	4 (14.3%)	7 (25.0%)	17 (60.7%)	28 (100.0%)
AIDS	14 (28.6%)	15 (30.6%)	20 (40.8%)	49 (100.0%)
They are the same	-	2 (100.0%)	-	2 (100.0%)
No response	1 (100.0%)	-	-	1 (100%)
Total	19 (23.8%)	24 (30.0%)	37 (46.3%)	80 (100.0%)

Responses from the pupils focus group discussion

Knowledge about HIV and AIDS symptoms

The respondents described a number of HIV symptoms such as weight loss, diarrhoea ,coughing, tuberculosis, hair thinning, body rush, sores on private parts, body sores and feeling weak all the time. Apart from the listed specific clinical diagnoses, pupils with hearing impairments interestingly listed an additional set of symptoms that were largely descriptive in nature like spotted skin, smelly urine, eyes becoming white and small, swelling legs and headache at night.

Knowledge of HIV transmission by gender

Pupils were asked to indicate the different modes of HIV transmission. Table 8 below shows their responses. Most of the pupils 15 (60.0%) females and 10 (40.0%) males

said HIV was transmitted through sex. The rest of the responses are shown in Table 13 below:

Table 8: Knowledge of HIV transmission by gender

Response	Gender		Total
	Male	Female	
I do not know	-	1 (100.0%)	1 (100.0%)
Sex, kissing and witchcraft	6 (75.0%)	2 (25.0%)	8 (100.0%)
Sex and unsterilized razor blades and needles	2 (25.0%)	6 (75.0%)	8 (100.0%)
Sex	10 (40.0%)	15 (60.0%)	25 (100.0%)
Deep kissing and unprotected sex	5 (83.3%)	1 (16.7%)	6 (100.0%)
Kissing, sharing razor blades and shaving machines	3 (60.0%)	-	3 (100.0%)
Kissing, blood transfusion and sharing spoons	2 (50.0%)	2 (50.0%)	4 (100.0%)
Unprotected sex and blood transfusion	3 (100.0%)	-	3 (100.0%)
Unprotected sex, blood transfusion and multiple partners	1 (50.0%)	1 (50.0%)	2 (100.0%)
Unprotected sex and sweat	3 (37.5%)	5 (62.5%)	8 (100.0%)
Sharing of bathing dishes and saliva	5 (50.0%)	5 (50.0%)	10 (100.0%)
Total	40 (50.0%)	40 (50.0%)	80 (100.0%)

Knowledge of HIV transmission by grade level

The study revealed that most of the pupils who said HIV and AIDS was transmitted through sex, were from Grade 12 classes (60.0%) followed by those in Grade 10 classes (16.0%). The rest of the responses are shown in table 9 below:

Table 9: Knowledge of HIV transmission by grade level

Response	Grade Level			Total
	10	11	12	
I do not know	-	-	1 (100.0%)	1 (100.0%)
Sex, kissing and witchcraft	2 (25.0%)	2 (25.0%)	4 (100.0%)	8 (100.0%)
Sex and unsterilized razor blades and needles	-	5 (62.5%)	3 (37.5)	8 (100.0%)
Sex	6 (24.0%)	4 (16.0%)	15 (60.0%)	25 (100.0%)
Deep kissing and unprotected sex	1 (16.7%)	2 (33.3%)	3 (50.0%)	6 (100.0%)
Kissing, sharing razor blades and shaving machines	1 (20.0%)	3 (60.0)	1 (20.0%)	5 (100.0%)
Kissing, blood transfusion and sharing spoons	1 (25.0%)	-	3 (75.0%)	4 (100.0%)
Unprotected sex and blood transfusion	1(33.3.0%)	-	2 (66.7%)	3 (100.0%)
Unprotected sex, blood transfusion and multiple partners	1 (50.0%)	1 (50.0%)	-	2 (100.0%)
Unprotected sex and sweat	3 (37.5%)	3 (37.5%)	2 (25.0%)	8 (100.0%)
Sharing of bathing dishes and saliva	3 (30.0%)	4 (40.0%)	3 (30.0%)	10 (100.0%)
Total	19 (23.8%)	24 (30.0%)	37 (46.3%)	80 (100.0%)

Responses from the pupils' focus group discussion

Knowledge of HIV prevention

When asked how a person could prevent becoming infected with HIV most (78%) of the pupils (78%) said by using a condom. One respondent was however quick to add that "condoms are not always safe", meaning condoms are not hundred percent safe. A few pupils said "using sterile needles", while others said, "not sleeping around". This means not having many sexual partners. Data from the questionnaire indicate that high school pupils with hearing impairments have knowledge of condom

use (41%) and abstinence (79%). Despite this knowledge some believe HIV can be prevented through prayers, having sex once in a while, having sex with healthy looking people only, checking for sores on partner's private part, rinsing of manhood with water immediately after having sex, circumcision and avoiding sharing bathing dishes especially amongst girls.

Knowledge of AIDS cure by gender

Pupils were asked to indicate whether there was a cure for AIDS. Table 10 below shows their responses. For the respondents who said 'Yes' there is a cure for AIDS, 74.0% were males and 26.0% were females. On the other hand, those who said 'No' there was no cure for AIDS, 40.0% were males and 60.0% were females.

Table 10: Knowledge of AIDS cure by gender

Response	Gender		Total
	Male	Female	
Yes	17 (73.9%)	6 (26.1%)	23 (100.0%)
No	23 (40.4%)	34 (59.6%)	57 (100.0%)
Total	40 (50.0%)	40 (50.0%)	80 (100.0%)

Knowledge of AIDS cure by grade level

As regards grade level, most of the respondents who said there was no cure for AIDS were from grade 12 class (46.0%) followed by those in grade11 (33.0%). As for those who said there was a cure for AIDS most of them were again were from grade 12 classes (48.0%). The rest of the responses are shown in Table 11 below:

Table 11: Knowledge of AIDS cure by grade level

Response	Grade Level			Total
	10	11	12	
Yes	7 (30.4%)	5 (21.7%)	11 (47.8%)	23 (100.0%)
No	12 (21.1%)	19 (33.3%)	26 (45.6%)	57 (100.0%)
Total	19 (23.8%)	24 (30.0%)	37 (46.3%)	80 (100.0%)

Group discussions with the pupils showed that , some pupils believed that there was cure for AIDS. The method of cure cited were prayer and traditional medicines.

Knowledge of abstinence as method of preventing HIV transmission by gender

Pupils were asked to indicate whether abstinence was the most certain method of preventing HIV transmission. Table 12 below shows their responses. For the respondents who said 'Yes', 54.0% were females while 46.0% were males. On the other hand, for those who said 'No', 65.0% were males and 35.0% were females.

Table 12: Knowledge of abstinence as method of preventing HIV transmission by gender

Response	Gender		Total
	Male	Female	
Yes	29 (46.0%)	34 (54.0%)	63 (100.0%)
No	11 (64.7%)	6 (35.3%)	17 (100.0%)
Total	40 (50.0%)	40 (50.0%)	80 (100.0%)

Knowledge of abstinence as method of preventing HIV transmission by grade level

As regards to knowledge of abstinence as the most certain method of preventing HIV transmission by grade level, most of the respondents who agreed that abstinence is the most certain method of HIV transmission were from grade 12 classes (41.0%) followed by grade those from grade 11 classes (33.0%). Table 13 below shows the rest of the responses.

Table 13: Knowledge of abstinence as method of preventing HIV transmission by grade level

Response	Grade level			Total
	10	11	12	
Yes	16 (25.4%)	21 (33.3%)	26 (41.3%)	63 (100.0%)
No	3 (17.6%)	3 (17.6%)	11 (64.7%)	17 (100.0%)
Total	19 (23.8%)	24 (30.0%)	37 (46.3%)	80 (100.0%)

Knowledge of condom use by gender

Pupils were asked to indicate whether it was necessary to use a condom when having sex. Table 14 below shows their responses. For the respondents who said 'Yes' it was necessary to use a condom when having sex, 58.0% were males and 42.4% were females. As for those who said 'No' it was not necessary to use a condom when having sex, 45.0% were males and 55.0% were females.

Table 14: Knowledge of condom use by gender

Response	Gender		Total
	Male	Female	
Yes	19 (57.6%)	14 (42.4%)	33 (100.0%)
No	21 (44.7%)	26 (55.3%)	47 (100.0%)
Total	40 (50.0%)	40 (50.0%)	80 (100.0%)

Knowledge of condom use as method of preventing HIV transmission by grade level

Most of the pupils who said it is necessary to use a condom when having sex were from grade 12 classes (47.0%), followed by those in grade 10 classes (28.0). As for those who said it is not necessary to use a condom when having sex, the majority were from grade 12 classes (46.0%). The rest of the responses are shown in table 15 below:

Table 15: Knowledge of condom use by grade level

Response	Grade level			Total
	10	11	12	
Yes	13 (27.7%)	12 (25.5%)	22 (46.8%)	47 (100.0%)
No	6 (18.2%)	12 (36.4%)	15 (45.5%)	33 (100.0%)
Total	19 (23.8%)	24 (30.0%)	37 (46.3%)	80 (100.0%)

Knowledge of whether or not a person been infected with HIV is infected with AIDS by gender

To find out if pupils agree with the statement, 'a person can be infected with HIV and not infected with AIDS is true'. Table 16 shows their responses. For the respondents who said 'Yes' a person can be infected with HIV and not infected with AIDS, the majority of the pupils were 15 (44.1%) males and 19 (56.0%) females. On the other hand, for those who said 'No' a person cannot be infected with HIV and not infected with AIDS 54.0% were male and 46.0% were male.

Table 16: Knowledge of whether or not a person been infected with HIV is infected with AIDS by gender

Response	Gender		Total
	Male	Female	
Yes	15 (44.1%)	19 (55.9%)	34 (100.0%)
No	25 (54.3%)	21 (45.7%)	46 (100.0%)
Total	40 (50.0%)	40 (50.0%)	80 (100.0%)

Knowledge of whether or not a person been infected with HIV is infected with AIDS by grade level

As regards to grade level, most of the pupils who said 'no' to the statement were from grade 12 classes 16 (47.1%) followed by those from grade 11 classes ,11 (32.4%). As for those who said 'Yes' a person can be infected with HIV and not infected with AIDS the majority were from grade 12 classes. Table 17 below shows the rest of the responses.

Table 17: Knowledge of a person been infected with HIV and not infected with AIDS by grade level

Response	Grade level			Total
	10	11	12	
Yes	7 (20.6%)	11 (32.4%)	16 (47.1%)	34 (100.0%)
No	12 (26.1%)	13 (28.3%)	21 (45.7%)	46 (100.0%)
Total	19 (23.8%)	24 (30.0%)	37 (46.3%)	80 (100.0%)

Responses on sources of HIV and AIDS information for high school pupils with hearing impairments

Sources of pupils' knowledge of HIV and AIDS

Knowledge of HIV and AIDS is directly related to accessible sources of information. Therefore, the survey sought information from where respondents regularly received messages about HIV and AIDS. The top five (5) sources of HIV and AIDS information cited by pupils with hearing impairments were teachers 11 (13.8%).The next significant source of information was the teachers and people around the pupils 8 (10.0%); television and t-shirts 7 (8.8%); safe club 6 (7.5%) friends 5 (6.3%).The rest of the sources of information indicated by pupils were relatives, medical, parents, and billboards.

Responses on hindrances of HIV and AIDS information among high school pupils with hearing impairments

Anti-AIDS club in school by gender

Pupils were asked to indicate whether they had Anti-AIDS club at their schools. Table 18 below shows their responses. For the respondents who said 'Yes' they had Anti-AIDS Clubs at their schools, (57.0%) were males and (43.0%) were females. Those who said they did not have Anti-AIDS club at their school, were 33.0% were males and 67.0% females.

Table 18: Anti-AIDS club in school by gender

Response	Gender		Total
	Male	Female	
Yes	32 (57.1%)	24 (42.9%)	56 (100.0%)
No	8 (33.3%)	16 (66.7%)	24 (100.0%)
Total	40 (50.0%)	40 (50.0%)	80 (100.0%)

Anti-AIDS club in school by grade level

Table 19 below shows that most of the respondents, who said they have Anti-AIDS club at their school were from grade 12 classes (39.0%) followed by those in grade 11 classes (32.0%). As for those who said they did not have Anti-AIDS club at their school, the majority were from grade 12 classes (63.0%).

Table 19: Anti-AIDS club in school by grade level

Response	Grade level			Total
	10	11	12	
Yes	16 (28.6%)	18 (32.1%)	22 (39.3%	56 (100.0%)
No	3 (12.5%)	6 (25.0%)	15 (62.5%)	24 (100.0%)
Total	19 (23.0%)	24 (30.0%)	37 (46.3%)	80 (100.0%)

Member of Anti-AIDS club by gender

For the respondents who answered that they had Anti-AIDS club at their school, a further question was asked to them to indicate whether they were members of Anti-AIDS club. For those who said they were members, 21 (52.5%) were males and 19 (47.5%) were females. On the other hand for those who said were not members of the Anti-AIDS club 19 (47.5%) were males while 21 (52.5%) were females.

Members of Anti-AIDS club by grade level

Most of the respondents who said they were members of Anti-AIDS club were from Grade 12 classes (38.0%), followed by those in grade 10 classes (33.0). As for those who said they were not members of Anti-AIDS club, the majority were from grade 12 classes (55.0%). The rest of the responses are shown in table 20 below.

Table 20: Member of Anti-AIDS club by grade level

Response	Grade level			Total
	10	11	12	
Yes	13 (32.5%)	12 (30.0%)	15 (37.5%)	40 (100.0%)
No	6 (15.0%)	12 (30.0%)	22 (55.0%)	40 (100.0%)
Total	19 (23.8%)	24 (30.0%)	37 (46.3%)	80 (100.0%)

Responses from the pupils' focus group discussion

Barriers to prevention of HIV and AIDS

The most significant barrier to prevention of HIV and AIDS as pointed out by the pupils was lack of information. This was attributed to communication barrier as most of the information on HIV and AIDS is in print material making it difficult for she pupils to comprehend given concepts. Lack of literature in sign language was also mentioned as a barrier to prevention of HIV and AIDS. The aspect of shyness on part of the girl child was cited as another barrier as most of the teachers in charge of Anti-AIDS club and safe club were patrons. As one female pupil put it "shy me ask teacher male."

Use of teaching aids

Pupils were asked whether their teachers used teaching aids when teaching HIV and AIDS. Most of the pupils at one school said their teachers do not use teaching aids. The pupils challenged the researcher to check on the classroom walls to see if there were any teaching aids on HIV and AIDS "check, check, nothing" pointing to the

walls. Even in cases where teaching aids such as charts were in existence, pupils stated that most of such aids showed obsolete information.

Issues related to HIV and AIDS with their family members, teachers and friends.

From the discussions, pupils stated that discussions of issues related to HIV and AIDS with their family members especially their parents were not there, as they considered it to be a taboo. However, four Grade 12 female pupils indicated that they held discussions with their family members but were quick to point out that their parents had limitations of either language or in-depth information on HIV and AIDS. One of them said her mother always tells her to abstain as AIDS kills. Her mother tells her this "sex, no, no kills".

On having discussions of issues related to HIV and AIDS with the teachers the pupils stated that apart from those in charge of the Anti AIDS clubs, other teachers did not discuss HIV and AIDS issues with the pupils.

The pupils also stated that they never discussed issues of HIV and AIDS with their friends and that if that happened, then it would be in very rare occasion.

Other ways of increasing knowledge on HIV and AIDS to high school pupils with hearing impairments

HIV and AIDS prevention programmes on television Zambia in sign language by gender

Pupils were asked to indicate whether they were in agreement that there should be programmes on TV in sign language. The findings are shown Table 21. The table shows that for the respondent who were in agreement that there was need to have HIV and AIDS prevention programmes on Television Zambia in sign language, 50.0% were males and another 50.0% were females. On the other hand, for those who said 'No' there was no need of having HIV and AIDS presentation programmes on Television Zambia in sign language again 50.0% were males and another 50.0% were females.

Table 21: HIV and AIDS prevention programme on television Zambia in sign language by gender

Response	Gender		Total
	Male	Female	
Yes	37 (50.0%)	37 (50.0%)	74 (100.0%)
No	3 (50.0%)	3 (50.0%)	6 (100.0%)
Total	40 (50.0%)	40 (50.0%)	80 (100.0%)

HIV and AIDS prevention programme on television Zambia in sign language by grade level

As regards to HIV and AIDS Prevention Programme on Television Zambia by grade level, majority of the respondents who were in agreement were from grade 12 classes (47.0%) followed by those in grade 11 classes (30%). As for those who said there is no need of having HIV and AIDS prevention programme on Television Zambia in sign language, were from grade 10,11 and 12 classes representing 33.0% each respectively.

Table 22: HIV and AIDS prevention programme on television Zambia in sign language by grade level.

Response	Grade level			Total
	10	11	12	
Yes	17(23.0%)	22(29.7%)	35(47.3%)	74(100.0%)
No	2(33.3%)	2(33.3%)	2(33.3%)	6(100.0%)
Total	19(23.8%)	24(30.4%)	37(46.3%)	80(100.0)

HIV and AIDS messages through posters or graphics by gender

Pupils were asked to indicate whether messages on HIV and AIDS could be meaningful if presented through posters or graphics. Table 23 below shows their responses. For the respondents who said 'Yes', 56.0% were males and 44.0% were females. On the other hand for those who indicated 'no', 67.0% were females and 33.0% were males.

Table 23: HIV and AIDS messages through posters or graphics by gender

Response	Gender		Total
	Male	Female	
Yes	33(55.9%)	26(44.1%)	59(100.0%)
No	7(33.3%)	14(66.7%)	21(100.0%)
Total	40(100.0%)	40(100.0%)	80(100.0%)

HIV and AIDS messages through posters or graphic by grade level

Table 24 below shows that, most of the respondents who said HIV and AIDS would be meaningful if presented through posters and graphics were from grade 12 classes (42.0%) followed by those in grade 11 classes (34.0%). As for those who said HIV and AIDS messages presented through posters and graphics would not be meaningful, the majority were from grade 12 classes (57.0). The rest of the responses are shown in the table

Table 24: HIV and AIDS messages through posters or graphic by grade level

Response	Grade level			Total
	10	11	12	
Yes	14 (23.7%)	20 (33.9%)	25 (42.4%)	59 (100.0%)
No	5 (23.8%)	4 (19.0%)	12 (57.1%)	21 (100.0%)
Total	19 (23.8%)	24 (30.0%)	37 (46.3%)	80 (100.0%)

In both gender and grade levels, under group discussions, the pupils who acknowledged the importance of posters and graphics as a means of disseminating

HIV and AIDS information indicated however, that very little information emanated from such posters and graphics.

How best HIV and AIDS information can be presented by gender

Pupils were asked to indicate how best they thought HIV and AIDS could be presented to them. Their responses varied with the majority of the pupils 15 (71.4%) females and 6 (28.6%) males saying through 'videos and drama by the deaf'; 12 (75.0%) males and 4 (25.0%) females said through 'sign language programme on television'; 7 (50.0%) males and 7 (50.0%) females said through sign language interpreters; and 7(58.3%) females and 5(41.7%) males said through stories. Other suggestions were through drama using sign language, presentations, using people living with HIV and AIDS, books written in sign language, and videos.

How best HIV and AIDS information can be presented by grade level

As regards to grade level most of the respondents who said HIV and AIDS information could best be presented through videos and drama by the deaf were from grade 12 classes (48.0%) followed by those in grade 10 classes (33.0%). The rest of the responses are shown in Table 25 below.

Table 25: How best HIV and AIDS information can be presented by grade level

Suggestions	Grade level			Total
	10	11	12	
Through books written in sign language	1 (50.0%)	1 (50.0%)	-	2 (100%)
Through drama using sign language	2 (22.2%)	2 (22.2%)	5 (55.6%)	9 (100.0%)
Through videos and drama by the deaf	7 (33.3%)	4 (19.0%)	10 (47.6%)	21(100.0%)
Through sign language using sign language interpreters	3 (21.4%)	7 (50.0%)	4 (28.6%)	14 (100.0%)
Through sign language programmes on television	3 (18.8%)	6 (37.5%)	7 (43.8%)	16 (100.0%)
Through videos	-	1(50.0%)	1 (50.0%)	2 (100.0%)
Through presentations and using people with HIV and AIDS	2 (50.0%)	-	2 (50.0%)	4 (100.0%)
Through stories	1 (8.3%)	3 (25.0%)	8 (66.7%)	12 (100.0%)
Total	19 (23.8%)	24 (30.0%)	37 (46.3%)	80 (100.0%)

CHAPTER FIVE

DISCUSSION OF FINDINGS

This chapter discusses the findings of the study which was conducted to find out the HIV and AIDS knowledge among high school pupils with hearing impairments. This was done in line with the objectives of the study outlined in the findings.

Knowledge of HIV and AIDS among high school pupils with hearing impairments

As regards knowledge of what HIV is, the study revealed that most of the pupils both males (34) and females (29) were aware or have knowledge of HIVS and the majority of them were from grade 12 classes. However, when asked to explain what they understood about HIV the study showed that only a few pupils (11 males and 7 females) were able to give a correct explanation while the majority of them (29 males and 32 females) did not respond to this issue, an indication that they did not know what HIV and AIDS was. For instance, one female pupil explained that HIV was a disease like AIDS which kills.

As regards to knowledge of what AIDS is, the study revealed that most of the pupils (53% males and 47% females) were aware of what AIDS is and majority of them were again from grade 12 classes. However, when they were asked to explain what they understood about AIDS, again only a few pupils were able to give the correct explanation.

The study also revealed that most pupils both males and females did not know what comes first between HIV and AIDS. Surprising enough of those who did not know what comes first between HIV and AIDS, most of them were from grade 12 classes. On the other hand, two male pupils were of the view that HIV and AIDS were the same. The above findings are an indication that information on HIV and AIDS is lacking among the high school pupils with hearing impairments. This lack of information has a negative impact on high school pupils with hearing impairments. The above findings are in line with Katuta et al. (2004) who acknowledged the adverse of lack of information on HIV and AIDS in Africa, Zambia included. When it comes to pupils with hearing impairments, literature showed that they stood a high chance of being infected with HIV and AIDS due to their limited knowledge on HIV and AIDS. Sangowawa et al. (2004) report on a study done in Nigeria showed that there were deficiencies in the deaf students' knowledge about HIV and AIDS.

As regards to symptoms of HIV and AIDS the study showed that both male and female pupils had enough information in this area. They described a number of HIV symptoms such as weight loss, diarrhoea ,coughing, tuberculosis, hair thinning, body rush, sores on private parts, body sores and feeling weak all the time. Apart from the listed specific clinical diagnoses, pupils with hearing impairments interestingly listed an additional set of symptoms that were largely descriptive in nature like spotted skin, smelly urine, eyes becoming white and small, swelling legs and headache at night. However, this may not be taken as the actual knowledge that the hearing impaired pupils have on HIV and AIDS as HIV and AIDS cannot be confirmed by the outward appearance of a person as they may be some other ailments that may lead

to such symptoms. This being as it is, it is a good indicator that the pupils have a degree of alertness to HIV and AIDS.

The study also sought to find out if pupils had knowledge on the different modes of HIV transmission. The study showed that most of the pupils 60% females and 40% males indicated that HIV was transmitted mainly through sex. Other notable modes of transmission as indicated by the pupils were using unsterilized razor blades and needles, unprotected sex, unprotected sex and blood transfusions. From the above it is clear that students have enough understanding on how HIV is transmitted. An interesting finding here is that the above responses came more from the grade 12 pupils than grade 10, an indication that the higher the level of education one attains the more they are exposed to information.

The above finding is in agreement with that of the MOH (2005) which stated that the HIV virus spreads from one person to another in several ways. However, it should be noted that the major mode of HIV transmission in Zambia is heterosexual through which 78% of the country's infections is transmitted. HIV and AIDS can also be spread through transfusion of unscreened blood, use of contaminated needles and syringes can also spread the virus, although this is very rare because measures are taken by the medical personnel before any blood transfusion takes place. HIV and AIDS can also be passed from an infected mother to her child during pregnancy, child birth and breast feeding.

However, Groce, Yousafzai and Maas (2006) in a study on HIV and AIDS and disability survey done in Nigeria indicated that the data on the knowledge about

transmission and prevention of the HIV virus indicated that the deaf group was more likely to agree with incorrect ideas.

In terms of transmission of HIV and AIDS, the findings of this study are that some hearing impaired pupils in Zambia believe that HIV can be spread by heavy kissing and using some plates with someone infected by the virus. This is in agreement with the study on the deaf and hearing impaired population in Swaziland (Groce et al 2003) which found that the deaf respondents were significantly more likely to believe that HIV could be transmitted by kissing, hugging and dirty places. However, none of these beliefs are true. In as much as deep kissing may to some degree transmit HIV and AIDS in cases where one may have sores in the mouth or bleeding gums, the major mode of HIV transmission is heterosexual.

Further the deaf were more unlikely to know that testing of blood prior to infection was a means of preventing HIV transmission. Taking the importance of knowledge on this aspect in the fight against HIV and AIDS, it is important for schools, churches and other organisations involved in the fight against HIV and AIDS to intensify the awareness campaigns using relevant media such as sign language. In the same study it was found that some deaf people believed the HIV virus could be transmitted by germs in the air (Groce, et al, 2003). This finding further helps to support the argument that the deaf have very little knowledge on HIV and AIDS.

Another issue that the study sought to find out was if pupils had knowledge of how HIV can be prevented. Most of the pupils (78%) in the study were of the view that HIV could be prevented by using a condom whenever having sex. However one

respondent was quick to add that "condoms are not always safe", meaning condoms are not hundred percent safe. Despite this knowledge some believe HIV can be prevented through prayers, having sex once in a while, having sex with healthy looking people only, checking for sores on partner's private part, rinsing of manhood with water immediately after having sex, circumcision and avoiding sharing bathing dishes especially amongst girls. Though the knowledge of HIV prevention seems to be above average, there is a danger that the incorrect or distorted information on the prevention of HIV if not checked, may rise to higher levels which would be put the hearing impaired pupils in higher risks of catching the HIV virus.

In order to prevent HIV infection, there are three main ways of preventing HIV transmission. These are abstinence, being faithful to your partner and condom use (ABC). It is imperative that the focus of preventive messages to the young people should emphasize the principle of suspecting everyone to be HIV positive except oneself. Such a principle may help the youth refrain from illicit sex (MOH, 2005). The messages should also be prepared in a manner that the hearing impaired pupils would be able to access and comprehend them. This would inevitably call for such messages to be in sign language or posters that would make the ABC campaigns against HIV transmission meaningful to the hearing impaired pupils.

As regards cure, most of the respondents (74% males and 26% females) were of the view that AIDS has until now no cure. However, group discussions with the pupils showed that, some pupils believed that there was cure for AIDS. The method of cure cited was prayer and traditional medicines. In the same vein Emasu (2004) cited a response where a deaf person through an interpreter indicated that AIDS was the

same as fever. It was a curse from God to punish couples. It has no cure, but when one was in good books with God, one's life would be spared. This finding clearly shows that more is supposed to be done to increase the knowledge on HIV and AIDS as regards the cure. Strictly information should be given that for now there is no cure for HIV and AIDS. The ARVs available from most of the medical institutions or organization can only prolong someone's life but absolutely not a cure at all.

On knowledge of abstinence as a method of preventing HIV transmission, most of the respondents (46% males and 54% females) were of the view that abstinence is the only best way of preventing HIV transmission. Kelly (2008) also argued that in order for the education system of Zambia to respond to HIV and AIDS epidemic it should be targeted at schools by "ensuring that every pupil is well equipped with correct information on HIV and AIDS, and its transmission". He also pointed out the promotion of abstinence as the most certain method of preventing HIV transmission.

As regards to knowledge of abstinence as the most certain method of preventing HIV transmission by grade level, most of the respondents who agreed that abstinence is the most certain method of HIV transmission were from grade 12 classes. The study also revealed that pupils, both male and female had knowledge on condom use. However fewer pupils were of the view that it was not necessary to use a condom when having sex. The attitude of the latter utterances by some pupils leave much to be desired as it encompasses a lot of risk for them.

Sources of HIV and AIDS information for high school pupils with hearing impairments

Knowledge of HIV and AIDS is directly related to accessible sources of information therefore, the study sought to find out from the pupils their sources of information on HIV and AIDS. The study revealed that the most important source of HIV and AIDS information as cited by pupils with hearing impairments was teachers. The next significant source of information was the teachers and people around the pupils; television and t-shirts; safe clubs; friends; relatives; medical personnel; parents; and billboards. The above finding is in conformity with the findings of a study conducted in Nigeria by Sangowawa et al.(2004) on HIV and AIDS knowledge and information sources among deaf students in Ibadani where it was found that students' sources of information on HIV and AIDS were television, teachers, friends, family members and newspapers.

In Zambia Siatontola (2004) also found out that the sources of information a teacher could use are Anti-AIDS Clubs, Education through entertainment such as role or dramatisation which included games for life and youth friendly health service. Other methods include the use of posters, roads side bill boards, leaflets and T-shirts.

Mwananyanda, et al (2005) revealed that among the Zambian youth their sources of knowledge on HIV included programmes on radio, television, and discussions on AIDS with their parents, teachers and friends.

However, though such sources were as given, they remain inadequate in addressing the needs of information on HIV and AIDS by the hearing impaired pupils as most of

such sources were not deaf friendly. The teachers have been identified as a major source of information. However, these in most cases were not well equipped to disseminate the HIV and AIDS information fully. This was worsened by the fact that HIV and AIDS was not on the time table of these pupils. Parents, siblings, friends and family members on the other hand, may not have the necessary literacy in sign language, thus reducing their effectiveness as a resource in this area. Addressing these inadequacies, will help the hearing impaired pupils to fully acquire the much needed knowledge on HIV and AIDS.

Hindrance of HIV and AIDS information among high school pupils with hearing impairments

There are many factors hindering access to information on HIV and AIDS among high school pupils with hearing impairments. The study therefore sought to find out what hindered high school pupils with hearing impairments from accessing information on HIV and AIDS. To solicit such information from the pupils, it was inevitable to ask them whether they had such clubs like the Anti-AIDS in their schools. The study showed that most schools had this club in place. However, there was also need to find out from the pupils as regards membership. The study revealed that despite having the Anti-AIDS club in schools, only half the number of pupils interviewed actually were members of the Anti-AIDS club. Among those who belonged to the club, most of them were from Grade 12 classes (38%), followed by those in grade 10 classes (33).

The lack of large membership could be attributed partly to the type of materials available in this club. As long as the materials remained incomprehensive to the

pupils, we will see very few of them joining the clubs as it were not delivering the intended purpose. When the pupils find the materials used at these clubs to be incompatible with them, they are likely not to get interested in the clubs. If this situation is not improved, it is my view that the numbers will keep on reducing until the clubs become almost irrelevant to the hearing impaired pupils in high schools.

Another hindrance on HIV and AIDS information among the high school pupils with hearing impairments is their inability to fully comprehend the HIV and AIDS educational materials. The unavailability of such information in deaf friendly language like sign language is a significant hindrance which is worsened by low reading achievements of pupils with hearing impairments as pointed out by the American Social Health Association (2001). The Association showed that HIV and AIDS educational materials were incomprehensive to the hearing impaired pupils. Sleek (1998) also showed that the average deaf persons' reading levels were low because sign language was structurally and grammatically different from written English. Kauffman and Hallaham (1994) have also presented evidence of low reading achievement of students with hearing impairments. It is apparent therefore that provision of HIV materials in deaf friendly language and improving the reading levels would increase the availability of HIV and AIDS information to the high school pupils with hearing impairments.

Herlihy et al. (2005) reported in their pilot study 'on cultural factors in Zambia that currently HIV and AIDS intervention strategies employed in Lusaka were inappropriate and inaccessible to persons with disabilities. They stated that this was

due to the cultural assumptions of low HIV risks for disabled persons that resulted in a lack of targeted education materials and accessible services.

Focus group discussions with the pupils revealed that the most significant barrier to prevention of HIV and AIDS was lack of information. This was attributed to communication barrier as most of the information on HIV and AIDS is in print material making it difficult for the pupils to comprehend given concepts. Lack of literature in sign language was also mentioned as a barrier to prevention of HIV and AIDS. The aspect of shyness on part of the girl child was cited as another barrier as most of the teachers in charge of Anti-AIDS club and safe club were patrons. As one female pupil put it "shy me ask teacher male."

The use of teaching aids also proved to be a big challenge in most schools. At one school, most of the pupils said their teachers do not use teaching aids. The pupils challenged the researcher to check on the classroom walls to see if there were any teaching aids on HIV and AIDS "check, check, nothing" pointing to the walls. Even in cases where teaching aids such as charts were in existence, pupils stated that most of such aids showed obsolete information.

The above finding conforms that of Malambo (2000) who argued there were no teaching and learning materials provided and teachers were not trained and the training manuals were not being used. The study further observed that teachers received inadequate training in preparing them for teaching HIV and AIDS. Teachers in the study also cited shortage of time and rare opportunities to go into detail when teaching HIV and AIDS in class.

As regards discussions of issues related to HIV and AIDS with their family members the study revealed that these were not there, especially their parents, who considered such discussions to be a taboo. However, four Grade 12 female pupils indicated that they held discussions with their family members but were quick to point out that their parents had limitations of either language or in-depth information on HIV and AIDS. One of them said her mother always tells her to abstain as AIDS kills. Her mother tells her this "sex, no, no kills". Banda (2009) revealed that the campaign awareness in Zambia on diseases such as HIV/AIDS did not reach the deaf children because of the language barrier.

Emasu (2004) in discussing barriers or factors that hinder the accessibility of HIV and AIDS information to people with hearing impairments also pointed out effective communication as a barrier. She cited lack of national language in Uganda as a communication barrier which had perpetuated the vulnerability of the deaf to HIV and AIDS. She argued further that few deaf people understood sign language and yet there was very little effort by the Ugandan government to utilise services of those few to train the deaf. In the same study, Emasu stated that families of the deaf people were a hindrance to information on HIV and AIDS by the deaf as the family members, especially their parents, thought they were not sexually active.

On having discussions of issues related to HIV and AIDS with the teachers the pupils stated that apart from those in charge of the Anti AIDS clubs, other teachers did not discuss HIV and AIDS issues with the pupils. The pupils also stated that they never discussed issues of HIV and AIDS with their friends and that if that happened, then it would be in very rare occasion.

Other ways of increasing knowledge on HIV and AIDS to high school pupils with hearing impairments

The study also sought to find out from the respondents in the study the other ways of increasing knowledge on HIV and AIDS to high school pupils with hearing impairments.

A number of ways were suggested on how to increase knowledge on HIV and AIDS to high school pupils with hearing impairments. One of the ways which the majority of pupils, 50% males and 50% females mentioned was introduction of sign language programmes on television which was thought to be the best solution of increasing knowledge on HIV and AIDS. Majority of the respondents who were in agreement were from grade 12 classes (47%) followed by those in grade 11 classes (30%).

The other suggested way to increase knowledge on HIV and AIDS from both the male (56%) and female (44%) which could be meaningful to them was through posters or graphics. In both gender and grade levels, under group discussions, the pupils who acknowledged the importance of posters and graphics as a means of disseminating HIV and AIDS information indicated however, that very little information emanated from such posters and graphics. This finding concur with that of the American Social Health Association (2001) which carried out a study in America where it was observed that the messages required to reach unique population groups were as diverse as the population themselves. For the deaf and hard of hearing the best method of communication was through graphics, photographs and diagrams.

Dyk (2003) also emphasised the importance of visual and learning aids. He itemised posters, photographs, pictures, projections and models as some of visual and learning aids that could increase the pupils' knowledge of HIV and AIDS. He emphasised that models of anatomy in particular could help learners to understand how HIV was transmitted from one person to another. He picked a model as one aid that could be used to show the correct usage of a condom. With such improved strategies for teaching learners with hearing impairments, it would help them have access to HIV and AIDS knowledge which would enable them to protect themselves from the scourge.

As regards how best the respondents thought the HIV and AIDS information could be presented to them the findings revealed that the majority of the pupils 71% females and 29% males were of the view that 'videos and drama by the deaf' would be the best method. Others however felt that sign language programme on television, using sign language interpreters, stories, drama using sign language, presentations, using people living with HIV and AIDS, and books written in sign language would be the best method.

In line with the above finding, Dyk (2003) advised that HIV and AIDS preventive programmes could only be successful if people living with HIV and AIDS were involved. It was argued that a personal story of someone living with HIV presented a powerful message. This meant that a successful peer education programme ought to help in transferring the control of knowledge from the hands of experts to lay members, thereby making the education more accessible and less intimidating.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents the summary, conclusion and recommendations of the study that was conducted to find out the HIV and AIDS knowledge among high school pupils with hearing impairments.

Summary of the Study

The purpose of the study was to investigate the HIV and AIDS knowledge among high school pupils with hearing impairments in Zambia. The specific objectives of the study were: to find out how much knowledge high school pupils with hearing impairments have of HIV and AIDS; to identify the sources of HIV and AIDS information such pupils use; to find out factors which hindered the access of information on HIV and AIDS by the hearing impaired pupils; to find out factors which hindered the access of information on HIV and AIDS by hearing impaired pupils; to find out if there were other ways which pupils would use to increase their knowledge of HIV and AIDS.

The investigations were carried out in three high schools for the hearing impaired at Magwero – Chipata district; St Joseph - Lufwanyama district and Munali - Lusaka districts of Zambia. The sample size was of 80 pupils comprising 40 female pupils and 40 male pupils drawn from grades 10, 11 and 12 from the three schools. The study utilised a combination of quantitative and qualitative paradigms. In selecting a sample from the population, simple random sampling was used. Data was collected through questionnaires and focus group discussion guide for pupils and then

analysed. Both qualitative and quantitative methods were used in the analysis of findings, although most of the analysis was done qualitatively. Descriptive statistics were used to analyse the findings, that is, using frequency distribution, percentages and graphic representation in form of tables. Non-structured questions were analysed through categorization or coding of themes. The data was mainly analysed in terms of gender and grade based on the four specific objectives of the study.

The findings of the study showed that people with hearing impairment are commonly overlooked in the development of materials and education programmes on HIV and AIDS. Most pupils, both males and females, had limited knowledge about HIV and AIDS. Pupils with hearing impairments did not fully utilise the services of the Anti AIDS clubs in their schools in terms of membership. There was also no time allocated to teaching of HIV and AIDS to hearing impaired pupils. The following recommendations were made:

More programmes on HIV and AIDS should be introduced in schools; the Ministry of Education should train teachers to specifically teach the component of HIV and AIDS to high school pupils with hearing impairments; the Ministry of Education should consider introducing HIV and AIDS on television with the help of interpreters if the HIV and AIDS messages/information were to reach pupils with hearing impairments; the Ministry of Education should make HIV and AIDS programme as part of the school subject and allocate it teaching time.

Conclusion

There are many factors hindering access to information on HIV and AIDS among high school pupils with hearing impairments. The study showed that despite having the Anti-AIDS club in schools, which are the main advocates of HIV and AIDS prevention, only half the number of pupils interviewed actually were members of the Anti-AIDS club. The lack of information on HIV and AIDS and lack of literature in sign language were major barriers to prevention of HIV and AIDS among the high school pupils with hearing impairments. This could be attributed to communication barrier as most of the information on HIV and AIDS was in print material making it difficult for the pupils to comprehend given concepts. Lack of literature in sign language was also a big barrier to prevention of HIV and AIDS.

The use of teaching aids also proved to be a big challenge in most schools. Most of the pupils in the study indicated that their teachers did not use teaching aids. Even in cases where teaching aids such as charts were in existence, most of such aids showed obsolete information. This could be attributed to lack of adequate training in preparing teachers to teach such a subject. There is no time allocated to teaching HIV and AIDS to the pupils and this tends to be a limiting factor.

The study has also shown that discussions of issues related to HIV and AIDS with the teachers was lacking. Apart from those in charge of the Anti AIDS clubs, other teachers did not discuss HIV and AIDS issues with the pupils. This is another source of concern because teachers are supposed to be first in the delivery of information and education of pupils on such issues.

As regards ways of increasing knowledge on HIV and AIDS to high school pupils with hearing impairments, the majority of pupils suggested that the Ministry of Education should introduce sign language programmes on television and involve people living with HIV and AIDS in sharing their experiences with the pupils.

Recommendations

Arising from the findings of the study the following recommendations are suggested:

- Head Teachers should ensure that membership of Anti AIDS clubs should be made compulsory for all pupils with hearing impairments.

- The Ministry of Education should train teachers to specifically teach the subject of HIV and AIDS to high school pupils with hearing impairments.

- The Ministry of Education should consider introducing HIV and AIDS programmes on television using sign language interpreters if the HIV and AIDS messages/information were to reach pupils with hearing impairments.

- The Ministry of Education should make HIV and AIDS to be part of the school syllabus and allocate it enough teaching time. Adequate HIV and AIDS educational materials in sign language should be provided to cater for the hearing impaired pupils once such a programme is introduced in schools.

- Special Schools and Deaf Units should initiate the process of inviting guest speakers who are hearing impaired and HIV and AIDS infected to share their experiences with hearing impaired pupils.

- A further study which should include teachers and parents of the hearing impaired pupils should be undertaken to determine the knowledge levels of HIV and AIDS of these key stakeholders so that a total package intervention in the fight against HIV and AIDS among these pupils is implemented.

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APPENDICES

APPENDIX I

QUESTIONAIRE FOR PUPILS WITH HEARING IMPAIREMENTS

Dear Pupil,

I am a student at the University of Zambia carrying out a study on HIV and AIDS knowledge and sources among pupils with hearing impairments. You have been selected to participate in the study. The information that you will provide will be used for academic purposes only and will be treated with strict confidence

.

INSTRUCTIONS

1. Tick in the appropriate box for your response for the statements or questions.
2. Write brief responses to the questions in the spaces provided.

SECTION A: PERSONAL INFORMATION.

SEX: Male ☐ Female ☐

GRADE: 10 ☐ 11 ☐ 12 ☐

SECTION B: HIV AND AIDS KNOWLEDGE AND SOURCES.

1. (a) Do you know what HIV is?

   YES ☐ NO ☐

   (b)If the answer to 1.(a) is yes, explain what it is.

   _____

   _____

2. (a) Do you know what AIDS is?

YES ☐ NO ☐

(b) If the answer to 2(a) is yes explain what it is.

_____

_____

3. Between HIV and AIDS which one comes first?

_____

_____

4. Where do you often get your information on HIV and AIDS?

_____

5. Do you have enough information on HIV and AIDS?

YES ☐ NO ☐

6. Abstinence is the most certain method of preventing HIV transmission..

YES ☐ NO ☐

7. A person can be infected with HIV virus and not infected with AIDS.

YES ☐ NO ☐

8. There is no cure for HIV and AIDS at present.

YES ☐ NO ☐

9. It is necessary to use a condom when having sex.

YES ☐ NO ☐

10. People with many partners are not likely to have HIV and AIDS as long as they stick to these partners.

YES ☐ NO ☐

11. Do you have a period on your school time table for learning HIV and AIDS?

YES ☐ NO ☐

12. Do your parents and other family members discuss HIV and AIDS freely with you?

YES ☐ NO ☐

13. Have any of the nongovernmental organisations ever addressed you on HIV and AIDS?

YES ☐ NO ☐

14. Do family members at home understand and use sign language properly?

YES ☐ NO ☐

15. (a) Do you have Anti AIDS club at your school?

YES ☐ NO ☐

(b) Are you a member of Anti AIDS club at your school?

YES ☐ NO ☐

16. Do you have any information in sign language about HIV and AIDS?

YES ☐ NO ☐

17. There is need to have HIV and AIDS prevention programme on Television Zambia in sign language.

YES ☐ NO ☐

18. Messages on HIV and AIDS can be meaningful if presented through posters or graphics.

YES ☐ NO ☐

19. HIV and AIDS is transmitted from one person to another through:-

_____

_____

20. Write any suggestions on how you think HIV and AIDS information can best be presented to you?

_____

_____

_____

THANK YOU FOR YOUR COOPERATION.

APPENDIX II

FOCUS GROUP DISCUSSION GUIDE

A. Self –Introduction

I am a post graduate student in the school of Education at the University of Zambia conducting a research on 'HIV and AIDS knowledge and Sources among High School pupils with hearing impairments in Zambia.

B. Guiding Questions

1. What do you understand by HIV and AIDS?
2. What are the symptoms of AIDS?
3. How are HIV and AIDS transmitted from one person to another?
4. (a) Can HIV and AIDS be cured?

   (b) How can HIV and AIDS be prevented from spreading?
5. Where do you get information on HIV and AIDS?
6. How should HIV and AIDS be taught to you as pupils with hearing impairments?
7. Do you discuss issues related to HIV and AIDS with your family members, teachers and friends?
8. (a) Do teachers use teaching aids when teaching *HIV and AIDS?*

   (b) What are these teaching aids?
9. Are you able to get information on HIV and AIDS through pictures, graphics, posters and t-shirts?
10. Do you have books on HIV and AIDS written in sign language?
11. What do you think are the barriers to prevention of HIV and AIDS?
12. What do you think should be done to increase information on HIV and AIDS among pupils with hearing impairments?