

**ADDIS ABABA UNIVERSITY  
SCHOOL OF GRADUATE STUDIES**

**KNOWLEDGE AND SEXUAL BEHAVIOR RELATED  
TO HIV/AIDS AMONG ADOLESCENTS  
WITH VISUAL IMPAIRMENT**

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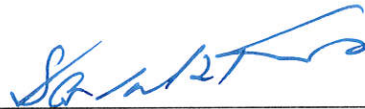
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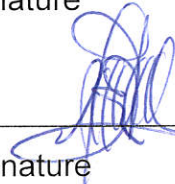
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# Table of Contents

	<i>Page</i>
Acknowledgment.....	i
Table of Contents.....	ii
List of Tables .....	v
Acronyms .....	vi
Abstract .....	vii
CHAPTER ONE.....	1
1. Introduction .....	1
1.1 Background of the Study.....	1
1.2. Statement of the Problem.....	4
1.3 Research Questions.....	6
1.4 Significance of the Study .....	6
1.5 Delimitation of the Study.....	7
1.6 Limitation of the Study.....	8
1.7 Operational Definitions of Terms .....	8
CHAPTER TWO .....	10
REVIEW OF RELATED LITERATURE .....	10
2. 1 Background Information of HIV/AIDS.....	10
2.2 HIV/AIDS Situation in Ethiopia .....	14
2.3 Individuals with Disability and HIV/AIDS.....	16
2.3.1 Sexuality, Gender and Abuse of Individuals with Disability.....	17
2.3.2. Vulnerability Factors Associated With HIV/AIDS Individual with Disability .....	21
2.4 HIV/AIDS among Adolescents with Visual Impairment.....	24

2.4.1. Prevalence of HIV/AIDS of the Adolescent with Visual Impairment.....	24
2.4.2. Knowledge of HIV/AIDS among Adolescent with Visual Impairment.....	26
2.4.3. Source of Information of the Adolescent with Visual Impairment.....	30
2.4.4 Sexual Behavior of Adolescents with Visuals Impairment.....	32
2.4.5 Adolescents with Visual Impairment and Condom Use.....	35
2.4.6 Adolescents with Visual Impairment and Substance Abuse.....	36
CHAPTER THREE.....	38
METHODOLOGY .....	38
3.1. Source of Data.....	38
3.2 Sampling Techniques.....	38
3.3 Instruments.....	39
3.4 Data Collection Procedures.....	41
3.5 Pilot Study.....	42
3.6 Data Analysis.....	43
CHAPTER FOUR.....	44
RESULTS .....	44
4.1. Background Information.....	44
4.2 Response on Knowledge and Sources of Information about HIV/AIDS.....	46
4.2.1 Knowledge of Respondents on Modes of Transmission of HIV/AIDS.....	48
4.3. Response Related to Sexual Behavior Statements about HIV/AIDS.....	58
4.4 Correlation between Knowledge and Sexual Behavior.....	64
4.5 Comparisons between Males and Females on HIV/AIDS Knowledge and Sexual Behavior.....	65

4.6. Knowledge and Sources of Knowledge about HIV/AIDS of AWVI..	67
4.7 Sexual Behavior in Preventing HIV/AIDS .....	70
4.8 Risk of HIV Infection among AWVI .....	73
4.9 Strategy Suggested to Teach AWVI.....	76
4.10 Service Provision Related to HIV/AIDS to AWVI.....	77
CHAPTER FIVE .....	79
DISCUSSION .....	79
CHAPTER SIX.....	92
6.1 Summary.....	92
6.2. Conclusion and Recommendation.....	95
Reference .....	99
Appendices .....	105
Appendix - A.....	105
Appendix - B.....	112
Appendix - C.....	113

## List of Table

	<i>Page</i>
<i>Table 1: Sex, Age, Religion, Martial Status, Ethnicity And Grad-Level Of Adolescents With Visual Impairment. ....</i>	45
<i>Table -2 Knowledge of Respondents on Whether Heard about HIV/AIDS or not.....</i>	46
<i>Table -3 Responses on Sources of Information .....</i>	47
<i>Table -4 Responses on Access of Information on Regular Bases.....</i>	47
<i>Table -5 Sexual Intercourse Related Transmission of HIV/AIDS .....</i>	49
<i>Table -6 Non Sexual Transmission of HIV/AIDS.....</i>	50
<i>Table-7 Knowledge's of Respondents on Mother-to-Child Transmissions of HIV/AIDS .....</i>	53
<i>Table -8 Knowledge on how much AWVI were Vulnerable.....</i>	54
<i>Table -9 Knowledge on Symptoms of HIV/AIDS.....</i>	55
<i>Table -10 Knowledge of Prevention Practice.....</i>	56
<i>Table- 11 Response about HIV/AIDS on Sexual Behavior.....</i>	58
<i>Table -12 Sexual Experiences Related Response.....</i>	59
<i>Table-13 Response on Condom Use .....</i>	60
<i>Table 14. Response of Having STDs during Most Recent Years.....</i>	61
<i>Table-15 Response on Vision Loss and its Consequence on Sexual Behavior.....</i>	62
<i>Table -16 Preferences where to buy Condoms .....</i>	63
<i>Table -17 Strategies Suggested to Teach AWVI .....</i>	63
<i>Table -18 Responses on Whether Checking Expiry date of Condoms before use .....</i>	64
<i>Table -19 Correlation between Knowledge and Sexual Behavior.....</i>	64
<i>Table-20 Data and Result of T-test on HIV/AIDS Knowledge between Males and Females.....</i>	65
<i>Table-21 Results of a T-test about Sexual Behavior Related to HIV/AIDS between Males and Females.....</i>	66

## **Acronyms**

AIDS	Acquired Immune-Deficiency Syndrome
HIV	Human Immune-Deficiency Virus
STD	Sexually Transmitted Disease
MOH	Ministry of Health
NGO	Non governmental organization
GO	Governmental Organization
UNAIDS	United Nation Program on AIDS
VCT	Voluntary Counseling and Testing
WHO	World Health Organization
PWD	People with Disability
AWVI	Adolescents with Visual Impairment
DFID	Department for International Development
ZPHC	Zimbabwe Parents of Handicapped Children
EWVA	Ethiopian Women with Disabilities Association
UNICEF	United Nations' Children's Fund
ECDD	Ethiopian center for Disability and Development
ENAB	Ethiopian National association for the Blind
MMM	Medical Missionaries of Mercy
UN	United Nation
AIDSCAP	AIDS control and prevention project.

## ABSTRACT

The major objective of this study was to explore the current level of knowledge and sexual behavior of adolescents with visual impairment in relation to HIV/AIDS.

To conduct this study 70 adolescents with visual impairment were purposively selected from the Ethiopian National Association for the Blind and instruments that measure their knowledge and sexual behavior were administered all on them. The statistical analysis in the study consists of percentage, chi-square, T-test and correlation. Key informants from three organizations namely Ethiopian National Association for the Blind, Ethiopian Center for Disability and Development, and Medical Missionaries of Mercy (who were also selected purposively) were interviewed to generate qualitative data.

With regard to the knowledge and sexual behavior related to HIV/AIDS, the study could establish the presence of good knowledge and favorable sexual behavior. The chi-square-test done on 26 items set to measure knowledge on HIV/AIDS showed a statistical significance. Likewise, sexual behavior related to HIV/AIDS showed a statistical significance that implies most respondents have desirable sexual behavior.

The result also revealed that the relationship between knowledge and sexual behavior was not significant. The T-test result indicated that at  $\alpha = 0.05$ , there is no significant difference between males and females on their established knowledge on HIV/AIDS. Likewise, no significant difference could be between males and females on their sexual behavior.

The findings of the study further highlight radio, friends, television and anti-ADIS club as instrumental in the dissemination of information of HIV/AIDS in its respective order. However, the information obtained through these sources was not in a regular basis. As a strategy to teach adolescents with visual impairment, peer, radio, and brail materials were preferred by the participants.

The results of the study also reveal adolescents with visual impairment as vulnerable to HIV/AIDS. This is because of poverty, stigmatization, rape and sexual exploitation, lack of health service (like, VCT), problems in medical procedures and ethics, dependency on others for checking expiry date on condoms, dependency on others for proper use of condom and lack of focus of adolescents with visual impairment and commitment by the concerned body to work on HIV/AIDS and visual impairment.

Finally it was recommended that the existed good knowledge on HIV/AIDS should be further strengthened. Information through radio should be more verbal, figurative and full of demonstration to enhance its effects on adolescents with visual impairment so as to increase their knowledge to a better level. Nearly half of the respondents had sexual life prior to marriage. Hence, abstinence should be promoted and propagated as their preference at this early age. Training on detection of damaged and safe condoms should be given. In addition to this, expiry date on condoms should be translated in to Braille on the package to serve individual with visual impairment. The study hopes that its findings would also be considered in the entire future prospective program planning, aiming at the prevention and management of HIV/AIDS at all levels.

# CHAPTER ONE

## 1. Introduction

### 1.1 Background of the Study

Most needs of individuals with disability have often been placed last compared with the non-disabled ones. The assumption may be that people with disability (PWD) will receive attention as soon as the problems with non-disabled population are solved. The question here is that, are the lives of individuals with disability less valuable than the lives of those who are not disabled? Human right issues indicate that there is no reason why the millions who live with a disability should be denied of their needs. After all individuals with disability make up 10% of all population (UN, 1993).

One person in ten-as many as 600 million people worldwide- live with a physical, sensory(deafness, blindness), intellectual or mental health impairment significant enough to make a difference in their daily lives (UN, 1993), in which Eighty percent (80%) of these live in the developing world.

In the 20<sup>th</sup> century, however, the situation has significantly been changed in favor of people with disabilities. The global political, economical, social and technological conditions led developed countries to address issues of disability.

Despite some positive action taken at global and national level, the measures couldn't be as effective as expected for various reasons: gap between legislation and action, lack of political commitment and poverty.

Although the disabling consequences of HIV/AIDS have been studied in depth (Groce, 2004) little attention has been given to the risk of HIV/AIDS for individual who have physical, sensory or intellectual disabilities before becoming infected. It is commonly assumed that disabled individuals are not at high risk of HIV infection because they are sexually inactive, unlikely to use drugs or alcohol, and are at less risk of violence or rape (UNCEF, 1999). Yet, a growing body of research indicates that they are actually at equal or greater risk for every known risk factor for HIV/AIDS. Adolescents with disability (AWD] are even at a more risk of HIV/AIDS, with substantial gender disparity (UNCEF, 1999].

Groce (2004) specifically indicated that the problems of HIV/AIDS are sever for the adolescent with visual impairment (AWVI). This group of individuals has communication gap which stops them from getting enough knowledge and expose them to the disease for they can't see and read. Related to their handicapping condition (World Bank, 2004) indicated that individual with visual impairment (IWVI) can be at a risk of infection due to:

- ⌘ Limited access to HIV/AIDS information media in relation to their visual loss which makes them not to get update information, education and communication.
- ⌘ Misconceptions related to the cause of the impairment make families keep children with visual impairment at home for fear of stigma which results individuals with visual loss to be separated from education, information, job and social interaction which in turn a hindrance to get information that make children vulnerable adults.
- ⌘ Myths and misconception about sexual life of the individual with visual impairment (like assuming that these individuals are sexually less active, less alcoholic and less prone to rape).

It could be understood from the above mentioned risk factors that individuals with visual impairment should be given special attention in relations to HIV/AIDS and there should be a need to explore how HIV/AIDS affects these individuals.

Hence, this study tries to assess the status of knowledge, and sexual behavior related to HIV/AIDS among adolescents' with visual impairment

## **1.2. Statement of the Problem**

Individuals' with visual impairment (IWVI) are relatively forgotten groups of the society in relation to HIV/AIDS issues. This idea comes from the assumption that these people are not equivalently sexual beings as the sighted ones. Nevertheless recent research conducted reveals that IWVI are not less active or less interested sexual beings (World Bank. 2004).

It is undeniable fact that visual information plays an important role in the acquisition of sexual knowledge and skill. According to Dodge (1993) IWVI have less information to act on than do sighted people.

Individuals with visual impairment have limited access to the HIV/AIDS information in relation to their disability. According to World Bank (2004), where AIDS campaigns are on billboard or television, groups such as individuals with visual impairment are at a distinct disadvantage.

Moreover, most adolescents, including those who are with impairment obtain information about sex from other adolescents (Baugh, 1984). Unfortunately, adolescents with visual impairment are often rejected by sighted peers, partly because they ask many irrelevant questions and engage in inappropriate acts of affection (Neff, 1983), and partly because of their mannerism, such as rocking and eye poking (Neff, 1983).

Thus, they have again limited opportunities to obtain information from sighted peers.

The above evidence suggests that individuals with visual impairment are less likely than their sighted peers to access HIV/AIDS information. This information may include a range of activities which include encouraging responsible sexual behavior, condom promotion, safe blood transfusion, early detection and treatment of sexually transmitted infection (STI), voluntary counseling and testing (VCT), peer education and sterile injecting equipments. Lack of this information makes the individuals with visual impairment the more vulnerable sub-groups of the society.

In addition, this population is put at increased risk of infection due to sexual exploitation and misconception about their sexuality rights. Consequently, individuals with visual impairment, experience a double burden in relation to HIV/AIDS: increased risk of infection and reduced access to prevention and care service information (Groce, 2004).

Therefore this study aims at identifying the level of knowledge and practice related to HIV/AIDS of IWVI in terms of the specific knowledge about HIV/AIDS that in turn emits sexual behaviors that reduce the risk of infection.

### **1.3 Research Questions**

This study attempts to answer the following research questions.

1. Do adolescents with visual impairment have adequate knowledge towards HIV/AIDS?
2. Do adolescents with visual impairment have healthy sexual behavior in the prevention of HIV/AIDS transmission?
3. What are the main sources of HIV/AIDS information for the adolescents with visual impairment?
4. How do knowledge and sexual behavior relate with each other?
5. Is there any significant difference between males and females in their level of knowledge and sexual behavior related to HIV/AIDS?
6. What makes adolescents with impairment more vulnerable to HIV/AIDS?
7. How does service provision to individuals with visual impairment look like?

### **1.4 Significance of the Study**

Since the study focuses on individuals with visual impairment and their knowledge and sexual behavior related to HIV/AIDS, the results of the study is expected to have the following significance:

1. The study would generate a baseline data about the level of knowledge and sexual behavior of the adolescents with visual impairment related to HIV/AIDS.
2. It would depict the vulnerability of the individuals with visual impairment to HIV/AIDS.
3. It would identify the gaps in policies and HIV/AIDS related services and develop recommendations to strengthen the continuation of HIV/AIDS prevention and care for people with visual impairment.
4. This study would encourage other researchers to pursue further research on a wider scale.
5. The study would orient governmental and non-governmental organizations who deal with HIV/AIDS and visual impairment to evolve strategies to address both the issues in tandems.

### **1.5 Delimitation of the Study**

This study is restricted to the members of blind association of Ethiopia in Arada Sub-city. The association comprises members with different background such as adolescent, and adult, male and female, literate and illiterate, and individuals with different economical status. However, the study focuses on the adolescents, because about one half of all people infected with HIV are under age of 25, half of the new incidence of

infection falls among this sub-group, one third of STDS occur among people between the ages of 13-20 (Mezgeb , 2005). In short adolescents are sexually active, most vulnerable and have the hope to turn the tides against HIV/AIDS. Hence the study is delimited to adolescents with visual impairment.

## **1.6 Limitation of the Study**

- ⌘ Special needs education is a new Phenomenon in Ethiopia. Locally written literature particularly on HIV/AIDS knowledge and sexual behavior on AWVI is scarcely available. Therefore, the study may not be substantiated with rich information.
  
- ⌘ The target populations are AWVI which are found in Arada sub-city of Addis Ababa. Therefore its generalization would be highly limited to urban settings.

## **1.7 Operational Definitions of Terms**

- 1. Adolescence-** Although the age category 10-19 is used a time of adolescent, this study consider the age from 15-20 as working definition for adolescents with visual impairment.

2. **Visual Impairment-** is a condition that ranges from limited vision to no vision at all (blind) and when these vision losses affects the adolescent's ability to process information.
3. **Knowledge-** is the understanding of adolescents with visual impairment about the cause, spread and prevention of HIV/AIDS.
4. **Sexual Behavior** – can be defined as sexual related activities of Adolescents with visual impairment.

## CHAPTER TWO

### REVIEW OF RELATED LITERATURE

#### 2. 1 Background Information on HIV/AIDS

*"In the early 1980s, not even doctors and scientists knew that a global medical disaster loomed. In fact, a few decades ago, this potentially deadly infection didn't even have name. Now most people have heard of the terrible disease known as AIDS, and most are familiar with the term "HIV positive" (Kirisstina, 2005).*

HIV and AIDS are no more strange words; they are the center of formal and informal discussion in society. AIDS generates conflicting feelings among us. It brings us fact to face with reality of love, sex, unfaithfulness, disease, loss and death. The disease is destroying relationships, families, organizations and government.

AIDS stands for Acquired Immune Deficiency syndrome. It is a disease caused by Human Immunodeficiency Virus (HIV), sometimes referred to as the AIDS Virus (MOH, 2002). A person who is infected with HIV virus is considered HIV positive. Since HIV may live in a person's body for years before causing any illness (Action Aid, 2002), an HIV person may look and feel healthy for a long time. In fact, unless people get tested for

the HIV antibody, they may not know that they are infected. Once a person is infected with HIV, he is always infected. As yet, there is no cure for AIDS.

According to Kristina (2005) the HIV/AIDS epidemic appeared in the 1980s. This disease has already infected millions of people, and the numbers are still rising. UNAIDS (2002) indicated that an estimated 34 to 46 million people world wide are infected with HIV, 70% of whom are Africans. From 1981 to the end of 2002 about 20 million people died as a result of AIDS. About 4.5 million people died were under the age of 15. UNAIDS<sup>(2002)</sup> also predict that between 2000 and 2020, fifty five million will have died prematurely due to HIV/AIDS.

Rapid expansion of HIV/AIDS in sub-Saharan countries has a profound impact on the socio-economic development of the region in general. This area is the most affected part of the world where more than two third of all people with HIV/AIDS are living. (UNAIDS, 2002) Similar to above idea.

HIV/AIDS is a major socio-economic issue that affects each and every one of us in one way or the other. It is a major developmental concern in the developing world, recent studies by development NGOs have indicated the millennium goals might never be achieved if HIV/AIDS is not addressed (Kloos and Damen, 2001).

When we consider the spread of the disease there are three ways for a person to become infected with HIV. First, a person can become infected by having unprotected sexual intercourse with an HIV positive person. The virus may be transmitted through semen, vaginal secretions, or any blood that may be present during sexual activity. Contact with this body fluid during any act of oral, vaginal or anal sex may result in HIV infection (Dauglas, 2002).

Second, Kirisstina (2005) expressed that uninfected person may become infected by exposure to the blood of an HIV positive person. This mode of transmission is often referred to as blood to blood transmission and includes sharing needles and syringes to inject drugs, tattooing, ear piercing done in an unsanitary setting, biting and scratching. Other modes of blood to blood transmission include sharing personal care items that may have blood on them.

Third, babies of HIV infected women may be born with the infection. HIV can be transmitted before or during birth. This is often referred to as vertical transmission. If the women breast feeds her baby, she may also transmit HIV during feeding (MOH, 2002).

Many people worry about having any contact with people who are infected with HIV, so it is important to know how the virus is not spread.

The only fully “safe” sex is no sex. That is why people use the term “safer” sex. Safer sex involves activities that lower the risk of infection with HIV and other diseases. Safer sex also reduces the risk of unwanted pregnancy.

Safer sex involves limiting the number of one’s sexual partners, minimizing the exchange of body fluids, using latex condoms, and using water- based lubricants. Female condoms are available for use by women when their male partner is unwilling to use the male condom. Individuals engaging in sexual activities are encouraged to avoid the use of alcohol and other drugs, as these impair one’s ability to use prevention and contribute to poor judgment and decision – making (Dauglas, 2002).

Safer sex minimizes the exchange of body fluids containing high concentrations of HIV: Semen, vaginal secretions and blood. The risk of infection from other body fluids is extremely low or nonexistent. Reducing exposure to semen, blood, and vaginal secretions during sex almost eliminates the risk of sexually transmitted diseases.

HIV is not passed on though coughing, sneezing, touching, hugging, kissing, or through sharing kitchen utensils or both room facilities.

According to Grundtest (2005) Mosquitoes digest the virus, and any blood that may cling to the mouth parts of other biting insects is too small to transmit the infection between people. In fact, unless individuals engage in one of high- risk activities described in the above list, it is extremely unlikely that they will become infected with HIV.

Even though, the HIV/AIDS pandemic also impacts people with disabilities, little is know about the prevalence of HIV/AIDS among individuals with disabilities. Asindua (2005,) as cited in Fetum (2006) explained that limited research studies have been done in terms of disability and HIV/AIDS and only a few studies have established prevalence and no prevalence data for any disabled population from sub-Saharan Africa.

## **2.2 HIV/AIDS Situation in Ethiopia**

Ethiopia is one of the world's oldest continuous civilizations, with a history dating back more than 2000 years. It is also the oldest independent country in Africa. According to MOH (2004), Ethiopia's population reached an estimated 71 million in mid-2004, and is expected to grow by over two percent annually through 2005. Ethiopia's population is young with 44% under the age of 15 years. Eight -five percent of the population is rural. The annual per capita incomes is currently estimated by 100 U.S. dollars.

HIV/AIDS probably started to spread in Ethiopia in the early 1980s. The first evidence of HIV infection was found in 1984. HIV/AIDS prevalence remained low in the 1980s but sharply accelerated through most of the 1990s, an estimated 2.2 to 3.0 million people are infected with HIV. The highest prevalence of HIV is seen in the age of 15-24 years representing recent infection. And 1.2 million children are AIDS orphans (MOH, 2002; UNAIDS, 2002). However, results in the last few years indicate some encouraging signs that the epidemic is progressing at slower rate, but, the rate of change is not sufficient enough to be complacent (MOH, 2004).

Infection with HIV causes a lot of damage in African population. In the case of Ethiopia we find that the wide spread of the virus results in socio-economic crisis. As mentioned by the Action Aid Ethiopia (2002) if it continues unchecked, HIV/AIDS will alter the momentum of the country's development by retarding growth, weakening human capital, discouraging investment, exacerbating poverty and inequality and leaving the next generation increasing vulnerable to the impact of the epidemic. The national HIV/AIDS control program at the ministry of health (MOH 2002) estimates that 88% of all infections in Ethiopia result from heterosexual transmission. Documented risk factors for HIV transmission include, sex with multiple partners, commercial sex, extramarital sex, non faithful partnerships, sexually transmitted diseases, infected blood and blood product, and traditional malpractice.

## **2.3 Individuals with Disability and HIV/AIDS**

*"To be human is to be sexual"*

(Suris et al., 1996)

Individuals with disabilities in many societies including ours are often considered as a non- sexual people. People still continue to believe (Groce, 2003) that sex is much associated with physical attractiveness which much of the disability group lacks.

However, a research conducted by the World Bank (2004) has proven the assumption that the individuals with disability are not sexually active and or no risk for HIV infection is wrong. Hence, these individuals have not been included in HIV/AIDS prevention and out reach efforts.

So, it is important to recognize the place of individuals with disability with in the HIV/AIDS pandemic, by recognizing their human right on sexuality and they have a sexual life like any body else does.

According to United Nation report (UN, 1993) there are 600 million individuals with disability. But data pertaining to the prevalence of person with disabilities in Ethiopia are fragmentary and incomplete. According Tirusew et al. (1995) cited in Tirusew (2000), the prevalence amount of disability in Ethiopia is 2.95%. The finding of the study further reveals that person with visual impairment constitute 30.4% from the total disability figure.

Today, little is known about HIV/AIDS prevalence among people with disability. It is believed that little effort has been made to know how the epidemic is affecting these individuals around the world. There exists no statistics to indicate the prevalence of HIV/AIDS among individuals with visual impairment in Ethiopia .

A small survey in USA reveals HIV infection rate among individuals with hearing impairment is twice as that of the surrounding hearing population (UNICEF, 1999). Another study conducted in Uganda, using STDs as proxy for potential HIV exposure found that 38% of women and 35% of men with disability having had a sexually transmitted disease at one time (Groce, 2003).

### **2.3.1 Sexuality, Gender and Abuse of Individuals with Disability**

*“All people can love, and all people can make human contact with other people”*

(Kalliance et al., 1997)

Many people are uncomfortable discussing difficult social issues in relation to disability, such as sexuality and rape. However, such issues are very real in the lives of many individual with disability and cannot be ignored.

Sexual expression is a natural and important part of human life. Unfortunately there are many misconceptions about the sexuality of individual with disabilities. The most common myth is that individual with disabilities are asexual which in turn creates a barrier to safe sex, education and access to information. Conversely, Sugar (1990) as cited in Groce (2003), expressed that all individuals are social and sexual being from the day they are born.

The type of disability that an individual has however, may affect the way in which the sexuality information should be presented. The disability may also affect what type of information is presented. For example person with visual impairment would be capable of understanding a wide range of facts and concepts about sexuality but may need material presenting this information through touch or hearing or through brail, cassette or large print materials. Likewise, Baugh said that:

*Lack of vision seriously undermines individual with visual impairment ability to gather information about sexuality. They can not learn incidentally through visual observation as do sighted children. This results in limited knowledge of gender roles, fashion, male-female attractiveness factor, and relationship behavior, various body shapes and sizes, pregnancy changes and other developmental changes through life cycle (Baugh, 1984).*

It is also true individuals with visual impairments do not have the same access to the television program, movies, books, and magazines of explicit sexual nature that are readily available to their sighted peers. Parents and teachers are often uncomfortable reading sexually explicit material aloud (Neff, 1983).

People with visual impairment are more vulnerable to assaults-physical and sexual-than are sighted people (Pava, 1994 as cited in Jengiyh, 2000), because they are less able to defend themselves and are perceived as easy targets by perpetrators of sexual attack.

Women with disability compared with non-disabled women and with men with disability are more likely to be vulnerable (Groce, 2003).

Several factors increase the vulnerability of women to HIV. In addition to being more physiologically susceptible to HIV, women are generally vulnerable to the infection because of gender norms, of the society which considers roles and responsibilities to women and men.

Being a woman with disability is an additional risk factor. According to Women with Disability Association of Ethiopia, women with disability are at risk of infection due to:

- ⌘ Misconception related to the cause of disability, families keep women with disability at home in fear of stigma which results

women with disability to be separated from education, information, job and social interaction and is a hindrance to get information.

⌘ Limited access to HIV/AIDS information and service utilization.

- Inaccessibility of information media in relation to their disability makes them not to get up date information, education and communication
- Opinion and judgment of service providers towards disability and sexuality is not attractive.(EWWDA, 2003).

Women with disability find it difficult to find and keep a man and are consequently willing to compromise their sexual rights. This idea is also supported by Jackson and Wallace.

*“Women with disabilities are less capable to marry than their non-disabled peers, but are more likely to have multiple sexual partners or to practice various form of serial monogamy”*

(Jackson and Wallace, 1999).

Various explanations have been given for why women with disabilities are subjected to abuse or violence. There seems to be determining elements such as socio cultural reason; like rape, abduction, early marriage, economic dependency and less access to information.

*“ ... the belief that people who have a sexually transmitted disease can rid themselves of the condition by having sexual inter course with the virgin “Virgin” cleansing “*

(Groce 2004).

Generally, women with disability face a unique challenge in preventing HIV infection due to the lack of education, poverty, information access and other factors.

### **2.3.2. Vulnerability Factors Associated With HIV/AIDS among Individuals with Disability**

Many of the established vulnerability factors for HIV/AIDS- poverty, illiteracy, marginalization and inaccessibility - are identical to individuals with disability.

#### **a. Poverty**

People with disability are among the poorest, most stigmatized and most marginalized of all the world's citizens (World Bank, 2004).

The epidemic has a strong relation with poverty. A growing body of evidence now shows that the people most severely affected by HIV/AIDS are the poverty striven masses, among who are the disabled (DFID, 2000).

Poverty increases people's vulnerability to HIV/AIDS by increasing their likely exposure to unsafe sexual practice. Poverty can also prevent women from gaining information about or access to the means of protection, and it can further reduce women's ability to negotiate about condom use with sexual partners.

### **b. Marginalization**

It is well known that stigma has been associated repeatedly with HIV/AIDS and has also been repeatedly associated with individual who are disabled. Therefore Individuals with disability who become HIV positive would be doubly stigmatized- double burden.

According to the UNAIDS report stigma and discrimination hamper access to prevention, treatment and support services for people living with HIV and therefore increase vulnerability to the infection (UNAIDS 2002).

### **C. Education**

Sexuality education provides individuals with disabled with information they need to protect them selves against HIV/AIDS.

However, DFID (2000), explained that sex education campaigns programs run though schools, are far less likely to reach people with disabilities

with in a community. Further, media campaigns run on the television or community dramas may indirectly marginalize people with visual impairments. There are also further complications, Where HIV/AIDS campaigns are run though news papers and bill boards, individuals with visual impairments are at disadvantage.

Therefore many Individuals with disability have no idea about how HIV/AIDS is transmitted and know little or no information about protection methods. In fact, Yousafzi et al. (2004) found that most individuals with disability found in Rwanda and Uganda know that a healthy looking person can be infected with HIV and that proper condom use can prevent HIV transmission.

#### **D. Access**

As illustrated by World Bank (2004) individuals with disability are not reached with HIV/AIDS messages. However accessing medical, social and legal services to these groups are highly valuable in alleviating the problem.

People with disability are not being included either implicitly or explicitly in most HIV/AIDS, out reach efforts. Lack of knowledge of disability and awareness of disability issues among aid workers, government misters, NGOs, etc is the primary barriers. Unfamiliar with disabled populations,

they are unaware that individual with disability are sexually active or otherwise at risk. Most view individuals with disability largely as a medically dependent child like population, isolated from real world (Yousafzi et al., 2004).

Reaching disabled individuals with HIV and AIDS message or services face many challenges. Some of the reasons given for this unique challenge are lack of education which inhibits ability to obtain and process information, lack of Information in accessible formats and lack of accessibility to HIV testing centers and clinics (Groce, 2004).

## **2.4 HIV/AIDS among Adolescents with Visual Impairment**

### **2.4.1. Prevalence of HIV/AIDS of the Adolescent with Visual Impairment**

The world's youth people (Aged 10-24) are especially vulnerable to HIV/AIDS of the 42 million people living with HIV/AIDS, more than a quarter are aged 15-24 (UNAIDS, 2002). In Ethiopia the highest prevalence rate of HIV (20.8%) was recorded between the ages of 15-19 (Mengistu, 1990 cited in Mezgebe, 2005)

Despite the fact that much efforts have been made in the area of HIV/AIDS with non- disabled population, hardly any disability have been included on it. There have been no surveys done to establish the exact number of individuals or adolescents with visual impairment who have either infected or died of HIV/AIDS. According to the reports of WHO (2006) as cited in Fetum (2005), approximately one million people are disabled in Ethiopia. Tirusew et al. (1995) cited in Tirusew (2000) explained that individual with visual impairment makes up 30.4% out of 2.95% of the total disability in Ethiopia, which are the second largest group next to person with motor disorders.

Adolescents should get special attention in the society. Apart from the fact that adolescent represents a significant proportion of the total population. They are likely to play important social, economic and political role in the society, moreover, this segment of the population deserve special attention, because it is a critical age of risk taking, an opportune time for professional intervention (pathfinder, 1999). Yet, adolescents are different from adult in a number of ways that make traditional, adult oriented HIV/AIDS service less effective at reaching them (Pathfinder, 1999).

#### **2.4.2. Knowledge of HIV/AIDS among Adolescent with Visual Impairment**

AIDS has been called a disease of behavior (AIDSCAP, 1997). If people avoid risk sexual behavior by using condoms, or abstaining from sex except within a monogamous relationship they could avoid AIDS.

Knowledge of HIV/AIDS can be expressed through knowledge on the mode of transmission of the disease; its symptoms, its effect; behavior that increase the risk of contracting them; and preventive methods.

Several studies ( Abesha, 2005, Zinabu 2003, UNAIDS, 2000 as cited by Yosef, 2006) had indicated that there is a wide spread assumption that increased knowledge about HIV transmission and its prevention leads to the change in behavior which in turn leads to actions that promote the prevention of the disease. World wide there are several studies on knowledge of Adolescents towards AIDS. Adolescent are often viewed as being at risk for HIV infection due to their propensity to engage in exploratory behavior and their needs for peer social approval and their sense of invulnerability.

The spread of HIV/AIDS among adolescent is a more recent phenomena. In the light of this view, Mengistu (1990) as cited in Mezgebe (2005) based on few survey studies conducted in Ethiopia observed that the younger age group of the population are affected by HIV/AIDS.

Further more (FGAE, 1998 cited in Dejene, 2005) in a survey conducted in Jimma youth cited that the proportion of knowledge of HIV/AIDS was high among sexually active adolescents and the level of knowledge about HIV/AIDS increases with age.

Research has also shown that large proportions of young people are not concerned about becoming infected with HIV. Adolescents need accurate, age appropriate information about HIV infection and AIDS; including the concept that abstinence is the only 100% effective way to avoid infection, how to talk with their parent or other trusted adults about HIV and AIDS, how to reduce and eliminate risk, how to talk with potential partner about risk, where to get tested for HIV, and how to use condom correctly. (World Bank, 2004).

ZPHC (2004) conducted a study on 22 individuals with disability (15 females and 7 males) on their basic knowledge showed that the majority of the respondent (85%) had a relatively high level of awareness on HIV and AIDS. For example, they knew what HIV and AIDS are, the difference between HIV and AIDS, the sign and symptoms, some modes of transmission and prevention. Regarding HIV/AIDS transmission 75% of the respondents, knew of the modes of transmission of HIV like blood contacts and unprotected sex with an infected partner. They also knew safer sex life styles as preventive measures of HIV infection for example condom use, faithfulness and abstinence.

It is specifically indicated that knowledge about HIV/AIDS was good in both rural and urban areas among the sighted individuals, who obtained their information from a wide range of sources. In contrast, adolescents with visual impairment who obtained information from a limited range of source, lacked knowledge about HIV/AIDS, and were misinformed about modes of transmission. However, knowledge of HIV/AIDS remained similar among adolescent with visual impairment, irrespective of area or gender. The same source also revealed that, even though most adolescents with visual impairment heard of HIV/AIDS, but are uncertain about the nature of the virus (Yousafzi et al., 2004)

A very recent study supports the above idea on the living condition among individual with visual impairment in Namibia showed that adolescents with visual impairment had a very little understanding of HIV/AIDS and other related issues (Kalipeni, 2004).

Another closely related study (Jengiyh, 2000) investigated that sexual knowledge of adolescents with visual impairment in Taiwan were less than sighted adolescents. The low performance of adolescents with visual impairment group could be attributed, in part to their slow learning rate, documented by (Welbourne et al., 1983 as cited in Jengiyh, 2000) and because of their visual impairments, to their lack of exposure to meaningful teaching and information about sex.

People with visual impairments are contented with variety of difficulties in sexuality education and development (Welbourne, Litschitz, Selvin and Green, 1983 as cited in Jengiyh 2000) for example, found that women who were visually impaired obtained information about sex at a slower rate than did sighted women and had significantly lower level of knowledge about sex. These authors also reported that adolescents who were visually impaired received little information on wet dreams, masturbation, dating problems, contraception, love, patting and oral genital contacts of all the sexual issues.

According to Mezgebe (2005), knowledge alone is not sufficient for adolescents to protect themselves from the HIV infection. The same source indicated that 87% of the newly infections are due to practice of multiple partner sexual contacts. This is an indication that though there is high level of knowledge about HIV/AIDS, risk behaviors are still continued to be practiced by the adolescents.

Likewise, Ibrahim (2006) explained that HIV/AIDS knowledge, along with positive attitudes and beliefs about HIV/AIDS, will lead to positive behavioral changes, i.e., behaviors that are less risky, or safer, such as use of condom, abstinence and avoidance of risky situation.

### **2.4.3. Source of Information of the Adolescent with Visual Impairment**

The adolescents' knowledge of HIV/AIDS varies. In some urban contexts, the adolescents have lay concepts and myths that could guide them into misting practices that could lead to contamination by HIV. School, mass media, especially television, and inter personal sources such as teachers, parents and peers are important source of information about HIV/AIDS and have a central role in the social construction and public perception of the problem in adolescents.

According to Serlo and Aavorinne (1999) cited in Ibrahim (2006), of the study done on the attitude of university students toward HIV/AIDS, the most important source of knowledge concerning HIV/AIDS was television (84%).

UNAIDS studies have shown that when young people are provided with accurate information on sex and HIV/ADIS, in schools they are more likely to delay sexual activity and use condoms when they do have sex (UNADS, 2004). Because so many adolescents with disability can't or don't go to school, (UNICEF,1999) non-formal education opportunities through channels including radio and television are invaluable.

A research conducted on individual with disability revealed that people with disability were accessing HIV/AIDS information from the following sources: Television, radios newspapers, magazines, peers, schools hospitals and seminars. However, the respondents indicated that there should be a special packaging of information materials which are target specific, for example AIDS information in Braille for adolescents with visual impairment (ZHPC, 2004).

Even though Braille is highly valuable in accessing HIV/AIDS information, it is a commonly known from the individuals and institutions that reading material in Braille is in short supply in Ethiopia. In other worlds, people with visual impairment have no access to printed materials. Hence there is a huge need for audio tapes and good brail information for people who know Braille (Tamiru, 2004).

Welbore et al. (1983) found that books and magazines are major source of information for Adolescents both sighted and non- sighted, and the radio was an important source of adolescents who were visually impaired. Thus, these researchers concluded that the poor performance of both sighted and non-sighted in a test of knowledge of sex could be attributed to these unreliable sources of information.

However a survey of the sexual knowledge of 104 adolescent with visual impairment and 180 sighted adolescents in Taiwan (Jengiy, 2000)

revealed that sighted adolescents were better informed than were the adolescents with impairment and that both groups were least knowledgeable about sexually transmitted diseases and the most knowledgeable was about anatomy. The same source indicated that the sighted adolescent sought information mainly from their peers, and the adolescent with visual impairment did so from their teachers.

#### **2.4.4 Sexual Behavior of Adolescents with Visuals Impairment**

In general sex has been considered a taboo topic. Accurate information about all aspect of sexuality is often felt to be something one should keep under the counter or wrapped in brown paper and any question about it if asked at all are whispered. Over all the topic of sexuality makes people uncomfortable, and moral and religious consideration often overshadowed the need to accessible accurate information. Add individuals with disability to the equation and further complications presented.

Sexual practice among adolescents often attracts wide spread attention and usually disapproval. Policies towards young people reflect the view that sexual activity shouldn't occur before marriage (Graham et al., 2000 cited in Dejene, 2005). Pre-marital sexual activity is universally taboo in sub-Saharan countries, but the practice is very different from this (Pathfinder, 1999).

People with disability are not given a chance to get education about sex and sexuality because some people believe that they are not sexually active. There is a misconception because of the disability they have, people with disability are not eager for sex (Marilyn, 1977 as cited by Fetum, 2006).

A research conducted by ZPHC (2004) explained that sexual behavior of individuals with disability are influenced by a number of factors most importantly the social expectations around femininity and masculinity, degree of wealth, social status, poverty and alcohol, however, these factors have a double effect on the people with disability.

It is also revealed that among people with disability the practice of multiple sex partners is lower, however, they get serial sex partners. The reason is that these individual are regarded as inferior in society, so they don't get stable relationships; they keep getting new sex partners after one has run away to a none-disabled person (world bank, 2004 ).

ZPHC (2004) also explained that individual with disability know safer sex life styles as preventive measure to HIV infection such as condom use, faithfulness and abstinence.

Adolescents with visual impairment need skill and power to negotiate sexual matter so that they can protect themselves from HIV/AIDS. In order to put this knowledge on how to protect themselves in to practice, young women and girls, young men and boys, need skill and confidence to use information they receive. This includes self-esteem and negotiation skills, skills to delay sexual activity practicing safer sex (including consistent and correct condom use), and having a reduced number of sexual partners (WHO, 2001).

#### **2.4.5 Adolescents with Visual Impairment and Condom Use**

Condom knowledge and use play an important role in preventing the transmission of HIV/AIDS and other STIs (Harvey, 1998 as cited in Mezgebe, 2005). Studies that evaluated effectiveness of condom use among heterosexual couples showed that the consistent condom use protected against HIV (Saracco, 1996).

Investigation on sexual behavior of adolescents indicated that condom use among adolescents is low. A study conducted on three Ghanaian towns among adolescents, for example, indicated that 50% of the adolescents reported condom use in their recent sexual practice (Glover, 2005 cited in Dejene, 2005).

But another research conducted with a nationally representative data of Ghanaian adolescents revealed 24% males and 20% of females reported consistent condom use in their recent sexual experience (Karim, 2003 as cited in Mezgebe, 2005). Investigation in Ethiopia also indicated low condom use 13% of women and 30% men reported condom use with a non cohabiting partner (CSA and ORC Macro, 2001 cited in Kloos; Damen 2005).

In general men are more likely to use condoms in recent sexual experience than women. Evidence also shows that youth are more likely to have use condom with their most recent casual partner than the older age group (AIDSCAP, 1997).

The practicalities of using condom by the individuals with visual impairment is still a challenge, for example, proper use of condom needs reading the expiry date that these adolescents couldn't read. IWVI also depend on their sexual partner if ever planned to use condoms. The dependency on their partner for safer sex comprises one's protection, thus increasing vulnerability to HIV infection (ZPHC, 2004).

#### **2.4.6 Adolescents with Visual Impairment and Substance Abuse**

Using drugs or alcohol can increases a person's risk of getting HIV. HIV can be spread if needles are shared during drug use. Drugs and alcohol affect a person's judgment. Some people may risk unsafe sex when they

are under the influence of one or both. No decision about sexual activity should be made under the influence of alcohol and drug. The use of drugs or alcohol impairs judgment leading to unprotected sex or sharing dirty needles (Granich and Mermin, 2001 as cited by Ebrahim, 2006).

Individual with visual impairment are more exposed to the disease through substance abuse (Groce, 2004). Therefore, it is important to intervene, to reduce the risk of this people by creating awareness. Drug use treatment is important in reducing HIV/AIDS transmission and prevention especially if it focuses on people who are at risk. In doing this, it can be possible to minimize drug use and drug related HIV risk behavior such as needle sharing and unsafe sexual practice. It helps to reduce transmission of HIV/AIDS through injecting drugs (NIDA, 2002 as cited by Fitum, 2006).

## **CHAPTER THREE**

### **METHODOLOGY**

This study employed descriptive survey research method.

#### **3.1. Source of Data**

The major sources of data for this study were adolescents with visual impairment who are the members of the National Association for the Blind in Arada sub-city. The other sources of information were the key individuals from key stakeholders. This include three representatives from the Ethiopian National Association for the Blind (ENAB), a Chairman of the Association of Women with visual impairment, a representative from Ethiopian center for disability and development (ECDD) and two representatives from Medical Missionaries of Mercy (MMM).

#### **3.2 Sampling Techniques**

The study site was selected purposively (the Arada sub city of Addis Ababa) with the belief that the existence of National Blind Association of Ethiopia and more members are available there and thinking that the study findings from such area will be comprehensive enough for generalizations. The association is also convenient to form contact with the respondents because AWVI come and gather to collect their benefits. All the AWVI in the district who are the members of the association were taken for the quantitative study. Hence, it is a population study.

The respondents for qualitative of the study were chosen purposively. Their involvement and rich experience in the field of disability in general and their constant involvement in the health and education of AWVI were the criteria considered for the selection. Further the long experience in working with AWVI in matters relating to gender and disability had been considered an added advantage for their selection. It was also established that all the respondents so selected had adequate skills in the communication as well as willingness to participate in the study.

### **3.3 Instruments**

In this study both qualitative and quantitative data gathering methods were used. A questionnaire was developed for the present study. As a means of supplementary information to quantitative data, semi-structured interview were conducted with the relevant stake holders purposively.

A self administered Amharic version translated into Braille was developed and administered. This questionnaire was prepared for AWVI and was the main data gathering. Questionnaires were developed through intensive and extensive review of relevant literature. In some instances, questionnaires that are tested and acknowledged in other studies are adopted in accordance with the framework of this study. Questionnaires from Ibrahim (2006) were found to be relevant to the study.

The content of the questionnaire was questions about demographic factors in section I (6), knowledge questions about HIV/AIDS and source

of knowledge about HIV/AIDS in section II (27), and other items which clarify sexual behavior related to HIV/AIDS in section III (14). Totally 41 items were developed in the questionnaire section. In fact, one question in section II and three questions in section III were developed open ended. A three point response category has been developed. The maximum and minimum possible scores for the knowledge scale would be 77 and 26 respectively, whereas the behavior scale would be 22 and 11 in a respective order. With regard to the behavioral scale a two point response category has been developed. Majority of knowledge and sexual behavior questions about HIV/AIDS has three or two choices (two type scale), yes or no, or I don't know. for those positive statements those who choose "yes" and for those negative statements those who choose "no" are considered to have positive response and those who say "no" to positive statements and those who say "yes" for negative statements are considered to have negative response.

The given scale value were 3=yes, 2=don't know and 1=no for the knowledge measuring question to those positively stated items, and for the behavior measuring question the given scale were 2=yes and 1=no to those positively stated items. In the items that were negatively stated the scoring was reversed (1=yes, 2=don't know, 3=no and for behavioral related question 1=yes, 2=no).

The remaining questions which are not included in the scales are open ended questions to which the participants would give their response.

To supplement the information gathered through the above instrument an interview was conducted with key informants from four different organizations.

### **3.4 Data Collection Procedures**

Smooth relationships have been established with the representatives of the association so as to meet the purpose of the study. Preliminary information was also secured from the association to determine the participants of the study.

The association comprises 70 AWWI in the Arada sub-city and all completed the questionnaire.

The questionnaire was administered in classes where the selected AWWI are found. Before data collection, participants were clearly told about the benefits of participating in the study. The study participants were briefed how to give their response on the Braille. The investigator and a special assistant supervised the whole session of filling the questionnaire. The data were supervised critically for their quality and then verified, checked for consistency, edited, coded and entered in to computer using SPSS 12 (statistical package for social science) window.

The semi-structured interview, consists of nine items was conducted with seven key informants. The interview process was a face to face communication. It was held for about one hour for each informant on different days. The interview process was also tape recorded based on the consent of the interviewee. The researcher had tried to explore information as much as possible in relation to the objective of the study.

### **Pilot Study**

Before applying the instrument to the main study, a pilot test was conducted in Minilik secondary school to fine tune the tool. The total number of participants in the try out were 20 (M=12, F=8) from grade 9 to 12. They were selected by simple random sampling method. After administering the instrument, some participants were asked for feedback and hence 2 confusing items from section II and 1 item from section III were removed. Some unclear items were also modified accordingly to minimize the items ambiguity.

Cronbach alpha was used to check the internal consistency of the items. The reliability coefficient of the scale for AWVI was 0.72 for knowledge and 0.61 for behavior scale. Thus the instrument was found valuable to collect the data for the main study and hence it was administered.

### **3.6 Data Analysis**

In analyzing the data both quantitative and qualitative methods were employed. Data gathered from the representatives of ENAB, chairman of women with disability, ECCD and MMM was analyzed qualitatively using a thematically approach based on research questions, while data gathered from AWVI were analyzed quantitatively. All the quantitative data were organized and interpreted using descriptive statistics. Percentages, mean, standard deviation, frequency tables, chi-square, correlation and T-test were employed to show clear results of the study. Alpha value  $\alpha = 0.05$  was used to test all significance test employed in the studies.

## **CHAPTER FOUR**

### **RESULTS**

#### **I. Presentation of Results Obtained Through Quantitative Analysis**

The findings of the study are presented and analyzed in this chapter. The information gathered is presented using tables.

#### **4.1. Background Information**

In this section the back ground of the participants of the study were presented.

As indicted in table 1 below, the total numbers of participants included in the study were 70 (100%). Out of which 37(52.9%) of them were male and 33 (47.1%) of them were female. The number of male participants is slightly higher than the female participants. The mean age of the respondents was 17.46 years with standard deviation 1.39 and minimum age 15 and maximum age 20 respectively. The predominant ethnicities were Amhara 40 (57.1%), Ormo 18 (25.7%), and Tigrai and Gurage 4(5.7%) with equal proportion.

## 4.2 Response on Knowledge and Sources of Information about HIV/AIDS

**Table -2** Knowledge of Respondents on Whether Heard about HIV/AIDS or not

<b>Response Category</b>	<b>Observed (N)</b>	<b>Expected (N)</b>	<b>Chi-square (<math>\chi^2</math>)</b>
Yes	66	35.0	*
No	4	35.0	54.914
Total	70		

\* Significant at 0.05 level

To examine the knowledge of respondent, about HIV/AIDS, the respondents were first asked whether they have heard about HIV/AIDS. This question was calculated separately from the other HIV/AIDS knowledge oriented scale. As can be seen from the above table, remarkably, most AWVI 66( 94.3%) claim to hear about HIV/AIDS as compared to 4(5.7%) who haven't heard about the disease yet.. The observed knowledge in this regard is almost double than its expected results. The chi-square ( $\chi^2$ ) test showed (d/f=1, n=70  $p < 0.05 = 54.9$ ) what is significant at 0.05 level.

**Table -3** Responses on Sources of Information

<b>Respondents major sources of information about HIV/AIDS</b>	<b>Frequency</b>	<b>Percent</b>
Radio	34	48.6
Friend	16	22.9
Television	12	17.1
Anti -AIDS Club	8	11.4
Total	70	100

The radio, friend, television and anti -Aids clubs were the usual sources of information about HIV/AIDS mentioned by 74.3%, 35.5% 27.1% and 18.6% of the respondents, respectively. Therefore radio took the major share in dissemination of information for AWVI respondents followed by friends.

**Table -4** Responses on Access of Information on Regular Bases

<b>Item</b>	<b>Response Category</b>	<b>Observed (N)</b>	<b>Expected (N)</b>	<b>X<sup>2</sup></b>
Do You have a means of getting information about HIV/AIDS on a regular basis?	No	36	35.0	.057**
	Yes	34	35.0	
	Total			

\*\* Not significant at 0.05 level

The respondents were also asked whether they have a means of getting information in regular bases, and a little less than half of the respondent 34 (48.6 %) have only access to information about HIV/AIDS on a regular bases while the rest don't. A chi-square test computed showed insignificant results, which meant observed and expected frequencies divided evenly. This implied good source information on HIV/AIDS on regular bases.

#### **4.2.1 Knowledge of Respondents on Modes of Transmission of HIV/AIDS**

In order to know the accuracy level of knowledge about HIV/AIDS, respondents were provided with a list of questions with three options (Yes, No and don't know) in which HIV actually transmitted and can't be transmitted.

Remarkably it is observed that majority of the respondents 66(94.3%) understand that AIDS is an infections disease and only 4(5.7%) knew that it is not contagious disease.

**Table -5** Sexual Intercourse Related Transmission of HIV/AIDS

<b>Item</b>	<b>Response Category</b>	<b>Observed (N)</b>	<b>Expected (N)</b>	<b>X<sup>2</sup></b>
Does HIV/AIDS mostly transmit through sexual intercourse?	No	13	35.0	27.657 *
	Yes	57	35.0	
	Total	70		
Is it possible that a person can transmit HIV through semen, vaginal fluids and blood contacts?	No	1	23.3	128.257 *
	Don't know	1	23.3	
	Yes	68	23.3	
	Total	70		
Do have the chance of getting infected with HIV/AIDS if you have sex with a person whom you know for a long time?	Yes	27	23.3	.886 **
	Don't know	22	23.3	
	No	21	23.3	
	Total	70		

\* Significant at 0.05 level

\*\* Not significant at 0.05 level

From the three items presented in table 5 to measure sexual intercourse related transmission of HIV/AIDS, statistically significant difference was observed except the last one item. This implied that there was a difference between what was expected and observed frequencies. For the first item it also meant to sexual contact was known to be the chief mode of transmission of AIDS, as mentioned in many of the cases. However the last item that asked whether there was a chance of getting infected with

HIV/AIDS if one has sex with a person who one know for a long time was found to be not significant.

This again implied the observed frequency was the expected frequency and the result obtained was good. However, if one happened to look through the tables 5 it was seen that the observed frequencies were evenly divided. This depicts a substantial number of the respondent mentioned modes of transmission as non modes of transmission.

**Table -6** Non Sexual Transmission of HIV/AIDS

<b>Item</b>	<b>Response Category</b>	<b>Observed (N)</b>	<b>Expected (N)</b>	<b>X<sup>2</sup></b>
A person can get infected with HIV by blood transfusion.	No	17	23.3	45.971 *
	Don't know	4	23.3	
	Yes	49	23.3	
	Total	70		
A person can get infected with HIV by sharing utensils, plates, cups and spoons with an infected persons	Yes	16	23.3	52.829 *
	Don't know	3	23.3	
	No	51	23.3	
	Total	70		
Can sharing of syringes, clippers and blades infect a person with HIV?	No	4	35.5	54.914 *
	Yes	66	35.5	
	Total	70		

A person can get infected with the HIV through mosquito bites.	<i>Yes</i>	19	23.3	* 21.800
	Don't know	10	23.3	
	<i>No</i>	41	23.3	
	Total	70		
A person can get AIDS by sleeping in the same room with an infected person.	Yes	11	23.3	* 74.600
	Don't know	2	23.3	
	No	57	23.3	
	Total	70		
A person can get AIDS by holding hands with an infected person.	Yes	3	23.3	* 106.31
	Don't know	3	23.3	
	No	64	23.3	
	Total	70		
Is it possible that contact with saliva can spread HIV/AIDS?	Yes	11	23.3	* 45.800
	Don't know	9	23.3	
	No	50	23.3	
	Total	70		
Can cough and sneezing spread HIV/AIDS?	Yes	5	23.3	* 57.629
	Don't know	12	23.3	
	No	53	23.3	
	Total	70		

\* Significant at 0.05 level

From the eight items presented in table 6 to measure non- sexual way of transmission the  $\chi^2$  computed was found all to be statistically significant. This implied that there was difference between the observed and expected frequencies in that; there was convincingly high level of knowledge about non sexual ways of mode of transmission of the disease. However, the prevalence of wrong mode of transmission that AIDS could be transmitted through mosquitoes bite was there, even though it was inconsiderable.

Specifically a considerably high proportion of the respondents believed that living together with an AIDS patient couldn't transmit the disease. Similarly, shaking hands, sharing utensil, plates, cups, spoon used by an AIDS patient; and saliva contact, coughing and sneezing were perceived as the impossible ways of transmission of HIV/AIDS. In contrast sharp equipments (like blades and syringes) and blood contact was highly considered as to expose an individual to the disease.

**Table-7** Knowledge's of Respondents on Mother-to-Child Transmissions of HIV/AIDS

<b>Item</b>	<b>Response Category</b>	<b>Observed (N)</b>	<b>Expected (N)</b>	<b>X<sup>2</sup></b>
HIV can be transmitted from an infected pregnant woman to her unborn baby during pregnancy.	No	11	23.3	* 61.229
	Don't know	5	23.3	
	Yes	54	23.3	
	Total	70		
HIV can be transmitted from an infected woman to her baby during delivery.	No	4	23.3	* 65.514
	Don't know	11	23.3	
	Yes	55	23.3	
	Total	70		
HIV can be transmitted from an infected mother to her baby during breast feeding.	No	6	23.3	* 77.257
	Don't know	6	23.3	
	Yes	58	23.3	
	Total	70		
If a woman has HIV/AIDS, she should not have any more children.	No	20	23.3	* 20.00
	Don't know	10	23.3	
	Yes	40	23.3	
	Total	70		

\* Significant at 0.005 levels

The knowledge of respondents on how HIV is transmitted from mother to child during pregnancy, delivery and breast feeding found to be statistically significant, which implies that HIV contamination could be happened during those process. Many of the respondents (57%) also believe that it is not morally right for mothers to have a child after infection.

**Table -8** Knowledge on how much AWVI were Vulnerable

<b>Item</b>	<b>Response category</b>	<b>Observed (N)</b>	<b>Expected (N)</b>	<b>X<sup>2</sup></b>
Adolescents with visual impairment are more vulnerable to HIV/AIDS.	No	19	23.3	* 21.800
	Don't know	10	23.3	
	Yes	41	23.3	
	Total	70		

\* Significant at 0.005 level

This item was about whether AWVI were much more vulnerable or not, and therefore the observed frequency exceeds the expected numbers. The chi-square computed and found to be significant. This implied that many believes that they were vulnerable than any parts of society.

**Table -9** Knowledge on Symptoms of HIV/AIDS

<b>Item</b>	<b>Response Category</b>	<b>Observed (N)</b>	<b>Expected (N)</b>	<b>X<sup>2</sup></b>
Is it possible that a person can have the AIDS virus and not show signs of the diseases for many years?	No	8	23.3	64.486 *
	Don't know	7	23.3	
	Yes	55	23.3	
	Total	70		
A person who looks healthy but carry HIV can transmit the virus to other people.	No	4	23.3	69.371 *
	Don't know	10	23.3	
	Yes	56	23.3	
	Total	70		

\* Significant at 0.005 level

Knowing the symptoms of HIV/AIDS helps people to take the necessary care when one is infected with virus and it is also helpful to take the necessary prevention by realizing how AIDS is a serious killer and impairs efficiency. Table 9 gives highlight on how far respondents know about the disease. As the finding reveals the observed frequency was double of its expected frequencies. A chi square result showed a statistical significance. All this implied that surprisingly enough respondents identified that the virus may hide itself for many years and stayed active in infecting others.

**Table -10** Knowledge of Prevention Practice

<b>Item</b>	<b>Response Category</b>	<b>Observed (N)</b>	<b>Expected (N)</b>	<b>X<sup>2</sup></b>
People can protect themselves from AIDS by having just one uninfected sexual partner who has no other partners	No	4	35.5	* 54.914
	Yes	66	35.5	
	Total	70		
Using condom consistently prevent both STD and HIV	No	7	23.3	* 81.971
	Don't know	4	23.3	
	Yes	59	23.3	
	Total	70		
People can protect themselves from AIDS by abstained from sexual intercourse.	No	30	23.3	* 13.229
	Don't know	9	23.3	
	Yes	31	23.3	
	Total	70		
A person can contract AIDS if he/ she has sexual intercourse just one time without a condom	No	9	23.3	* 73.400
	Don't know	4	23.3	
	Yes	57	23.3	
	Total	70		
Having blood test for HIV help to protect oneself from AIDS.	No	3	35.5	* 56.514
	Yes	67	35.5	
	Total	70		

\* Significant at 0.005 level

The above questions were revolving around the knowledge of preventive methods. They were computed to be statistical significant. There was a high level of observed frequency. This implied that responses under the knowledge of prevention had a high level of knowledge in which the first steps in prevention was knowing one self through blood test. Confined one self with one sexual partner, Condom use and abstain from sex respectively was believed to be the next things to do.

To conclude, a total of 26 questions on transmission, symptom and prevention were presented to measure the respondent knowledge. The finding generally indicated that AWVI had very good level of knowledge, 24 items found to be statistically significant and only 2 items were not significant. The mean knowledge score was (64.8), which supports the chi- square test results. Gender wise the total knowledge of females mean 64.9 while 65.43 for males.

### 4.3. Response Related to Sexual Behavior Statements about HIV/AIDS

**Table- 11** Response about HIV/AIDS on Sexual Behavior

Sexual related items	Frequency	Mean	St. deviation	Min	Max	Chi-square (X <sup>2</sup> )
Had sexual intercourse during most recent year?	31	1.00	.00	1	1	-
Had multiple sexual partners in most recent years?	31	1.77	.43	1	2	* 9.323
Have ever used condoms?	31	2.00	.00	2	2	-
Do you use condom during your first sexual contact?	31	1.23	.43	1	2	* 9.323
Had sexual contact with prostitute in most recent years?	31	2.00	.00	2	2	-
Had sex with casual partner in most recent years?	31	1.87	.34	1	2	* 17.065
Used condom during sex with casual partner in most recent years.	31	1.87	.34	1	2	* 17.065
Had sexual transmitted disease (STD) in most recent years?	31	2.00	.00	2	2	-
Had unsafe injection?	31	2.00	.00	2	2	-
Do you think vision interferes with your sexual behavior?	31	1.23	.43	1	2	* 9.323
Do you think loss of vision n creates problem with condoms use?	31	1.19	.40	1	2	* 11.645

\* Significant at 0.05 level

As it can be seen from the above table the number of respondents reduced to 31(44.2%) out of the 70 (100%) respondents. This was due to the fact that AWVI, who had sexual experience, was only 31. Comparing the number of respondents who started sex with that of never had respondents, were almost equivalently proportional. Respondents who have had sexual intercourse were only asked those lists of question in table 12, which relates sexual experience and sexual behavior. Therefore, the data above presented were the AWVI who had sexual intercourse. The age of respondents, ranges between 15 and 20.

**Table -12** Sexual Experiences Related Response

<b>Items</b>	<b>Response category</b>	<b>Observed (N)</b>	<b>Expected (N)</b>	<b>X<sup>2</sup></b>
Had sexual intercourse during most recent year?	Yes	31	31	-
	Total	31		
Had multiple sexual partners in most recent years?	Yes	7	15.5	* 9.323
	No	24	15.5	
	Total	31		
Had sexual contact with prostitute in most recent years?	No	31	31	-
	Total	31		
Had sex with casual partner in most recent years?	Yes	4	15.5	* 17.065
	No	27	15.5	
	Total	31		

\* Significant at 0.05 level

From the four items presented to measure sexual experience related issues, only two items computed for chi-square and found to be statistically significant. For the rest two items chi-square computation is not possible since the variables are constant. In other word this was to mean that all the respondents had sexual contact and <sup>but</sup> all the respondent hadn't had any sexual contact with prostitutes.

But for those item found to be significant implied that, most respondents had never had multiple sexual partner and hadn't had casual partner in most recent years.

**Table-13** Response on Condom Use

Items	Response Category	Observed (N)	Expected (N)	X <sup>2</sup>
Have ever used condoms?	Yes	31	31	-
	Total	31		
Do you use condom during your first sexual contact?	No	7	15.5	* 9.323
	Yes	24	15.5	
	Total	31		
Used condom during sex with casual partner in most recent years.	No	4	15.5	* 17.065
	Yes	27	15.5	
	Total	31		

\* Significant at 0.05 level

One of the indicators of prevention of HIV/AIDS is the use of condoms. Due to this each of the respondents who practiced sex were asked whether she/he has ever heard and used condoms. The finding reveals all respondents used condoms at least once in their life time. Computing chi-square is not possible since the variables remain constant. But the remaining two items showed statistical significance with a chi-square value illustrated in table 13. This was meant most respondents who practiced sex had used condoms during their first contact. Most respondent also used condom when having sex with casual partner.

**Table -14** Response of Having STDs during Most Recent Years

<b>Items</b>	<b>Response Category</b>	<b>Observed (N)</b>	<b>Expected (N)</b>	<b>X<sup>2</sup></b>
Had sexual transmitted disease (STD) in most recent years?	No	31	31.0	-
	Total	31		
Had unsafe injection?	No	31	31.0	-
	Total	31		

- This variable is constant. Chi -square test can't be performed.

As we can see from the table observed and expected frequencies are equal, hence comparison is not possible this depicts that all the respondents had never had STD and had never used unsafe injection.

**Table-15** Response on Vision Loss and its Consequence on Sexual Behavior

Items	Response Category	Observed (N)	Expected (N)	X <sup>2</sup>
Do you think vision interferes with your sexual behavior?	No	24	15.5	9.323 *
	Yes	7	15.5	
	Total	31		
Do you think loss of vision creates problem with condoms use?	No	25	15.5	11.645 *
	Yes	6	15.5	
	Total	31		

\* Significant at 0.05 level

Both items revolving in asking whether visual impairment adversely affects one's sexual behaviors as well as proper condom use. As shown in the table the result surprisingly came up with a significance difference, which implies that a large number of respondents ( 77%) did believe that their sexual behavior has nothing to do with their vision loss. Again many (80.6%) believed that they didn't have any problem in putting on condoms.

**Table -16** Preferences where to buy Condoms

Preferences where to buy Condoms	Pharmacy	Store	Health center	Street venders	Others	Total
Frequency	26	15	25	3	1	70
Percent	37.1	21.4	35.7	4.3	1.4	100

Concerning their preference on where to buy condoms, most respondents (37.2%) wants to buy from the pharmacy while Health center 25(35.8), stores 15(21.4%), street vendors 3(4.4%), and others 1(1.4%) were the next preferences respectively.

**Table -17** Strategies Suggested to Teach AWVI

<b>Strategy suggested to teach AWVI</b>	<b>Peer education</b>	<b>Drama &amp; theater</b>	<b>Braille material</b>	<b>Radio</b>	<b>TV</b>	<b>Others</b>	<b>Total</b>
Frequency	27	6	15	21	-	-	69
Percent	39.1	8.7	21.4	30.4	-	-	100

As illustrated in the above table, It was understood that 27(39.1%) of the respondents mentioned peer education as a good strategy to teach AWVI above HIV/AIDS. Radio 21(30.4%) and materials on Braille 15(21.4%) were also preferred strategy next to peer education.

**Table -18** Responses on Whether Checking Expiry date of Condoms before use

<b>Response Category</b>	<b>Frequency</b>	<b>Percent</b>
Yes	55	79.7
No	14	20.2
Total	69	100

Fifty-five (79.7%) of the total respondents, as depicted in table 18, checked whether the condoms were expired or not. The rest 14 (20.2%) didn't see the date on the condoms at all. Many reasons have been forwarded when asked how they checked it. Among the many prevailing reasons were "asked store keepers to read", which accounts 39% "asking love mate to read" 30% and 21% by "asking friends to read". Other reasons were also forwarded when asking why not? Because "I don't use it", because "I never think it will be expired", because "I never know that it has problem" and because "I have fear of asking to read" were some of the major reasons among many others.

#### 4.4 Correlation between Knowledge and Sexual Behavior

**Table -19** Correlation between Knowledge and Sexual Behavior

	<b>Sexual Behavior</b>
Knowledge(Pearson correlation)	-.077 **

\*\* Not significant at 0.05

A research question was asked whether there is any relationship between knowledge of AWVI about HIV/AIDS and their sexual behavior related to HIV/AIDS. The result obtained revealed that there was no significant relationship ( $r = -.077$ ,  $P > 0.05$ ) between knowledge and sexual behavior related to HIV/AIDS. Further correlation was made between *males and*

females on knowledge and sexual behavior related to HIV/AIDS. Similarly, there was no statistically significant relationship between males' knowledge and sexual behavior related to HIV/AIDS ( $r=-.097$ ,  $p>0.05$ ). This was also true about females' knowledge and sexual behavior related to HIV/AIDS ( $r= -.029$ ,  $p>0.05$ ).

#### 4.5 Comparisons between Males and Females on HIV/AIDS Knowledge and Sexual Behavior

**Table-20** Data and Result of T-test on HIV/AIDS Knowledge between Males and Females.

Sex	N	Mean	Std. deviation	t- value
Males	37	65.43	5.928	= 0.09**
Females	33	64.09	6.507	

\*\* Not significant at 0.05

To explore whether there is a significant difference between male and female respondents on the variable knowledge about HIV/AIDS, t- test was computed. The result obtained showed that there was no significant difference in knowledge of HIV/AIDS between males and females ( $t=0.090$ ,  $d/f= 68$ ,  $p> 0.05$ ).

**Table-21** Results of a T-test about Sexual Behavior Related to HIV/AIDS between Males and Females.

<b>Sex</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>T- value</b>
Males	15	18.40	1.404	0.203**
Females	16	19.00	1.155	

\*\* Not significant at 0.05

A t- test also computed to check whether there is difference on females and males sexual behavior of AWVI. The result as shown in the table21 depicts that there is no discrepancy between males and females on the variable sexual behavior ( $t=0.203$  d/f=29,  $p>0.05$ ).

## **II. Presentation of Results Obtained Through Qualitative Methods**

To elaborate on the data obtained through the questionnaire, interview was held with key stakeholders including vice-chairman, public relation officer and youth leaders of the Ethiopian National Association of the Blind (ENAB) and chairman of women with disability and with representatives of Medical Missionaries of Marcy (MMM). The findings are presented below.

#### **4.6 Knowledge and Sources of Knowledge about HIV/AIDS of AWVI**

All of the Interviewees except representative from MMM indicated that AWVI have knowledge about HIV/AIDS. Knowledge on HIV/AIDS includes transmission through sexual intercourse, equipments that are not sterilized, insect bites and blood transfusion. Symptoms like losses of weight, serious cough, fever, can't be known by just one's look and skin infection were listed. Knowledge on HIV/AIDS also refers to preventive methods like abstinence from sex, be faithful to sexual partners and condom use. When asked further about the depth of the knowledge of AWVI, still almost all agreed that these groups had a good knowledge. For example, as one of the interviewee said:

*"AWVI heard about HIV/AIDS. They had the knowledge on transmission, symptoms and prevention of HIV/AIDS.*

Public officer from ENBA also indicated that AWVI had a high level of awareness on basic HIV/AIDS knowledge, for example, they knew what HIV/AIDS is, the difference between HIV and AIDS, signs and symptoms, some mode of transmission and they also knew safer life style as preventive measure to HIV infection. The same respondent also indicated that, although the knowledge on HIV/AIDS is relatively high few still have misconception on the mode of transmission of HIV. Some AWVI

believe that transmission is only through sexual contact and through multiple relationships, but they don't understand the risk of serial partners' (*one partner one time for a long period and another partner for another long time*).

However, the data gathered from representatives of Medical Missionaries of Marcy contradicts the idea suggested above. According to this NGO group, lack of information was observed during their assessment on students with visual impairment. The organization had what they called it pre and post knowledge of HIV/AIDS evaluation. They had conducted their pre assessment (*before HIV/AIDS education was given*) on students with visual impairment in an elementary school and came up with poor knowledge of HIV/AIDS but the assessment done later-post assessment (*after training was given on HIV/AIDS education*) some better results had been registered. But, still remains poor on their depth of knowledge on HIV/AIDS. In fact, the assessment conducted was in German elementary school, which comprises few AWVI. Here it is important to notice that the assessment done was a bit far from the target group.

All the interviewee, describe that AWVI obtain information about HIV/AIDS from Radio, friends (peer), teachers, AIDS Club, Braille materials and audio cassettes respectively.

However, vice-chairman of ENAB explained, in order to meet the needs of AWVI in-terms of accessing information about HIV/AIDS on an equal base as the sighted fellows; information on AIDS should be available in audio cassette and Braille to assist the AWVI members better than any other sources. He justified the importance of Braille in the following way. "A common form of communication that has been used widely in HIV/AIDS education is the spoken words, which is sometimes open to misinterpretation and messages may be forgotten."

However the interviewee explained that it is undeniable fact that radio is the chief sources of information for AWVI. Respondent from youth wing in ENAB strengthen this idea as, even through avoid cassettes and Brail are important, they are not available and can't be much practical in our context. Therefore, radio is major source of information, for AWVI. Here Vice-chairman of ENAB argues that despite radio is the chief sources of information, the programs made in radio should be specifically designed and referring the AWVI. For example messages on radio should be more of verbal presentation and full of demonstration. The public officer from ENAB agrees on radio as a chief source of information since radio is available for everybody than other properties like tape recorder. And therefore, the information can be accessible for many AWVI in the country.

Representative from MMM also particularly believed that AWVI would be capable of understanding a wide range of concepts and facts about HIV/AIDS if materials are presented in appropriate format (e.g. Braille or cassette).

Again chairman of ENAB also added that most students and workers with visual problem can get HIV/AIDS information from school and working areas. However, this respondent has a fear that illiterate with visual impairment might lack sufficient knowledge, since these illiterates don't go to school, don't read Braille, have less socialization and only depend on radio.

#### **4.7 Sexual Behavior in Preventing HIV/AIDS**

Representative from the youth wing of ENAB explained, AWVI exhibit normal behavior like any body else does. However, expressing their sexual feelings has some difficulties. For example, male- female attractiveness factors, body shapes and size, and other developmental changes contribute some difficulties in forming relationship. Dating is another factor that puts these individuals in to trouble, specially dating with sighted peers. These Adolescents have their own way to select their sexual partners. Good smell, attractive voice and good manner are some of the factors that enable them to select their sexual partner. AWVI also had a very close relationship with each other better than their

sighted peers. Most of the time they spend much time together. They have been going to school, church, liberties and association center together. These activities increase the likelihood to form sexual partner, which in turn advances to unwanted sexual activities

According to the public relation officer from ENAB, although it was difficult to measure sexual behavior of AWVI, possible to suggest about their behavior from the discussions held with them, from the different forums held with and from different workshop participations. With respect to preventive practice most interviewees agreed that abstaining from sex, faithfulness to respective partner and using condoms were believed to be the three categories of prevention that could reduce the risk of infection .

The public officer assumed that AWVI choose to one to these preventive mechanisms. As the same participant explained, since AWVI are at younger age the preferred means of prevention was abstained till marriage. He also added that it shouldn't be forgotten that there were AWVI who had multiple partner and didn't use condom and risk themselves.

The youth wing from ENAB, who himself is AWVI said that:

*"I believe in safe sex, I therefore have a sexual partner, I could say I have follow in one of the ABC (abstinence, be faithful, condom use) rules."*

represent many of AWVI, hence asking people to read is a must but many AWVI are afraid of asking other sighted people to read them.

The last interviewee tried to conclude that even though many are aware of the ABC rules, some did not still have adequate knowledge regarding HIV/ AIDS, its nature, cause and prevention. For example the Cheshire Foundation made blood test on HIV among female AWVI and found with many HIV positive girls. This indicates that there are still behavioral problem needs to be understood and changed.

#### **4.8 Risk of HIV Infection among AWVI**

A chairman from Ethiopian Center for Disability and Development (ECDD) believed that individuals who live with visual impairment are vulnerable to the pandemic. Among the reasons forwarded were stigmatization, poor health access and lack of education; which opposes the assumption held by the general population that AWVI are at low risk.

As participant from the youth wing of ENAB stated that AWVI didn't have the courage to get tested and know their HIV status since they had the fear of being stigmatized. AWVI knew practically what being stigmatized really means from their disability experience. They don't want to make it double by knowing their HIV status. Therefore, the infection rate would be high among this group.

The same participant also explained that the people with visual impairment are excluded from the main stream regarding HIV/AIDS issues that make the situation worse for AWVI. For example VCT service didn't offer where it could be accessible. In fact Zewuditu Hospital had recently a deal to open VCT center where it would be accessible to individual with visual impairment around *Sides Kilo*. The respondent also added that information, education and communication materials on HIV/AIDS are not offered in Braille and which worsen the problem further. The other problem mentioned was the dependency of AWVI on their sexual partner to proper usage of condom. According to the respondent, if both sexual partners are specially individuals with visual impairment proper usage of condom would be affected. Eventually the respondent concludes that all the problems above mentioned come from lack of mainstreaming HIV/AIDS for AWVI.

One participant from ECDD explained that lack of concern by stake holders adds the vulnerability. For example:

*“The Ethiopian government did prepare a strategic plan for HIV/AIDS in 2004. The plan included vulnerable groups of the society that need to be given greater attention like people aged 15-19, prostitutes, truck drivers, orphaned children and young people out of the school. However, Individuals with disability were not included in the strategic*

*plan. It is not only the strategic plan but also the country's HIV/AIDS policy doesn't include individuals with disability.*

Chairman from women with visual impairment in Ethiopia who herself has visual impairment, added that all women are generally vulnerable due to gender inequalities in our society, female AWWI Probably carry double burden, and are particularly more at risk to abuse.

The same interviewee strengthened the above idea by saying that women with visual impairment like other disability group are more likely to be raped than their sighted peer. The worst part of the situation is that these individuals are unable to recognize the rapist. They are assumed to be as easy victims. The same source described a story that she knew very closely and reported in the following manner.

*"Miss x, a 20 year - old blind girl, was traveling on a bus to visit her family. At the end of the first day she had to rent a hotel room to spend the night there. A man who was on the same bus offered to assist her, but things changed when people reached her room. According to Miss X she was thanking the man for his help before he turned into a kind of animal. He raped her, she says she hadn't had sex before the rape and hasn't since that day on wards, but when she had a blood test she found out to be HIV positive..*

The same participant concluded that the story above is one of the many stories of AWVI. Most AWVI in this country live in extreme poverty and are thus at high risk of contracting HIV/AIDS.

The public relation officer from ENAB agreed on majority of the vulnerability issues and disagreed on the assumption that AWVI are at low HIV/AIDS risk. He replied that, he hasn't come across such an idea from the people whom he knows. He even believed that the assumption that AWVI are at low HIV/AIDS risk doesn't exist at all in any minds of the people. This is totally unacceptable for this respondent. He added:

*No body assumes AWVI are more likely to be free from the pandemic. AWVI are just vulnerable like any other. It is important here that every one should know that HIV had never signed an agreement with IWVI not to touch them.*

#### **4.9 Strategy Suggested to Teach AWVI**

Concerning best teaching strategy, the interviewees mentioned different strategies which they think is pertinent to them. Most interviewees choose radio but with a specific concern, peer education, and Braille materials respectively, as a strategy to teach AWVI. Almost all respondents believed the above mentioned strategies in its order are the

preferable ways of teaching AWVI. Moreover most agree that where there is a good economy and concern Braille materials help the education to be conveyed effectively to the receiver.

#### **4.10 Service Provision Related to HIV/AIDS to AWVI**

As mentioned by the interviewees efforts made so far to reach AWVI about HIV/AIDS and related issues are discouraging. Even though there are some efforts made by Medical Missionaries of Mercy, Pathfinder and Action Aid, a lot remains to be done. For example, Medical Missioners of Mercy which is exclusively working on HIV/AIDS and Individual with Visual Impairment produces only two materials (books) in Braille that focus on knowledge, support and care about HIV/AIDS. Moreover efforts done so far are not integrated and sustained. As a result they failed to contribute fair share in the fight against the disease.

The representatives of blind association (the main stakeholder) complained that individuals with visual impairment are not being included in most HIV/AIDS out reach efforts. They also added that projects designed to reach AWVI in HIV/AIDS issues remained mostly on paper without implementation. For example AWVI do not have appropriate ( accessible ) blood testing center, are not provided with AIDS education to stop the spread of the virus, do not get appropriate care and support for AIDS patients.

As representative from youth wing of the ENAB specifically explained, even though some had got a chance of VCT service, many other do not get chance of VCT because of inaccessibility. The same source also added that many accept the need of VCT if the testing center is available around their association because this will give more confidence, and help to avoid societal stigma and maintain confidentiality about their HIV status.

Generally the interview process revealed that AWVI has a relatively good knowledge on HIV/AIDS and related issues. They also mentioned that various sources of information – radio, peers, Braille, audio cassettes, schools (teachers) and working area information are some of the favorite sources respectively. Regarding their sexual practice many AWVI follows the ABC rules, yet some put themselves at risk by having multiple sexual partners and serial partner. Most AWVI are vulnerable to HIV/AIDS because of improper usage of condoms, unable to identify damaged and safe condoms, inaccessibility of VCT service, marginalization, lack of HIV/AIDS education and poor service provision by government and NGOs.

## **CHAPTER FIVE**

### **DISCUSSION**

A total of 70 Adolescents with visual impairment were involved in the quantitative study. In combined with quantitative approach, qualitative method was used to enrich the output of the study. Seven key informants from relevant stakeholders were included in the qualitative parts of the study.

This section discusses the results in reference to the knowledge, sources of knowledge, strategies adopted to teach, sexual behavior, vulnerability and service provision to AWVI related to HIV/AIDS.

Knowledge of HIV/AIDS varied from simply having heard of the term HIV to clearly understanding of its other characteristics. The finding of the study revealed that almost all of the respondents had good knowledge on HIV/AIDS. The chi-square test done on the items set to measure knowledge about HIV/AIDS, 24 items were found to be statistically significant, which implies that many of the respondents had above average knowledge.

As to the modes of transmission, substantial number of respondents reported that HIV can be transmitted through sexual intercourse (81.4%), infected blood transfusion (78%), and by using unprotected

sharp instruments (94%). It was also mentioned that semen, vaginal fluid, blood contacts (68%) and breast feeding (82.9%) among the means of HIV transmission. Coughing and sneezing, through saliva, sleeping in the same room, shaking hands, sharing utensils with AIDS patients were some of the invalid transmission modes mentioned by majority of the respondent. Regarding to the symptoms, most respondents (80%) mentioned that a healthy looking person can be HIV virus carrier.

On the contrary, some respondents have replied that the transmission of the virus could be possible through mosquito bites (27.1%).

With regarding to the knowledge of preventive methods of HIV/AIDS be faithfulness to a respective sexual partner (94.3%), condom use (84.3%) and abstinence (44.3%) was the measures suggested.

Quite a number of respondents understood well that HIV is transmitted from mother to child both in pregnancy and delivery.

Though the respondents were found to be having reasonable knowledge related to HIV/AIDS, some misconceptions had been exhibited. For instance, the question that asks whether there would be a chance of being infected with HIV by having sex with someone who is known for a long period of time was answered inadequately. This indicates that,

there is still existing misconception on the mode of HIV transmission. Some (42%) also believe that abstinence is not sufficient enough to protect them from HIV/AIDS. In parlance with getting up-to-date information on HIV/AIDS, (51.4%) of the respondents don't get information on regular basis.

As indicated above a great deal numbers of respondents have a good theoretical knowledge related HIV/AIDS. However, the misconceptions and protection measures replies by the respondents could be an indicative of disseminating specific needs of information on HIV/AIDS for AWVI on regularly basis.

It is important here to add the researcher's observations to what extent the knowledge questions set up to measure about HIV/AIDS appeared silly to them. And they are found much more knowledgeable. While the researcher was monitoring the interview, the researcher heard the respondents' expression on how much the question raised concerning on HIV/AIDS and related issues in the following statements:

« ጥራሽ ግዑዝ ስካሰ ስደረገን እኮ» when expressing their feelings that the sighted people are considering them , as if they were totally illiterates about HIV/AIDS and related issues.

«ከጤረታ ነው የሌላ የመጣው?» to mean that sighted people are assuming them as if they are coming from other planets, where there is no information about HIV/AIDS.

The finding of quantitative study was found in conformity with the key informant interview regarding to the knowledge of HIV/AIDS. Likewise, majority of the interviewee indicated the presence of good knowledge among AWVI in terms of transmission, symptom and prevention knowledge.

Generally having good knowledge could be attributed to their educational status (in which 91% are literate), availability of convenient and use of information, and their urban life.

According to the informant from ECDD, adolescent with visual impairment in rural settings differ from urban settings. The basic rational for the difference is due to the urban areas where there are better access in education, prevention messages, VCT service and less stigmatization. Consequently, AWVI in urban area have comparably better knowledge than rural residents. Within the urban settings; it is believed that non sighted adolescents are lesser in understanding in connection with the availability of convenience and use of information source about HIV/AIDS. In terms of gender, the non sighted females

were said to be less knowledgeable than male counterparts. Unlike this the quantitative survey findings shows that there is no discrepancy between males and females of Arada-sub city on HIV/AIDS (t-test value =.90, d/f =68;  $p < 0.05$ ). This might be associated with getting use of the same source of information and equivalent level of education.

In an assessment study conducted by St-Merry counseling center on the knowledge of HIV/AIDS in German elementary school on students with visual impairment stated that low knowledge but improvement has been shown that after successive awareness campaign which entails a need for preparing HIV/AIDS awareness materials and strengthening peer group education

On the contrary to the findings of the present study different literatures support low level of HIV/AIDS knowledge among AWVI. According to Yousafzai et al. (2003), individuals with visual impairment, obtained information from limited sources and lack knowledge about HIV/AIDS and were miss informed about mode of transmission. Another study conducted by Jenjiyh (2000), has also a proxy result which stated as adolescents with visual impairments were less knowledgeable about sex. The low performance of the AWVI could be attributed to their lack of exposure to meaningful teaching and information about sex.

Regarding the source of information about HIV/AIDS, the majority of respondents preferred radio (74.3%) to be source of information about HIV/AIDS, followed by friends (35.7%) and Television (27.15%) despite the fact that most information obtained were not in a regular basis. The interview results also confirmed that radio took the lion share in disseminating information to AWVI followed by peers, Braille materials and audio cassettes respectively. As the interviewees emphasis that Braille materials and audio cassettes are important source that suit the special needs of the AWVI. These sources would fill the gap when AWVI misses radio programs. Yet, these materials are in short supply in our country. The lacks of sufficient Braille materials result in people with visual impairment to depend on other less convenient sources.

The result obtained above on the source of information about HIV/AIDS, is consistent with the findings of Wellborn et al. (1983), as his study shows that radio was an important source of information about sex related issues for women who were blind. However Jenjyh (2000), who is not supported in the present study, explained that teachers and parents, were the chief sources of information about sex related issues for AWVI whereas, few used audio and visual media.

Concerning the sexual behavior, most AWVI (77%) believe that their vision loss never adversely affect their sexual behavior (which includes like dating). This result is inconsistent with other literatures. According

to Neff (1983), since AWVI don't see displays of affection or reactions of others to those display their sexual relation is affected. For example many flirting behaviors are visual like eye gaze, facial gestures, and postures signs when one person is interested in meeting another. The survey findings against the literature might be a result of the way adolescents choose of sexual partner by the sense of good smell, attractive voice and close relationship rather than focusing on signs and gazing.

The findings revealed that most of the respondents have had no sexual experience while 31(44.3%) have had no HIV vulnerable risk to HIV/AIDS, like engaging in multiple sexual partners, sexual contact with commercial sex workers, unsafe sex, (i.e. using condom) and un safe injection. It seems as a result of this no having had sexual transmitted diseases (STD).

It is plausible to say that AWVI have a sexual behavior which is essential in prevention of HIV/AIDS. Therefore, concerning sexual behavior of AWVI about HIV/AIDS, their practice shows good practice on HIV/AIDS prevention ranges from abstinence to condom use. Question raised under sexual behavior section, excluded respondents who have not started sex yet, therefore the number of respondents reduced almost by half 31(44.3%) out of the total 70 (100%) of AWVI.

It is well known that the basic factor that increases the risk of HIV infection is unsafe sexual practice of the people. The study revealed that among AWVI who had sexual experience all had used condoms at least once in their life. Further inquiry revealed that 77.4% AWVI used condoms during their first sexual contact and 87% used condoms during sex with sexual partner. Therefore the result showed the practice of condom to avoid unsafe sex. Many other (77.4%) hadn't had multiple sexual partners. Again 87% also hadn't had sex with casual partner and 100% hadn't got sex with prostitutes. Overall the results obtained showed many AWVI understands practice of safe sex.

Fifty five percent (55.7%)<sup>39</sup> out of the total respondents 70 (100%) who were never had sex plus the result obtained through interview showed that abstinence is the leading preventive method. As the response from stakeholders indicates AWVI are too young to start sex, hence abstaining from sex were and should be their major solution in reducing the risk of infection.

The findings further indicate majority of the respondents' uses condom and are faithful to their respective sexual partner with almost equal proportion. Quite interestingly AWVI uses condom even to those who are trusted partner. The interview results also supports that AWVI were

aware of condom use and one to one partnership to reduce the risk of HIV/ AIDS. This could be attributed to perception of one's vulnerability.

The findings of the study is consistent with Fetum's (2006) un published report with a different disability type explained that adolescents with hearing impairment are aware of the practice that pre-dispose them to HIV infection.

Generally the study revealed the association between knowledge on HIV/AIDS and sexual behavior does not show a significant difference which implies that attainment of HIV/AIDS knowledge can not guarantee one's safer sexual practice. In other words good knowledge on the level about HIV/AIDS doesn't necessarily imply that behavioral changes had been brought. Results showed good knowledge of HIV/AIDS and favorable sexual practice with no significant relationship between the two variables. This might be due to the nature of the data in that the knowledge and behavior related to HIV/AIDS are found to be high and there is less variability among the participants in knowledge and behavior related to HIV/AIDS. Hence correlation is the artifacts of variation.

Concerning the strategy suggested for AWVI about HIV/AIDS most respondents reported that HIV/AIDS education present in radio, peer education and anti-Aids club in respective order would be an appropriate

from different perspectives. Yet, to meet their special needs Braille materials and audio cassettes would also be highly valuable since lessons from visual media and billboard misses AWVI, besides reading material like Braille are easily understandable and memorable.

Assessing vulnerability towards the pandemic of HIV/AIDS many respondents (58.2%) perceived themselves that they are at risk. Sexual, alcohol and *chat* were mentioned as risk behaviors during the interview process. As is true with general population many representatives believed that women with visual impairment experiences rape, sexual exploitation and abuse. One reason for this was the perception of the public about AWVI to be 'free' from the HIV virus and even more women with visual impairment are thought of as soft targets by the rapist. In line with this Groce (2004), explained that women with disability are up to three times more likely to be raped than non-disabled. Likewise, at present in Ethiopia due to its intense problem, there is a tougher punishment against offenses of rape. The rapist will be punished with 15 years of imprisonment.

Other risk behavior factor mentioned was medical procedure and ethics. Here it is important to add the researcher observation on a program presented on Ethiopia TV about a story of a girl with visual impairment.

*The girl was virgin but found to be HIV positive because of contaminated sharp equipment.*

Lack of proper condom use and expired condoms may also put AWVI at risk. In fact many (79.4%) checked whether the condoms are damaged or not, but they rely on sighted individuals to read them. Moreover, many AWVI don't know get appropriate facility or don't know location for VCT service. Hence increase risk to transmission of the disease. Another factor which makes AWVI vulnerable were mentioned during the interview process that many women with visual impairment encouraged by their families or friends to fall pregnant whether they are married or not so that they will have children to take care of them when they grow old.

The other risk factor was poverty. The result of the interview confirmed that poverty puts individuals with disability at risk. From ECDD representative who herself is an adolescent with visual impairment, literary explained that:

*"We were 18 in number while I was a grad 9 student. Among us 9 were pregnant. We were discussing why this was happening? Definitely those who run to make money and support their life for survival got pregnant. In fact this was happened 10 years back.*

Overall, the interview processes revealed that a lack of focus on HIV prevention and routine service accommodation. The access and utilization of service related of HIV/AIDS by AWVI was limited because of inconvenient location of the facilities and attitudes of the service providers and the general population. For example, for counseling and testing service AWVI has to cross many roads in order to reach to the centers besides they have to ask many individuals how to get there which in turn requires confidentiality of the situation. Again if these populations are unable to get VCT services because of the above and other reasons in turn increases the rate of infection among themselves. So far, there are only handful individuals with visual impairment that knew their HIV status and initiate others.

There are also cases reported on mistreatment from hospitals which have a discouraging effect. An interview from the blind association remembered an issue told related to this situation. Many sighted people were surprised when some one with visual impairment went to hospital for HIV test and said:

አንተ ደግሞ እዚህ ምን ታደረጋህ? when expressing their feeling that he didn't belong to that area as if he is non-vulnerable to HIV/AIDS .

Concerning stigmatization and educational service provision, the interview process revealed that stigmatization is existing because they are disabled and when HIV/AIDS crises added, the problem would be worse. Therefore AWVI need some protection regarding to this point. Moreover, the interview process showed that there is even no HIV/AIDS policy that addresses disability issues. While there are a number of government and NOG run HIV/AIDS prevention and control activities, they do not run programs that focus on visual impairment. The basic reason as mentioned by the informants were that most of the NGOs do not show interest as they consider providing HIV/AIDS related activities on individuals with disability as costly and needs strong commitment.

It was also underlined that there is no HIV/AIDS policy that addresses issues of people with disabilities in general and individuals with visual impairment in particular.

## CHAPTER SIX

### Summary, Conclusions and Recommendations

#### 6.1 Summary

The aim of the present study was to explore knowledge on HIV/AIDS and sexual behavior related HIV/AIDS among adolescents with visual impairment. In this effort, the following basic research questions were formulated and investigated.

1. Do adolescents with visual impairment have adequate knowledge towards HIV/AIDS?
2. Do adolescents with visual impairment have adequate sexual behavior towards HIV/AIDS?
3. What are the main sources of HIV/AIDS information for the adolescents with visual impairment?
4. How do knowledge and sexual behavior related with each other?
5. Is there any significant difference between sexes on their level of knowledge and sexual behavior related to HIV/AIDS?
6. What makes adolescents with impairment more vulnerable to HIV/AIDS?
7. How does service provision to individuals with visual impairment look like?

To investigate the above basic research questions of the study both quantitative and qualitative methods were used in an organized manner. In this regard, two types of instruments (questionnaire and semi-structured interview) were used to collect the basic and relevant information for the study. The instruments were pilot tested using 20 students with visual impairment before the actual survey. It was given an opportunity to improve and make the final questionnaire clear, non-ambiguity and also to have a possibility to include some basic factual questions. Besides, some less sensible questions were rejected.

The AWVI from the Ethiopian National Association for the Blind were selected for the study due to the fact that the association was where individuals with visual impairment come and gather to collect their benefits and the association is located in Addis Ababa in Arada sub city, which is convenient to form a continuous contact with the respondents as well as with the authorities.

All the adolescents with visual impairment found in the Arada sub-city were taken. A total of 70 AWVI were participated with full consent, of which 52.9% males and 47.1% were females. Furthermore, all study participants were in the age limit of 15 to 20 with a mean 17.46 and standard deviation 1.39. In terms of educational attainment, a large proportion 91.5% of the respondents, were literate.

The quantitative data were analyzed using different statistical measures (chi-square, t-test, correlation, percentage, mean and St.deviation) and qualitative data that comprises of qualitative attributes and followed thematic based research questionnaire approach methods. The data obtained from seven key stakeholders (key informants) through in-depth interview also presented as verbatim and direct quotation.

The findings revealed that most AWVI knew the modes of transmission, symptoms and prevention methods of HIV/AIDS. The sexual behavior of the respondents also showed that AWVI are practicing Abstinence, Be faithful and use condom (ABC) rules. Abstinence is their first hand choice with a potential preference of faithfulness to a respective sexual partner.

According to the findings of the study there is no knowledge difference on HIV/AIDS, between male and female AWVI, and so does for their sexual behavior. Further more, it was found that there is no association between knowledge of HIV/AIDS and sexual behavior among AWVI.

There were general assumptions that the AWVI lack information on HIV/AIDS because of their sight limitation. In contrast, the present study revealed that AWVI have sufficient information on HIV/AIDS.

The primary sources of information for AWVI on HIV/AIDS are Radio and Friends while the preferred sources of information include Radio, Braille and Audio cassettes in respective order. Nevertheless, it was felt that Braille and Audio cassettes are in short supply. Within the existing conditions, Radio, peer education and school Anti- AIDS clubs are suggested by the respondents as a best way of teaching AWVA.

The study result also revealed that AWVI are vulnerable groups to the HIV/AIDS pandemic. Factors that contributes to the vulnerability of AWVI are found to be, poverty, stigma, rape and sexual exploitation, lack of health services (in terms of VCT service), dependency on others for checking the expiry date on condoms, dependency on others for condom use, shortages of Braille and audio-cassettes and lack of medical procedures and ethics .

Generally HIV/AIDS out reach efforts by NGO and GO toward AWVI showed lack of concern and determination. There are almost no specific HIV/AIDS programs by these concerned bodies that targets adolescents with visual impairment.

## **6.2. Conclusion and Recommendation**

Most of the AWVI have significant knowledge on the modes of transmission, symptoms and prevention methods of HIV/AIDS. It also seen that AWVI have favorable sexual behavior in which they are likely to

be practicing Abstinence, Be faithful, and use condom (ABC) rules. They also believe that abstinence and faithfulness to a single sexual partner as a best reliable method to protect oneself from infected to HIV/AIDS.

The primary sources of information/knowledge for AWVI on HIV/AIDS are Radio and Friends while the preferred sources of information include radio, Braille and audio cassettes in respective order. They further prioritize Peer group discussion, radio and anti-AIDS club as best possible strategies to teach AWVI on HIV/AIDS issues.

The study confirms that the knowledge towards HIV/AIDS among female and male AWVI are almost identical and so does for their sexual behavior. The findings further attest that there is no association between knowledge of HIV/AIDS and sexual behavior among AWVI.

However, AWVI are found to be vulnerable groups to the HIV/AIDS pandemic mainly as a result of external factors. Among some triggering factors that contribute to the vulnerability of AWVI are poverty, stigma, rape and sexual exploitation, lack of medical procedures and ethics, shortages of Braille and audio-cassettes dependency on others for checking expiry date on condom, and dependency on others for using condom it self.

The unsuitable facilities specific to people with disability including visual impairment in health institutions make a difficulty in promoting voluntary counseling and testing among AWVI. For example, VCT centers locations are placed at a distance where AWVI couldn't easily reach.

In addition, governmental and non governmental organization concern to AWVI is showed lack of commitment. There are almost no specific HIV/AIDS programs by these concerned bodies that targeting adolescents with visual impairment.

Based on the findings of the study the following recommendations are made to reduce the impact of HIV/AIDS on AWVI.

- ⌘ Up-to-dated information on HIV/AIDS should be transmitted through radio, peer group discussion and Anti-AIDS clubs.
- ⌘ Strengthening/promoting peer group discussion, radio programs (that are more of verbal presentation) and Anti- AIDS club among AWVI to transfer full-fledged information on HIV/AIDS.
- ⌘ Undertaking regular assessment on knowledge on HIV/AIDS and sexual behavior among AWVI to identify gaps and sought immediate solutions.
- ⌘ Promoting abstinence from sex before marriage among AWVI.
- ⌘ Public awareness campaign to condemn rape, sexual exploitation and unsafe sex towards the AWVI.

- ⌘ Strengthening the law enforcement bodies to act quickly towards rape and sexual exploitation faced by AWVI
- ⌘ Preparing and distributing IEC materials on HIV/AIDS specific to AWVI.
- ⌘ Demonstrate and teach to AWVI about how to use condom, and devise any relevant means how to identify the expiry date of condom.
- ⌘ HIV testing centers should consider the special needs of AWVI and thus establish VCT centers that suitable to Visual impaired adolescents.
- ⌘ Programs and policies should address and take into consideration the specific needs of individuals with disability in general and AWVI in particular.
- ⌘ Encouraging civil society organizations to involve in prevention and control of HIV/AIDS that targeted on AWVI.
- ⌘ The structure role and functions of the Ethiopian national association for the blind have to be strengthened further so as make their service and delivery more precise, objective and target oriented. This could be achieved by establishing appropriate professional link with other GOs and NGOs who are working in the same line

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**Appendix A**

**ADDIS ABABA UNIVERSITY**

**FACULTY OF EDUCATION**

**DEPARTMENT OF PSYCHOLOGY**

The purpose of this research is to generate some information of the Adolescents' with visual impairment about Current knowledge and sexual behavior related to HIV/AIDS. The information will be used for research and teaching purpose only.

You are selected for this study because it is believed that you could provide adequate and enough information on the subject. Therefore, your unlimited cooperation in providing genuine information will be appreciated. To indicate your response please put “√” mark. You are also kindly requested to write your response in the space provided for the questions that require written response.

**ORGANIZATION OF THE QUESTIONNAIRE**

This Questionnaire has three sections. Section I comprise question on your background information, the second part is about your knowledge and source of information on HIV/AIDS, and the last section is designed to know the sexual behavior related to HIV/AIDS.

**Thank you in Advance**

## Section I: Socio-Demographic Characteristics

1. Sex (a) Male (b) Female

1.2. Age \_\_\_\_\_

1.3. Martial Status (a) Single (b) Married  
(c) Divorced (d) widowed

1.4. Ethnic Group \_\_\_\_\_

1.5. Religion (a) Orthodox (b) Muslim  
(c) Catholic (d) Protestant  
(e) Other, please mention \_\_\_\_\_

1.6 Educational level

(a) Illiterate (c) High school  
(b) Primary (d) College and above

## Section II: Knowledge of HIV/AIDS and Source of Information

*Knowledge statements and questions on HIV/AIDS*

1. Have you ever heard about HIV/AIDS?

Yes  No

2. Does HIV/AIDS mostly transmit through sexual intercourse?

Yes  No  Don't known

3. Is AIDS a contagious disease?

Yes  No  Don't known

4. Is it possible that a person can transmit HIV through semen, vaginal fluids and blood contacts?

Yes  No  Don't known

5. Is it possible that a person can have the AIDS virus and not show signs of the diseases for many years?

Yes  No  Don't known

6. Do you have the chance of getting infected with HIV/AIDS, if you have sex with a person who you know for a long time?

Yes  No  Don't known

7. People can protect themselves from AIDS by having just one uninfected sexual partner who has no other partners.

Yes  No  Don't known

8. Using condom consistently prevent both STD and HIV

Yes  No  Don't known

9. People can protect themselves from AIDS by abstained from sexual intercourse.

Yes  No  Don't known

10. A person who looks healthy but carry HIV can transmit the virus to other people.

Yes  No  Don't known

11. A person can contract AIDS if he/she has sexual intercourse just one time without a condom.

Yes  No  Don't known

12. A person can get infected with HIV by blood transfusion.

Yes  No  Don't known

13. A person can get infected with HIV by sharing utensils, plates, cups and spoons with an infected person.

Yes  No  Don't known

14. Can Sharing of syringes, clippers and blades infect a person with HIV?

Yes  No  Don't known

15. A person can get infected with the HIV through mosquito bites.

Yes  No  Don't known

16. A person can get AIDS by sleeping in the same room with an infected person.

Yes  No  Don't known

17. A person can get AIDS by holding hands with an infected person.

Yes  No  Don't known

18. Is it possible that contact with saliva can spread HIV/AIDS?

Yes  No  Don't known

19. Can cough and sneezing spread HIV/AIDS

Yes  No  Don't known

20. HIV can be transmitted from an infected pregnant woman to her unborn baby during pregnancy.

Yes  No  Don't known

21. HIV can be transmitted from an infected woman to her baby during delivery.

Yes  No  Don't known

22. HIV can be transmitted from an infected mother to her baby during breast feeding.

Yes  No  Don't known

23. If a woman has HIV/AIDS, she should not have any more children.

Yes  No  Don't know

24. Are adolescents with visual impairment more vulnerable to HIV/AIDS?

Yes  No  Don't known

25 having blood test for HIV help to protect oneself from AIDS?

Yes  No  don't know

26. Do you have a mean of getting information about HIV/AIDS on a regular basis?

Yes  No  Don't known

27. from the following sources of information on HIV/AIDS which of the following sources provide you important information to protect from HIV/AIDS and bring behavioral change. (You can give more than one answer).

- A. my friend \_\_\_\_\_
- B. my family \_\_\_\_\_
- C. Radio \_\_\_\_\_
- D. Television \_\_\_\_\_
- E. Printed materials \_\_\_\_\_
- F. Anti- AIDS club \_\_\_\_\_

- G. Teachers \_\_\_\_\_
- H. Religious leaders' \_\_\_\_\_
- I. Health workers \_\_\_\_\_
- J. Clinics \_\_\_\_\_
- K. Peer education \_\_\_\_\_
- L. Sex partner \_\_\_\_\_
- M. If other please specify \_\_\_\_\_

### Section III: Sexual Behavior Related to HIV/AIDS

*Sexual behavior statements and questions on HIV/AIDS*

1. Had sexual intercourse during most recent year?

Yes  No

2. Had multiple sexual partners in most recent years?

Yes  No

3. Have ever used condoms?

Yes  No

4. Do you use condom during your first sexual contact?

Yes  No

5. Had sexual contact with prostitute in most recent years?

Yes  No

6. Had sex with casual partner in most recent years?

Yes  No

7. Used condom during sex with casual partner in most recent years.

Yes  No

8. Had sexual transmitted disease (STD) in most recent years?

Yes  No

9. had unsafe injection?

Yes  No

10. My sexual behavior is adversely influenced by my visual impairment.

Yes  No

11. If and when you use condom, did your vision impairment adversely affect the use of condoms?

Yes  No

12. If you in case want to buy condoms from where you prefer to buy it?

(a) Pharmacy \_\_\_\_\_

(b) Stores \_\_\_\_\_

(c) Health centers or clinics \_\_\_\_\_

(d) Street vendors

(e) Other (please specify) \_\_\_\_\_

13. Do you checkout the expiry date of condoms. In case you want to use?

Yes  No

If yes, how (please give reason) \_\_\_\_\_

If no, why (please give reason) \_\_\_\_\_

14. What strategies do you suggest to educate visually impaired Adolescents about HIV/AIDS? (Rank according to importance)

(a) Peer education \_\_\_\_\_

(b) Drama and theater (Audio channeled) \_\_\_\_\_

(c) Brail material \_\_\_\_\_

(d) Radio \_\_\_\_\_

(e) Television \_\_\_\_\_

(f) Other (Specify \_\_\_\_\_

**Appendix B**

**ADDIS ABABA UNIVERSITY**

**FACULTY OF EDUCATION**

**DEPARTMENT OF PSYCHOLOGY**

**Interview Guide**

Interview held with representatives of the Ethiopian Association for the Blind, Medical Missionaries of Mercy, Ethiopia Center for Disability and Development, and chairman of Adolescents with Visual Impairment.

1. Knowledge of AWVI about HIV/AIDS.
2. Sources of information of AWVI about HIV/AIDS.
3. Sexual behavior of AWVI in terms of prevention of HIV/AIDS.
4. Vulnerability of HIV/AIDS among AWVI.
5. Vulnerability of HIV/AIDS among boys and girls of AWVI.
6. Strategies employed to teach AWVI about HIV/AIDS.
7. Organization involved in reaching AWVI with HIV/AIDS prevention information.
8. Accessibility of HIV/AIDS prevention messages in accessible formats.
9. HIV status of AWVI and efforts made to know one's status.

## Appendix C

### አዲስ አበባ ዩኒቨርሲቲ ትምህርት ፋካልቲ የሳይኮሎጂ ትምህርት ክፍል

የዚህ ጥናት ድህረ ገጽ ላይ በአጠቃላይ ዓይነት ዓይነት ጥናት ላይ ለመሰማር የአራዳኝ ክፍል ከተማ ወጣት ዓይነት ስለሆኑ አይ ቪ ኤድስ ያላቸውን ግንዛቤ ለማየት፣ የመረጃ ምንጫቸውን ለማወቅ ፣ ወሲባዊ ባህሪያቸውን ለመዳሰስ እና በዚህ ሀሳብ ዙሪያ መረጃ ማሰባሰብ ነው።

ይህ መጠይቅ የተለያዩ የግልና ሚስጢራዊ የሕይወት ጥያቄዎችን ይዟል፤ ነገር ግን በእናንተ የሚሰጠው መረጃ ለጥናታዊ ድህረ ገጽ መሳካት በጣም አስፈላጊ ነው። ስለዚህ መጠይቁን በግልጽና በትክክል እድትሞሉ ትጠየቃለሁ።

ሚስጢራዊነትን በተመለከተ ሁሉም የመጠይቁ አሞላል ስርዓት በሚስጥር መልስ መስጠት የሚያስችላችሁ ሲሆን የምትሰጡት መልስ በምንም መልኩ እናንተን አይገዛም። ይህንንም ለማረጋገጥ በማንኛውም የመጠይቁ አካል ላይ ስማችሁን እንድትጽፉ አይፈለግም። መልሳችሁን (✓) ምልክት በማድረግ በሳጥኑ ውስጥ አስቀምጦ ወይም የድህረ ገጽ መልስ ለሚያስፈልጋቸው ጥያቄዎች መልሳችሁን በተሰጠው ክፍት ቦታ ላይ ጻፉ።

**የመጠይቁ ይዘት:-** ይህ መጠይቅ ሶስት ክፍሎች አሉት። የመጀመሪያው ክፍል የግል ሁኔታን የሚመለከቱ ጥያቄዎችን ይዟል፤ ሁለተኛው ክፍል ስለ ኤች አይ ቪ ኤድስ እና መተላለፊያ መንግዶች እንዲሁም የመረጃ ምንጭን ሲይዝ የመጨረሻውና ሶስተኛው ክፍል ደግሞ ከኤች አይ ቪ ኤድስ ጋር ተዛማጅነት ያላቸው ወሲባዊ ሕይወትን የሚመለከቱ ጥያቄዎችን ይይዛል።

ስለትብብራችሁ በቅድሚያ አመሰግናለሁ።

**ክፍል አንድ:- የግል ሁኔታ**

- 1. ፆታ ሀ/ ወንድ  ለ/ ሴት
- 1.2. ዕድሜ -----
- 1.3. የጋብቻ ሁኔታ ሀ/ ያላገባ  ለ/ ያገባ   
ሐ/ የፈታ  መ/ የሞተበት
- 1.4. ብሔር-----
- 1.5. ኃይማኖት ሀ/ ኦርቶዶክስ  ለ/ ሙስሊም   
ሐ/ ካቶሊክ  መ/ ኻርነስታንት   
ሠ/ ሌላ ካለ ይጥቀሱ -----
- 1.6. የትምህርት ሁኔታ  
ሀ/ ያልተማረ  ለ/ የአነደኛ ደረጃ ትምህርት   
ሐ/ የሁለተኛ ደረጃ ትምህርት  መ/ ኮሌጅና ከዚያ በላይ

**ክፍል ሁለት :- የኤች አይ ቪ ኤድስ ግንዛቤና የመረጃ ምንጭ የተመለከቱ ጥያቄዎች**

- 1. ስለ ኤች አይ ቪ ኤድስ ሰምተው ያውቃሉ?  
አዎ  የለም
- 2. ኤድስ በአብዛኛው የሚተላለፈው በግብረ ሥጋ ግንኙነት ነው?  
አዎ  የለም  አላውቅም
- 3. ኤድስ ተላላፊ በሽታ ነው?  
አዎ  የለም  አላውቅም
- 4. ኤች አይ ቪ ከሰው ወደ ሰው በብልት ፈሳሾች፣ በደም ንክኪ እና በዘር ፍሬ ፈሳሽ ሊተላለፍ ይችላል?  
አዎ  የለም  አላውቅም
- 5. የኤች አይ ቪ ቫይረስ በደሙ የሚገኝ ግለሰብ የኤድስ በሽታ ምልክቶች ለብዙ ዓመታት ላይታይበት ይችላል?  
አዎ  የለም  አላውቅም
- 6. ለረጅም ጊዜ ከማውቀው ሰው ጋር ወሲብ ብፈጽም ኤድስ አይዘኝም?  
አዎ  የለም  አላውቅም
- 7. ሁለት ተቃራኒ ፆታ ጓደኞች ሁለቱም ኤች አይ ቪ ኤድስ ከሌለባቸውና አንድ ለአንድ ከተወሰኑ ራሳቸውን ከኤድስ በሽታ መጠበቅ ይችላሉ?  
አዎ  የለም  አላውቅም
- 8. በወሲብ ጊዜ ኮንዶምን በአግባቡ መጠቀም ከአባላዘር በሽታዎችና ከኤች አይ ቪ ኤድስ ራስን መጠበቅ ይቻላል?  
አዎ  የለም  አላውቅም
- 9. ማንም ሰው ከወሲብ በመታቀብ ራሱን ከኤች አይ ቪ ኤድስ መከላከል ይችላል?  
አዎ  የለም  አላውቅም

10. ሲታይ ጤናማ የሚመስል ሰው ኤች አይ ቪን ወደ ሌሎች ሰዎች ሊያስተላልፍ ይችላል?  
አዎ  የለም  አላውቅም
11. በአንድ ጊዜ ብቻ ያለ ኮንዶም በተፈጸመ የግብረ ሥጋ ግንኙነት ኤች አይ ቪ ኤድስ ሊይዝ ይችላል?  
አዎ  የለም  አላውቅም
12. በደም ልገሳ ወቅት ኤች አይ ቪ ካለበት ወደ ሌሎች ሊተላለፍ ይችላል?  
አዎ  የለም  አላውቅም
13. ብርጭቆዎችን፣ ሳህኖችንና ሌሎች የመመገቢያና የማብሰያ ዕቃዎችን በጋራ መጠቀም ለኤች አይ ቪ/ኤድስ ሊያጋልጥ ይችላል?  
አዎ  የለም  አላውቅም
14. ሲሪንጅ፣ ምላጭ፣ መርፌና የተለያዩ ሹል ብረቶችን በጋራ መጠቀም ለኤች አይ ቪ ኤድስ ሊያጋልጥ ይችላል?  
አዎ  የለም  አላውቅም
15. በወባ ትንኝ መነደፍ ለኤች አይ ቪ ኤድስ ሊያጋልጥ ይችላል?  
አዎ  የለም  አላውቅም
16. በአንድ ክፍል ውስጥ ኤች አይ ቪ ካለበት ሠው ጋር አብሮ መተኛት ለቫይረሱ ሊያጋልጥ ይችላል?  
አዎ  የለም  አላውቅም
17. በመጨባበጥ ኤድስ ሊተላለፍ ይችላል?  
አዎ  የለም  አላውቅም
18. በምራቅ ኤች አይ ቪ ከሰው ወደ ሰው ሊተላለፍ ይችላል?  
አዎ  የለም  አላውቅም
19. በመሳልና በማስጠጠስ ኤች አይ ቪ ቫይረስ ከሰው ወደ ሰው ሊተላለፍ ይችላል?  
አዎ  የለም  አላውቅም
20. በኤች አይ ቪ ቫይረስ ከተያዘች እርጉዝ ሴት ቫይረሱ ወደ ፅንሱ ሊተላለፍ ይችላል?  
አዎ  የለም  አላውቅም
21. በወሊድ ወቅት ኤች አይ ቪ ቫይረስ ካለባት ግራ ወደ ልጅ ቫይረሱ ሊተላለፍ ይችላል?  
አዎ  የለም  አላውቅም
22. ኤች አይ ቪ ካለባት እናት በጡት ማጥባት ቫይረሱ ወደ ልጅ ሊተላለፍ ይችላል?  
አዎ  የለም  አላውቅም
23. በኤች አይ ቪ የተያዘች እናት ልጅ መውለድ አይገባትም?  
አዎ  የለም  አላውቅም
24. ወጣት አይነሥውራን ለኤች አይ ቪ ኤድስ ከሌሎች የበለጠ ተጋላጭ ናቸውን?  
አዎ  የለም  አላውቅም
25. የኤች አይ ቪ ምርመራ ማካሄድና ራስን ማወቅ ከኤድስ በሽታ ለመከላከል ይጠቅማል?  
አዎ  የለም  አላውቅም

26. ስለኤች አይ ቪ ኤድስ መረጃ ባለማቋረጥ ያገኛሉ?

አዎ  የለም  አላውቅም

27. ከዚህ በታች የተዘረዘሩት የኤች አይ ቪ ኤድስ የመረጃ ምንጮች የትኞቹ ጠቃሚ መረጃ የምታገኝበት/ኚበት ዘዴ ነው?

(ከአንድ በላይ መልስ መስጠት ይቻላል)::

ሀ/ ከጓደኞቹ

ሸ. ከሃይማኖት መሪዎች

ለ/ ከቤተሰቦቹ

ቀ. ከጤና ባለሙያዎች (ሠራተኞች)

ሐ/ ከሬዲዮ

በ. ከክሊኒኮች

መ/ ከቴሌቪዥን

ተ. ከአቻ ለአቻ ትምህርት

ሠ/ ከሕትመት ውጤቶች

ቸ. ከፍቅረኛ ጓደኛ

(ጋዜጣ፣ መጽሔት ያሉ)

ኘ. ሌላ ካለ ግለፅ-----

ረ/ ከፀረ ኤድስ ክብብ

ሰ/ ከመምህራን

ክፍል 3 - ከኤች አይ ቪ ኤድስ ጋር ተዛማጅነት ያላቸው

የወሲባዊ ባሕሪ ጥያቄዎች

1. በቅርብ ዓመታት የግብረ ሥጋ ግንኙነት ፈጽመው ነበር?  
አዎ  የለም
2. በቅርብ ዓመታት ከአንድ በላይ የፍቅር ጓደኞች ነበረዎት?  
አዎ  የለም
3. ኮንዶም ተጠቅመው ያሉቃሉ?  
አዎ  የለም
4. የግብረ ሥጋ ግንኙነት በጀመሩበት ወቅት ኮንዶም ተጠቅመዋል?  
አዎ  የለም
5. በቅርብ ዓመታት ከሌተኛ አዳሪ ጋር ወሲባዊ ግንኙነት አድርገዋል?  
አዎ  የለም
6. በቅርብ ጊዜያት ቋሚ ካልሆነ የፍቅር ጓደኛ ወሲባዊ ግንኙነት አድርገዋል?  
አዎ  የለም
7. በቅርብ ጊዜ ቋሚ ካልሆነ የፍቅር ጓደኛ ጋር በነበረዎት የግብረ ሥጋ ግንኙነት ኮንዶም ተጠቅመዋል?  
አዎ  የለም
8. በቅርብ ዓመት በአባላዘር በሽታ ታመው ያውቃሉ?  
አዎ  የለም
9. ጥንቃቄ በጎደለው ሁኔታ የሕክምና መርፌ ተወግተው ያውቃሉ?  
አዎ  የለም
10. ማየት ባለመቻልዎ ምክንያት የወሲባዊ ባሕሪዎ ላይ ችግር ይፈጥራል ብለው ያስባሉ?  
አዎ  የለም
11. ማየት ባለመቻልዎ ምክንያት የኮንዶም አጠቃቀም ችግር ይፈጥራል ብለው ያስባሉ?  
አዎ  የለም
12. ኮንዶም ለመግዛት ቢፈልጉ ከየት መግዛት ይመርጣሉ?  
ሀ/ ከመድኃኒት ቤት  ለ/ ከመደብር  ሐ/ ጤና ጣቢያ/ክሊኒክ   
መ/ የጎዳና ላይ ሻጮች  ሠ/ ሌሎች (ይጠቀሱ)-----

13. በኮንዶም መጠቀም ቢፈልጉ የኮንዶሙን የመጠቀሚያ ጊዜ ገደቡን ያረጋግጣሉ?

አዎ  የለም

አዎ ካሉ እንዴት (ምክንያቱ ይገለጹ) \_\_\_\_\_

የለም ካሉ ለምን (ምክንያቱ ይገለጹ) \_\_\_\_\_

14. ማየት የተሳናቸው ወጣቶችን ስለሌች አይ ቪ/ኤድስ ለማስተማር ምን ዓይነት የማስተማሪያ ዘዴ ቢሆን ይመርጣሉ? (እንደደ ደረጃቸው በቅደም ተከተል ያስቀምጡ)

ሀ/ የአቻ ለአቻ ትምህርት  ለ/ ድራማ፣ ቲያትር (በድምጽ የሚተላለፍ)

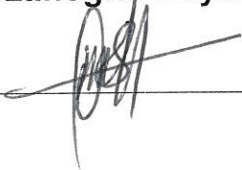
ሐ/ በብሬል  መ/ ሬዲዮና

ሠ/ ቴሌቪዥን  ረ/ ሌላ (ይገለፅ) \_\_\_\_\_

## DECLARATION

This thesis is my original work, has not been presented for a degree in any other university and the all source of materials used for thesis have been dually acknowledged.

Name: **Gezahegne Beyene**

Signature 

Date – **APRIL, 2007**

This thesis has been submitted for examination with my approval as a university advisor.

Advisor R. S. Kumsa

Signature 

Date of Approval April, 2007

