

**ADDIS ABABA UNIVERSITY**

**SCHOOL OF GRADUATE STUDIES**

**HIV/AIDS KNOWLEDGE AND RISK REDUCTION BEHAVIOR  
AMONG DEJACH WONDRAH HIGH SCHOOL STUDENTS; SEX  
AGE AND GRADE LEVEL DIFFERENCE.**

**BY**

**SAMUEL YARED**



**July 2007**

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**A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENT OF THE DEGRE OF ARTS IN  
DEVELOPMENTAL PSYCHOLOGY.**

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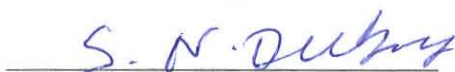
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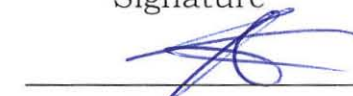
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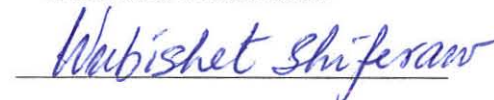
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## **Acronyms**

**AIDS** Acquired Immune Deficiency Syndrome

**HIV** Human Immune Deficiency Virus

**MOH** Ministry of Health

**SPSS** Statistical Package for Social Science

**STD** Sexually Transmitted Diseases

**STI** Sexually Transmitted Diseases

**TTI** Teacher Training Institution

**WHO** World Health Organization

**FGAE** Family Guidance Association of Ethiopia

**PLWHA** People Living With HIV/AIDS

## **Abstract**

*The objective of this study was to explore differences in knowledge about HIV/AIDS and risk reduction behavior. For this purpose a self administrative questionnaires was administered to 233(121 male and 112 female)students in Dejach Wondrad High School in Yeka Sub City, Addis Ababa. The result showed that a significant( $p=0.05$ ) difference in knowledge score was found as a result of sex, age and two interaction effect sex by age and three interaction sex by age by grade level. But the remaining factors were unable to serve as sources of variability. A statistical significant difference shows due to grade by sex interaction in risk reduction behavior. But all remain was not significant. In addition, the correlation between knowledge about HIV/AIDS and risk reduction behavior was 0.07. Which implies change in behavior and personal concern due to the appearance of HIV/AIDS were very small.*

# CHAPTER ONE

## 1 Introduction

### 1.1 Background of the problem

The HIV/AIDS epidemic has become a serious health and development problem in many countries around the world. According to UNAIDS, in 10<sup>th</sup> anniversary special edition 2006, an estimated 38.6 million people worldwide were living with HIV at the end of 2005. An estimated 4.1 million became newly infected with HIV and an estimated 2.8 million lost their lives to AIDS. Report on the Global AIDS Epidemic Sub-Saharan Africa has just over 10% of the world's population, but it homes to more than 60% of all people living with HIV-25.8 million. In 2005, an estimated 3.2 million people in the region became newly infected, while 2.4 million adults and children died of AIDS. Among young people aged 15-24 years, an estimated 4.6 % of women and 1.7% of men were living with HIV in 2005 (AIDS epidemic update. UNAIDS/ WHO 2005).

In Ethiopia, HIV probably started in the early 1980's. There were only two AIDS cases reported in 1986. It is currently estimated that, the cumulative number of people living with HIV/AIDS (PLWHA) is about 1.32 million (45% male and 55% female). This results in a prevalence rate of 3.5% (3% among males and 4% among females; 10.5% urban

and 1.9% rural areas) for the total estimated population of 73 million. The estimated number of new adult AIDS cases was 137,499. The number of new HIV infections was 128,922 (353 per day) including 30,338 HIV-positive births. Females accounted for 53.2% of new infections (AIDS in Ethiopia 6<sup>th</sup> report MOH 2007).

There were 134,450 (368 per day) AIDS-related deaths including 20,929 children 0-14 years (83.6% under age five). Females accounted for 54.5% of AIDS-related deaths. The number of AIDS orphans aged 0-17 years reached 744,100 (AIDS in Ethiopia 6<sup>th</sup> report MOH 2007).

The number of PLWHAs in need of antiretroviral treatment (ART) was 277,757 including 43,055 (15.5%) children aged 0-14 years (AIDS in Ethiopia 6<sup>th</sup> report MOH 2007).

Rural incidence rose slowly until 2002 and seems to have leveled off at lower rate than urban incidence. National parallels the rural rate except for a pronounced raise in the late 1980's and early 1990's due to the sharp incidence rise in urban Ethiopia. (AIDS in Ethiopia 5<sup>th</sup> Report MOH 2005)

AIDS impact on the economic of the country in a number of ways. In 2003 128,000 pregnant women and 35,000 new born, were living with HIV/AIDS. In the same year, there were 231,000 new HIV infections, 123,000 AIDS patients, and 115,000 AIDS deaths. One of the main

consequences of the HIV/AIDS epidemic is orphan hood. In 2003 alone, it was estimated that 539,000 children lost one or both of their parents due to AIDS. With the advent of the epidemic, an increased number of people are also requiring care and support. The lost of young adult in their most productive years of life is most likely to affect the overall economic output. The lost of trained professionals such as teachers, medical workers, engineers, development workers, etc, to AIDS would do the same and more as it will greatly affect the human resource development of the country. AIDS also increases the cost of medical care, drugs and funeral expenses. It has been estimated that the foreign exchange requirements for imported drugs would escalate to million of dollars (AIDS in Ethiopia 5<sup>th</sup> Report). The available data on age specific prevalence of HIV/AIDS reveal that the highest prevalence of HIV infection rate is in the age of 15 to 24 years, indicating the on going recent infection in the country (MOH 2002).

Adolescents are at the center of the HIV/AIDS epidemic. They are most vulnerable, because they often do not have access to information, knowledge, and skills related to HIV/AIDS. Furthermore, adolescence is a period when many young people are likely to experiment with sex and drugs. In relation to this CDC/HIV prevention fact, sheet (1993) report, young people, particularly adolescents, are vulnerable to HIV infections and AIDS. Meschke et at., (2000) revealed that worldwide, every minute

five adolescents aged 10 to 24 are infected with HIV/AIDS, resulting in 2.6 million infections each year.

Bankole et al., (2004), says in sub-saharan Africa, the epidemic is affecting the majority of the youth, out of nearly 10 million women and men aged 15 to 24, roughly 1 in 14 are living with HIV/AIDS and half of newly infected cases in 2003 occurred among this age group.

In Ethiopia the highest prevalence of HIV infection is being observed among age groups 15-24 years of age (FDRE-MOH, 2002). Because significant proportions of Ethiopian youth are being involved in a number of risk behaviors such as unsafe sex drug abuse, alcoholism, delinquency etc (Yusuf, 1998, FDRE, MOH, 2002).

Awareness of the existence and threat of HIV, as well as information knowledge about how HIV is spread and how its transmission can be prevented is still lacking in many populations. Lacking knowledge and skills, adolescents are less likely they are to protect themselves.

Bankole et at., (2004) reports that large proportion of adolescents in sub-sahara Africa have inadequate information on how to protect themselves against HIV/AIDS though a substantial proportion are sexually active and engage in behaviors that places.

It is against this back ground that the study seeks to explore if there are differences in knowledge about HIV/AIDS and risk reduction behavior of students as some factors like sex, age, grade level.

### **1.1.1 Adolescent and sexuality**

Adolescence is a developmental transition between childhood and adulthood entailing major physical, cognitive, and psychosocial changes. It is generally considered to begin with puberty, the process that leads to sexual maturity, or fertility-the ability to reproduce (Papalia 1999)

One of the most noticeable effects of all the biochemical changes occurring in adolescence is an increase in sexual drives and feeling (Gander et al 1981)

According to Butterworth et al. 1994 one of the tasks of adolescence is to identify with opposite sex. But for many adolescents these newfound emotions may produce confusion and anxiety (Grandner 1981)

In support of this G. Stanley Hall referred to the adolescent year as a time of "storm and stress". The storm and stress view is Hall's concept that adolescence is a turbulent time charged with conflict and mood swings. Thought, feelings, and actions oscillate between conceit and humility, good and temptation, happiness and sadness (Santrock 2000)

Freud described adolescents as a period of sexually driven conflict. Sexuality is a broad term that encompasses the set of beliefs, values and behaviors that defines each of us as a sexual being. Freud

proposed that even infants are sexual beings and that human psychological and personality development proceeds through several stages in which the crucial experiences are essentially sexual (Santrock 2000, Olson et al 2000).

The formation of person's sexuality is a complex process, involving continuous interaction among a wide variety of biological influences, family and cultural influences, and each individual's relatively unique set of personality characteristics (Olson et al 2000).

Behaviorists such as B.F Skinner emphasize that virtually behavior, including sexual behavior, is learned (or conditioned) through reinforcements and punishments we are conditioned to continue those behaviors that are rewarded and to cease those behaviors that are punished.

Social learning theory is a derivative of behavioral theory and it emphasizes the role of observation and imitation in learning sexuality-related behaviors (Curtis et al 1999)

### **1.1.2 What is HIV/AIDS?**

HIV stands for human Immunodeficiency Virus. HIV is a sexually transmitted disease. Like other sexually transmitted diseases, it can also be transmitted through blood and during pregnancy (Berer, 1993). More specifically Stroebe and Stroebe, (1996) indicated that the virus is transmitted by the exchange of cell containing the virus, notably blood, semen and vaginal secretions. There is also a risk of transmission from an infected mother to her baby during pregnancy or delivery, or through breast-feeding. Using unspecialized needles, surgical instruments, and transfusing an infected blood have also been considered as major means of HIV transmission.

HIV may remain inactive for many years and thus infected people stay healthy until the virus becomes more active as to damage. The immune system considerably to the extent that the body becomes less able to resist illnesses it is the development of these illness that leads to a diagnosis of AIDS. AIDS stands for Acquired Immune Deficiency Syndrome. Immune deficiency means that the immune system is being prevented from functioning. A syndrome is a group of symptoms or illness originating from one cause, in this case HIV (Spencer, 1993, Berer, 1993). The time for HIV to develop in to AIDS depends on the infected parson's state of health and other factors like the dietary intake and access to treatment. Some individuals develop the symptoms quite quickly, whereas others remain free of symptoms for as

long as 8-9 years. The average incubation interval is now thought to be 7-10 years (Spencer, 1993, Berer, 1993 Stroebe, 1996).

### **1.1.3 Prevention of HIV/AIDS**

Preventing HIV transmission is the key to the solution of the AIDS epidemic (Berer, 1993). With no known cure for AIDS and medical consensus that vaccine is several years away, human service professionals will continue to have important role in educating the ill informed (Royes et al, 1987). Even if education were completely successful, it would still have to be an ongoing process each generation a new generation of people become adult and need to know how to protect them from infection. The older generations, who have hopefully already been educated, may need the message reinforced, and need to be kept informed, so that they are able to protect themselves and inform the younger. It is not only young people, injecting drug users or gay men who become infected the virus has affected a cross-section of society. This means that education ought to be aimed at all parts of society, not only those groups who are seen as being particularly high-risk.

According to the ministry of health report the major mode of transmission is through heterosexual contact and it is in this area that interventions have to be concentrated. The intervention includes

promoting abstinence before marriage, faithfulness to one partner, and promoting the use and the availability of condoms (Brooks-Gunn, 1989, Sehin 2000).

## **1.2 Review of Related Literature**

In this section, the relevance literature on the issue under investigation were briefly reviewed. Accordingly, research on major variables; knowledge of HIV/AIDS, risk-reduction behavior and sex, age, and educational level and related issues are discussed.

### **1.2.1 Knowledge of HIV/AIDS, risk-reduction behavior and sex**

Numerous studies had conducted on differences on knowledge of AIDS, risk- reduction behavior and sex and found different results. For instant Savaser (2003) in his study conducted with 705 high school students (360 ninth grades and 345 eleventh graders; 305 female, 400 male) for determining their knowledge and attitude about HIV/AIDS. The finding indicated that boys had higher scores than girls. Similarly Yerdaw et al (2002) interviewed a total of 2278 individuals around Addis Ababa using a pre-tested questionnaire with key indicators such as mode of transmission, attitude towards HIV/AIDS patients, information sources, sex, educational and marital status and found that there is significant association between knowledge of HIV/AIDS and target group sex ( $p < 0.05$ ). Also Abera (2001) in his study to assess

the status of AIDS education in the second cycle primary school of Oromia Region .He found that there is a statistically significant awareness difference between male and female. Males were more aware than females were. In support of this Lal et al (2000) assessed the knowledge of and attitude towards AIDS, sexually transmitted disease and sexuality among college students in Thiruvanthapuram district, Kerala found that male students ( $p < 0.001$ ) demonstrate a higher knowledge of HIV and STDs.

In contrast to the above finding Dagne (1999) in his study to determine the sexual behavior, associated problems and risk factors among Jiren Senior Secondary students in Jimma (1998/1999) found that the difference between males and females in knowledge of AIDS is not statistically significant. In support of this Ashebir (1995) on his study explored difference in the awareness about AIDS and risk-reduction behavior among the students of Teacher's Training Institutes (TTIs) found that there is no significant difference between male and female students in terms of awareness about HIV/AIDS.

When we see literature on risk-reduction behavior Mezgeb (2005) on his study of the sexual behavior and knowledge of HIV/AIDS and other STIs, among 1000 randomly selected school adolescents aged 15 to 19 years in Hulet Ejju Enesie District of East Gojjam, Amhara Region found that among those already sexually experienced, more males

than females had sexual contact (43.6% Vs 32.3%). The chi square test results indicated the existence of a statistically significant association between sex (gender) and sexual experience of school adolescents. Similarly Ashebir (1995) in his study explored differences in the awareness about AIDS and risk-reduction behavior among the students of TTIs found that changes in risk-reduction practices have shown statistically significant ( $p < 0.05$ ) difference due to sex.

### **1.2.2 Knowledge of AIDS, risk-behavior and age**

Knowledge about the spread of HIV and safe sexual practices has a critical impact on the prevention of AIDS. Several investigations have been carried out to assess the relationship between awareness about AIDS, its behavioral implication and age. Many researchers have found different results.

Savaser (2003) on study conducted with 705 Turkish high school students for the purpose of determining their knowledge and attitudes about HIV/AIDS show scores increased in parallel with age. Similarly Brook (1999) on study compared AIDS knowledge, attitude and sources of information of 1724 students in Holon indicate knowledge increase with age. Fantahun (1996) also indicated in his study in out of school youth in Bahir Dar Town age is significantly related with knowledge of AIDS. Dagne(1999) found that 22.2%of the students in the age range of 15 to17 years and 43% of the students age 18 to21

score above average in knowledge about AIDS. The difference among the age groups in knowledge score is not statistically significant. FGAE (1998) as cited in Dagne (1999) indicated that in the baseline survey conducted on Jimma youth the level of knowledge about HIV/AIDS increase with age.

Dagne (1999) found in his study found knowledge about risk factor is not statistically significant with age ( $\chi^2=11.670005;p=0.06975$ ). Similarly Adugna (2005) found that no significant association is observed between the age of the adolescents and the number of sexual partners they have had for both sexes.

In contrast to this Fantahun (1996) indicated in his study in out of school youth in Bahir Dar Town age had significant relation with practice. In support of this Sileshi (2005) studied on 528 randomly selected adolescents in Bahir Dar to assess those factors that lead adolescents towards risk sexual behavior found that age showed a statistically significant association with sexual experience of adolescents ( $\chi^2=17.032;df=1;p<0.001$ ). 69.4 percent of adolescents in the age group 17 to 19 years were sexually experienced, whereas a lower percentage (49.3 percent) of the adolescents were sexually experienced in the age group 15 to 16 years. Other study by Mezgeb (2005) showed that age is a statistically significant association with sexual experience of school adolescents ( $\chi^2=31.29;df=1;p<0.001$ ). In

his study he found forty five percent of the adolescents in the age group 17 to 19 years were sexually experienced, whereas a lower percentage (24.5%) of the adolescents were sexually experienced in the age group 15 to 16 years.

### **1.2.3 Knowledge Of HIV/AIDS, Risk-Reduction Behavior And Education Level**

Macek (2005) on the study to estimate the attitudes of teachers, parents and pupils grade seven and eight in primary schools towards the integration of HIV-positive pupils into regular schools, and their knowledge about HIV/AIDS. Results show that higher level of education had higher scores. Mezgeb (2005) also found that grade level of adolescents showed association with knowledge of adolescents ( $\chi^2=13.30;df=5;p<0.05$ ).

Similarly Yerdaw et al (2002) interviewed a total of 2278 individuals around Addis Ababa found that there is a significant association between knowledge of HIV/AIDS and target group educational level ( $p<0.0001$ ). Savaser (2003) in his study conducted with 705 high school students for determining their knowledge and attitude about HIV/AIDS. The finding indicated that 11<sup>th</sup> grader had higher scores than 9<sup>th</sup> graders. Adugna (2005) in his attempt to examine the relationship between adolescents' perception of different parenting processes and their sexual risk-taking behavior among high school

students in Nekemte Town found that there is significant association between female sexual experience and grade level ( $\chi^2=11.765, p=0.008$ ). But there is no significant association between male grade level and their sexual experience ( $\chi^2=5.603, p=0.133$ )

#### **1.2.4. Knowledge Of HIV/AIDS and Risk-Reduction Behavior**

There is a wide spread assumption that increased awareness about HIV transmission and its prevention leads to a change in behavior which in turn leads to actions that promote the prevention of the diseases. Based on such assumption, several empirical investigations have been carried out to assess the existing awareness about AIDS and its behavioral implications. But they had different result. For instance Dagne (1999) in his study to determine the sexual behavior, associated problems and risk factors among Jiren Senior Secondary School students in Jimma (1998/1999) found that most of the students have adequate awareness about AIDS. But have no caution about sexual behaviors and practice.

Similarly Fantahun(1996)conduct a survey on sexual behavior, knowledge and attitude towards HIV/AIDS of 1115 out of school young people in Bahir Dar Town found that the association of knowledge scores with attitude and practice score was not statistically significantly  $p=0.056$  and  $0.07$  respectively. In support of the above Ismail et al (1995) study knowledge attitude and practice on high risk

factors for HIV/AIDS was carried out among rural males of Dembia District, North Gonder Administrative Zone found that higher knowledge was not associate with high-risk behavior ( $p < 0.05$ ). But Ashebir(1995)found that correlations between the risk reduction behavior and general AIDS awareness was positive(0.241)and low. Similarly Tilahun (1997) indicated that AIDS related knowledge was generally adequate, but it is reported that sexual behavior among Gonder Medical College students was not consistent with that knowledge. Furthermore most studies shows that college students are responsible well informed about AIDS but reluctant to change their sexual behavior unless the treat of infection is personalized.(Beyene;et al 1997 as cited in Asnake 2001)

### **1.3 Statement of the problem**

The HIV/AIDS situation in Ethiopia has evolve from two reported AIDS cases in 1986. Currently 1.32 million people are living with HIV/AIDS (AIDS in Ethiopia 6<sup>th</sup> Report MOH 2007). In most countries the HIV epidemic is driven by behaviors (e.g. multiple sexual partners, injecting drug use) that expose individuals to the risk of infection (UNAIDS, UNICEF, WHO 2002). Heterosexual relationship is the major cause of infection; over 90% of the cases in Ethiopia. The other ways are mother to child transmission during pregnancy, delivery and breast feeding; use of un sterilized medical tools; use of infected blood during

blood transfusion; some harmful traditional practices that involve body mutilation using un sterilized tools such as razor, knife, etc (Aklilu kidan, Haillom Bantayega, 2002). The available data on age specific prevalence of HIV/AIDS reveal that the highest prevalence of HIV infection rate is in the age of 15 to 24 years, indicating the on going recent infection in the country (MOH 2002). Studies in many part of the world have shown that adolescence are sexually active, with figures ranging from 17.3% to 83% and follow up surveys show a trend of increasing sexual activity.

Studies done in Ethiopia also demonstrate a similar pattern. Out of 4,216 unmarried youth surveyed in selected areas of the country 47.4% of males and 57.2% of females had experienced sexual intercourse. One of the alarming finding in these studies conducted in Ethiopia is that a significant number of adolescents do not practice safer sex. (Save the children/USA 2000).

Today many people have heard about HIV/AIDS. However many people still do not know exactly how to protect themselves. And there are still wide spread misconceptions about HIV/ADS.

In order came up with creative and effective response to HIV/AIDS, it is essential to have basic knowledge about the disease and the pandemic. It is also essential to master the skills needed to protect from setting HIV.

Information on knowledge and on the level and intensity of risk behavior related to HIV/AIDS is essential in identifying populations most at risk for HIV infection and in better understanding the dynamics of the epidemic. It is also critical to have information in assessing changes over time as a result of prevention efforts.

The indicators on knowledge and misconceptions are an important prerequisite for prevention programs to focus on increasing people's knowledge about sexual transmission, and, to overcome the misconceptions that act as a disincentive to behavior change. Indicators on sexual behavior and the promotion of safer sexual behavior are at the core of AIDS programs, particularly with young people who are not yet sexually active or are embarking on their sexual lives, and who are more amenable to behavioral change than adults (UNAIDS, Unicef WHO 2002 update).

In the background of the study and literature review, indicated that gender, age and educational level which could play significant role in practicing the intervention strategies. In line with this, specifies questions were formulated for investigation.

1. Do students of different grade level show differences in their knowledge of AIDS and risk-reduction behavior?

2. Do the knowledge of AIDS and risk-reduction behaviors depend on sex of the students?
3. Do students of different age show differences in their knowledge of AIDS and risk-reduction behavior?
4. What relationship exists between the knowledge of AIDS and reported risk- reduction behavior of high school students?

#### **1.4 Objective of the study**

The study was carried out to attain the following objectives:

-To investigate if there is a significant difference among different age levels with regard to knowledge of HIV/AIDS and risk reduction behavior.

-To examine if there is a significant difference between male and females respondent with regard to their knowledge of HIV/AIDS and risk reduction behavior.

-To identify if there is a significant difference among different grade levels with regard to knowledge of HIV/AIDS and risk reduction behavior.

-To examine if there is interaction among gender, age and grade level with regard to knowledge of HIV/AIDS and risk reduction behavior.

-To investigate the relationship between knowledge of HIV/AIDS and risk reduction behavior.

### **1.5 Significance of the study**

Awareness of the existence and threat at HIV as well as information and knowledge about HIV is spread and how its transmission can be prevented is still lacking in many population.

A report of UNAIDS/WHO 2005 indicates that in many of sub-Saharan Africa, knowledge about HIV transmission routes is still low. Generally, women are less well informed about HIV than are men; this is also true for rural areas compared with those living in cities and towns. This is the case even in the ten countries where more than one out of ten adults is infected. In 24 sub-Saharan countries two third or more of young women (age 15-24 years) lacked comprehensive knowledge of HIV transmission (various surveys, 2002-2004). Data from 35 of the 45 countries in sub-Saharan Africa show that, on average, young men were 20% more likely to have correct knowledge of HIV than young women.

Some young people believe that HIV/AIDS can be cured, that it spreads by mosquito bites and that a healthy looking person cannot be infected with HIV.

AIDS education in schools is so important that all over the world, a huge amount of young people still become infected with HIV. Most young people become sexually active in their teens, and by the time

this occurs they need to know how to prevent themselves becoming infected with HIV. If they are to be enabled to protect themselves, they must be given information that empowers them to do so.

The indicators on knowledge and misconceptions are an important prerequisite for prevention programs to focus on increasing people's knowledge about sexual transmission, and, to overcome the misconceptions that act as a disincentive to behavior change. Therefore, the finding of this study may:

- Help practitioners by providing some necessary empirical evidence, thereby shading light on the nature of the relationship and trends of high school student's knowledge and risk reduction behavior across gender, grade level and sex.

- Help future direction of research for those individuals interested in this and related areas.

## **1.6 Operational Definition**

- High School Student: - students who are enrolled in grades 9 through 12.
- Risk-reduction behavior:- the practical involvement of an individual in the activities that are promoting the prevention measures against the spread of HIV epidemic or vice versa
- Knowledge about HIV/AIDS: - having a knowledge about the transmission, prevention of HIV/AIDS.

## **1.7 Delimitation of the Study**

This study is delimited to Dejach Wondrad High School students in Yeka Sub city. And focuses on sex, age and educational level as a variable to explain knowledge of HIV/AIDS and risk reduction behavior

## **CHARTER TWO**

### **2 Research Design and Methodology**

The purpose of the present study is to find out if there is a significant difference in the knowledge of AIDS and risk reducing behavior among Dejach Wondrad high school students on Addis Ababa. Therefore the study investigates knowledge of HIV/AIDS and risk reduction behavior as dependent variables and sex, grade level, age as independent variables. And the study sees the relationship between knowledge of HIV/AIDS of students with their sexual behavior.

#### **2.1 Populations and Sampling Technique**

The population of this study was high school students Dejach Wondrad High School Students in Addis Ababa. This high school is selected because it is convenient to the researcher at the time of the study. A total of 240 students were selected. In the sampling process the student were stratified according to there grades (9<sup>th</sup> 10<sup>th</sup> 11<sup>th</sup> 12<sup>th</sup>) and sex (male, female). An attempt was made to take equal number of student form each stratum using systematic random sampling. Accordingly, strata I consists of grade 9 students. There were 58 students in strata I out of which 28 were male and 29 were female. Strata II were grade 10 students. This consists of 59 students (23

males and 26 females). Strata III were grade 11 students, which consists of 60 students (37 male 23 females). Strata IV grade 12 students, which consist of 56 students 30 male and 26 females. After rejecting those respondents who provide incomplete responses the number of student reduced to 233. Thus the analysis was based on response obtained from these respondents instead of as intended.

## **2.2 Variables**

Dependent variables

The research has two dependent variables

- 1) Knowledge about HIV/AIDS
- 2) Risk sexual behavior

Independent variables

- 1) Sex (Male versus female)
- 2) Grade level (9<sup>th</sup> 10<sup>th</sup> 11<sup>th</sup> and 12<sup>th</sup>)
- 3) Age of the respondent.

## **2.3 Instruments**

A considerable effort was made in searching of instruments that could be used for this study. The questionnaire was designed based on this already existing tool. These include Research Instrument HIV/AIDS and education (A Tool Kits for Ministries of Education), Dagne Admasu (1999), Alemayehu Taye (2001).

The questionnaire had three sections. Part one is focusing on respondents demographic characteristics; students were asked to

report on their sex, grade level, and age. The second part is about knowledge of HIV/AIDS, which is yes, or no answer type questions. The questions are related to knowledge about transmission, mode of prevention of AIDS.

The third part of the questionnaire consists of items related to risk reduction behavior in student which is also yes or no questions. The questionnaires were first prepared in English then translated in to Amharic by the researcher. The translated copies were given to language experts for checking the translation. Correction was made on the question based on discussion between language experts and researcher. Then the Amharic version of the questioner was ready for pilot administration.

### **2.3.1 Pilot Testing**

The questionnaire was pilot tested on 21 grade 10 students of Lem High School in Bole Sub City Addis Ababa. The purpose of the testing was to find out if the instructions, wording and response categories of the instrument as a whole were clear and comprehensible to respondents and to find the reliability of the instrument. Discussion was held with these students and they give comments about the items that they face difficulties. Using KR 20 reliability of the instrument was assessed, the computation yielded reliability coefficient of 0.702.

Two graduate students of development psychology students approved regarding the validity of the instruments and their feedback was used to shape the instruments.

#### **2.4 Data Analysis**

After collection of the questionnaires the responses were coded on a separate sheet. Each accurate answer was given one point and inaccurate answer was given zero point and the scores were summed up. Two three-factor analyses of variances were carried out for the two dependent variables. The analysis helped to determine whether there are significant differences in the main and interaction effects—knowledge of HIV/AIDS and risk reduction behavior. These were:

1. Knowledge of HIV/AIDS  
2 (Gender) x 2 (age) x 4 (grade level)
2. Risk reduction behavior  
2 (gender) x 2 (Age) x 4 (grade level)

Preliminary statistic (mean and standard deviations) where computed for the total sampled for sex, grade levels and age correlation was used to see the relationship by knowledge of HIV/AIDS and risk reduction behavior.

## CHAPTER THREE

### 3. Result of the Study

In this chapter attempts were made to describe demographic information of students and the results of the study are organized and presented in tables. Mean and standard deviations of the students score on knowledge of HIV/AIDS and risk reduction behavior in respect to their sex (male female) grade levels (9<sup>th</sup> 10<sup>th</sup>, 11<sup>th</sup>,and12<sup>th</sup>) and age are presented. ANOVA summery was computed based on the two dependent variables knowledge of HIV/AIDS and risk-reduction behavior with respect to the independent variables sex, grade level and age.

#### 3.1 Demographic Information of Respondent

In this section the demographic information of the respondents of the study are presented.

**Table 1: Number of students by sex**

| Respondent sex | No  | %      |
|----------------|-----|--------|
| Female         | 112 | 48.1   |
| Male           | 121 | 51.9   |
| Total          | 233 | 100.0. |

According to Table 1.the total number of participant 233 out of which 121 were male and 112 were female.

**Table 2: Number of students by grade level**

| Respond of grade | No  | %     |
|------------------|-----|-------|
| Nine             | 58  | 24.9  |
| Ten              | 59  | 25.3  |
| Eleven           | 60  | 25.8  |
| Twelve           | 56  | 24.0  |
| Total            | 233 | 100.0 |

According to table 2 from the participant of the study 58 were grade nine students, 59 were grade ten, 60 are grade eleven and 56 were grade twelve students.

**Table 3 Number of Respondent by age**

| Age Range | No  | %    |
|-----------|-----|------|
| 14-16     | 89  | 38.2 |
| 17-19     | 124 | 53.2 |
| Total     | 213 | 91.4 |

As indicated in table 3 above from the participant of the study 89 were in the age range 14-16 and 124 were in the age range of 17-19. Twenty students were more in age than 19 and less than 14 in age so they were dropped.

### 3.2 Knowledge of HIV/AIDS

**Table 4: Mean and Standard Deviations on Knowledge of HIV/AIDS**

| Variables   |                  | Means | SDs  |
|-------------|------------------|-------|------|
| Sex         | Male             | 15.95 | 3.02 |
|             | Female           | 16.71 | 2.30 |
| Grade level | 9 <sup>th</sup>  | 16.74 | 2.62 |
|             | 10 <sup>th</sup> | 16.17 | 2.82 |
|             | 11 <sup>th</sup> | 15.68 | 3.01 |
|             | 12 <sup>th</sup> | 16.70 | 2.26 |
| Age         | 14-16            | 16.96 | 2.27 |
|             | 17-19            | 16.11 | 2.63 |

**Table 5: Summary of one way ANOVA on students' Knowledge of HIV/AIDS**

**by sex**

| Source of variation | DF  | Sum of squares | Mean square | F      |
|---------------------|-----|----------------|-------------|--------|
| Between Groups      | 1   | 33.149         | 33.149      | 4.566* |
| Within Groups       | 231 | 1676.979       | 7.260       |        |
| Total               | 232 | 1710.129       |             |        |

\*P<0.05

The Result in Table 5 suggest that there is significant difference (F(1,231)=4.566 ) between the total male and female students in-terms of the knowledge of HIV/AIDS.

**Table 6: Summary of one -way ANOVA on student’s knowledge of HIV/AIDS by grade level**

| Source of variation | DF  | Sum of square | Mean square | F      |
|---------------------|-----|---------------|-------------|--------|
| Between Groups      | 3   | 43.880        | 14.627      | 2.010* |
| Within Groups       | 229 | 1666.248      | 7.276       |        |
| Total               | 232 | 1710.129      |             |        |

\*p>0.05

The result in Table 6 suggests that there is no significant difference (F(3,229)=2.010) between grade level score above HIV/AIDS.

**Table 7: Summary of one-way ANOVA student’s knowledge of HIV/AIDS by age.**

| Source variable | DF  | Sum of square | Mean square | F      |
|-----------------|-----|---------------|-------------|--------|
| Between Groups  | 1   | 36.746        | 36.746      | 5.945* |
| Within Groups   | 211 | 1304.240      | 6.181       |        |
| Total           | 212 | 1340.986      |             |        |

\*P<0.05

The result of Table 7 shows that there was significant difference ( $F(1,211)=5.945$ ) between the age 14-16 and 17-19 age.

**Table 8: Summary of the interaction effects of ANVOA On Knowledge of HIV/AIDS**

| Sources of variation     | SS       | DF  | MS     | F      |
|--------------------------|----------|-----|--------|--------|
| Sex                      | 17.249   | 1   | 17.249 | 3.000* |
| Grade levels             | 19.346   | 3   | 6.449  | 1.121  |
| Age                      | 16.363   | 1   | 16.363 | 2.846* |
| Sex X Grade levels       | 34.998   | 3   | 11.666 | 2.029  |
| Sex X Age                | 26.042   | 1   | 26.042 | 4.529* |
| Grade levels X Age       | 8.924    | 3   | 2.975  | 0.517  |
| Sex X Grade levels X Age | 68.596   | 2   | 34.298 | 5.965* |
| Error                    | 1138.558 | 198 | 5.750  |        |
| Total                    | 1340.986 | 212 |        |        |

\*  $P < 0.05$

The three main effects sex, grade levels, and age are shows that sex and age has significant difference at an alpha = 0.05 level. Further, as seen in table 7, two, three level interaction are presented to examine all the possible combinations and to represent in summary of ANVOA showing the joint effects of the treatment variables up on knowledge score. Among the two level

interaction, it was only the interaction between sex and age that has shown a statistically significant difference in the main score of knowledge at alpha = 0.05 level ( $F=4.529$ ) on the three level interaction between sex, age and grade level there is also a significant difference, in the mean score of knowledge about HIV/AIDS

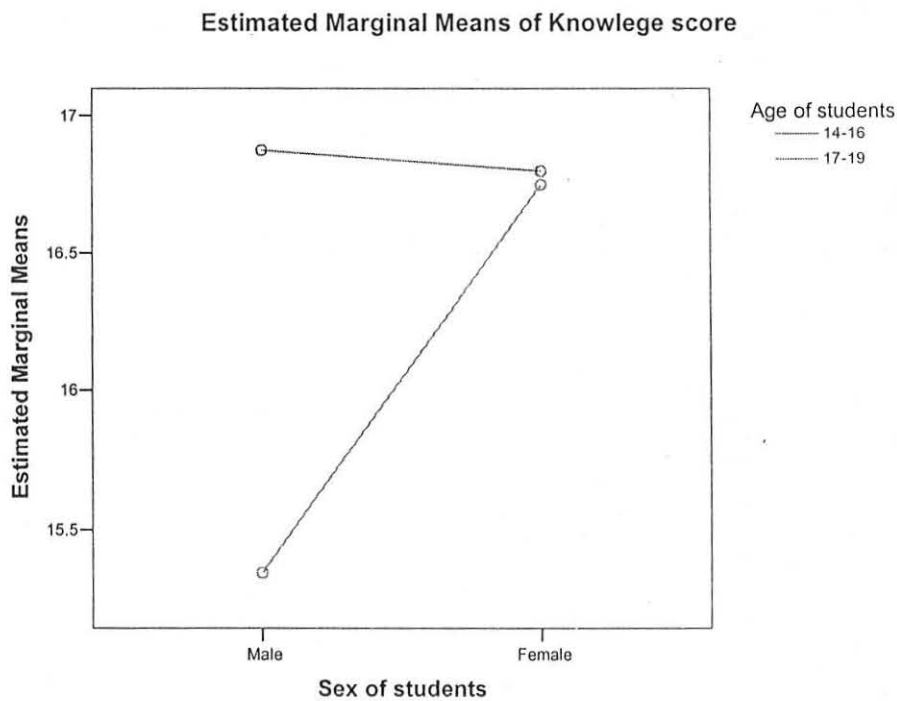


Figure 1: Plot of Interaction between Students Sex and Age

Figure 1 show that sex and age of students was found to interact significantly ( $F= 4.529$   $p<.05$ ). As seen from the figure above, male of age between 17-19 scored a mean of 15.2 as compared to the males of 17-19 who have mean of 16.8. The mean scores of females of age 14-16 as well of age 17-19 years were similar, i.e. 16.7. Thus, males of 17-19 have lower score as compared to the

males of 14-16 and females of both 14-16 and 17-19 age groups.

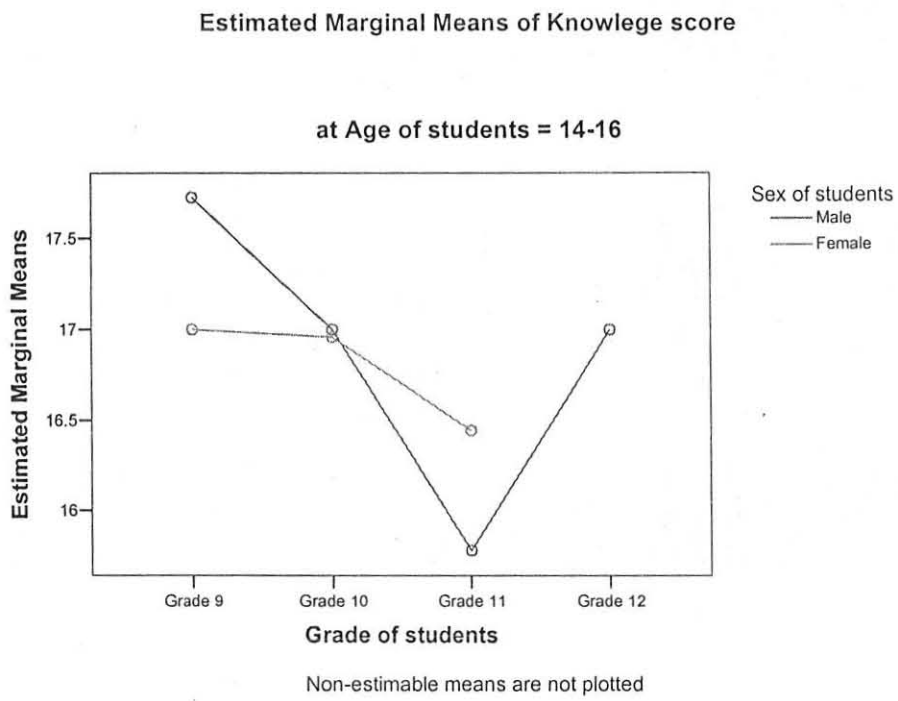


Figure 2 Plot of Interaction between Students Sex and Grade Level at the age 14-16.

As seen from Figure 2 sex and grade level were found to interact significantly. Students whose age range between 14-16 and of grade 9 male students score higher than female, grade 10 male and female students score approximately the same, grade 11 females score higher than male.

### Estimated Marginal Means of Knowledge score

at Age of students = 17-19

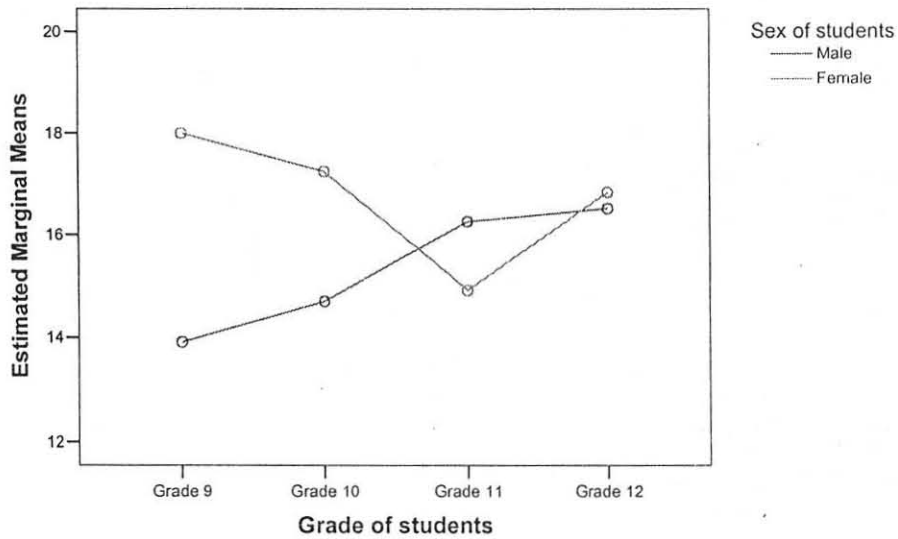


Figure 3 Plot of Interaction between Students Sex and Grade Level at the age 17-19

As seen in the figure 3 above there is significant interaction effect between students whose age 17-19, sex and grade level. Grade 9 female students scored higher than male, similarly grade 10 and 12 female score higher than male. But, grade 11 male scored higher than female.

**Table9. Means interaction grade of students \* sex of students \* age of students on knowledge of HIV/AIDS.**

| Grade of students | Sex of students | Age of students | Mean   | Std. Error |
|-------------------|-----------------|-----------------|--------|------------|
| Grade 9           | Male            | 14-16           | 17.722 | .565       |
|                   |                 | 17-19           | 13.909 | .723       |
|                   | Female          | 14-16           | 17.000 | .550       |
|                   |                 | 17-19           | 18.000 | .979       |
| Grade 10          | Male            | 14-16           | 17.000 | .906       |
|                   |                 | 17-19           | 14.700 | .758       |
|                   | Female          | 14-16           | 16.958 | .489       |
|                   |                 | 17-19           | 17.250 | .848       |
| Grade 11          | Male            | 14-16           | 15.778 | .799       |
|                   |                 | 17-19           | 16.259 | .461       |
|                   | Female          | 14-16           | 16.444 | .799       |
|                   |                 | 17-19           | 14.917 | .692       |
| Grade 12          | Male            | 14-16           | 17.000 | 1.384      |
|                   |                 | 17-19           | 16.520 | .480       |
|                   | Female          | 14-16           | 16.500 | .410       |
|                   |                 | 17-19           | 16.840 | .480       |

### 3.3 Risk -Reduction Behavior

In this part the interaction of the risk reduction behavior students with the independent variables sex, grade level and age will be answered

**Table 10: Mean and standard Deviation on Risk-Reduction behavior**

| Variable     |                  | Mean  | SDs  |
|--------------|------------------|-------|------|
| Sex          | Male             | 2.17  | 2.25 |
|              | Female           | 1.79  | 2.14 |
| Grade Levels | 9 <sup>th</sup>  | 2.09  | 2.12 |
|              | 10 <sup>th</sup> | 2.34  | 2.36 |
|              | 11 <sup>th</sup> | 1.52  | 2.07 |
|              | 12 <sup>th</sup> | 2.02  | 2.21 |
| Age          | 14-16            | 1.655 | 1.97 |
|              | 17-19            | 1.98  | 2.23 |

**Table 11: Summary of one -way ANOVA for students risk reduction behavior by sex**

| Source of variation | DF  | SS       | MS    | F      |
|---------------------|-----|----------|-------|--------|
| Between Groups      | 1   | 8.749    | 8.749 | 1.814* |
| Within Groups       | 231 | 1114.213 | 4.823 |        |
| Total               | 232 | 1122.961 |       |        |

\*p>0.05

As shown in the Table 10 above, the students' risk -reduction behavior score by the two sexes brought not significant differences ( $F(1,231)=1.814$ )

**Table 12: Summary of one- way ANOVA for students' risk-reduction behavior by grade level**

| Source of variation | DF  | Sum of square | Mean square | F      |
|---------------------|-----|---------------|-------------|--------|
| Between Groups      | 3   | 21.207        | 7.069       | 1.469* |
| Within Groups       | 229 | 1101.755      | 4.811       |        |
| Total               | 232 | 1122.961      |             |        |

\* $p>0.05$

The above result indicated that the student risk-reduction behavior scores has no significant difference between different grade level

**Table 13: Summary of one – way ANOVA for students Risk-Reduction behavior by age**

| Source of variance | DF  | Sum of squares | Mean square | F      |
|--------------------|-----|----------------|-------------|--------|
| Between Groups     | 1   | 5.717          | 5.717       | 1.270* |
| Within Groups      | 211 | 950.170        | 4.503       |        |
| Total              | 212 | 955.887        |             |        |

\* $p > 0.05$

The Table 12 indicates that there is no significant difference ( $p > 0.05$ ) between the students' Risk-Reduction behavior scores across their age.

**Table 14; Summary Table of 3-way ANOVA on Risk-Reduction behavior of students.**

| Source of variation | Sum of square | DF  | Mean square | F      |
|---------------------|---------------|-----|-------------|--------|
| Grade               | 23.253        | 3   | 7.751       | 1.794  |
| Sex                 | 0.362         | 1   | 0.362       | 0.084  |
| Age                 | 21.309        | 1   | 21.309      | 4.932  |
| Grade X Sex         | 35.599        | 3   | 11.866      | 2.747* |
| Grade X Age         | 1.555         | 3   | 0.518       | 0.120  |
| Sex X Age           | 0.939         | 1   | 0.939       | 0.217  |
| Grade X Sex X Age   | 9.228         | 2   | 4.614       | 1.068  |
| Error               | 855.425       | 198 | 4.320       |        |
| Total               | 955.887       | 212 |             |        |

\*  $p < 0.05$

The summary of the analysis of variance is given in Table 13 which shows the interaction effect of grade by sex show statistical difference in risk-reduction behavior.

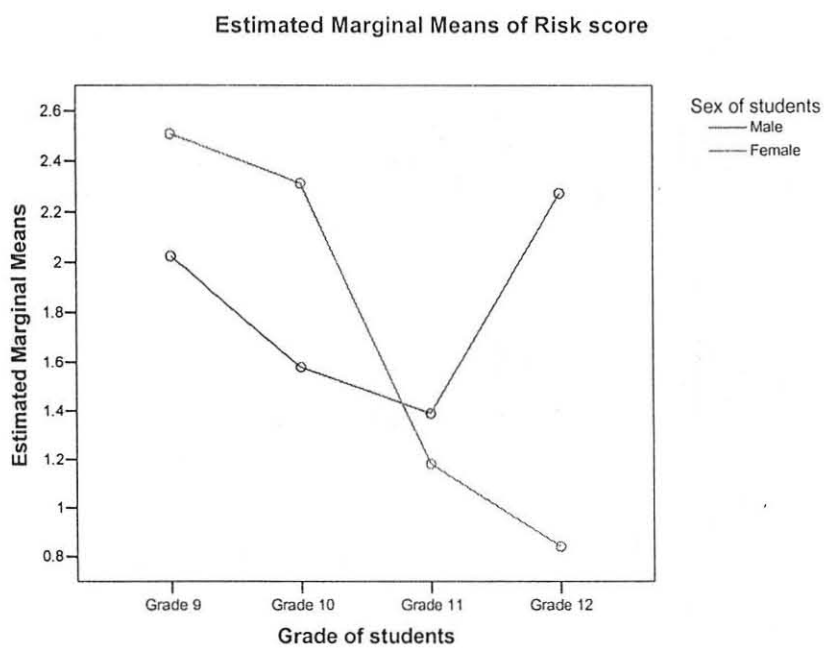


Figure 4 Plot of Interaction between Students Sex and Grade Level

Figure 4 above shows that sex and grade level of student interaction is significant in risk reduction behavior. In figure grade 9 and 10 female scored higher than male, but grade 11 and 12 males scored higher than female.

### 3.4 The relations between knowledge of AIDS and risk reduction behavior

**Table 15: Pearson Correlations between knowledge score and risk score.**

|                 |                     | Knowledge score | Risk score |
|-----------------|---------------------|-----------------|------------|
| Knowledge score | Pearson Correlation | 1               | .070       |
|                 | Sig. (2-tailed)     |                 | .288       |
|                 | N                   | 233             | 233        |
| Risk score      | Pearson Correlation | .070            | 1          |
|                 | Sig. (2-tailed)     | .288            |            |
|                 | N                   | 233             | 233        |

The above table shows that the Pearson correlation between knowledge score and risk score is 0.070 which is not significant at  $\alpha = 0.05$ .

## CHAPTER FOUR

### 4 Discussions

#### 4.1 Knowledge about HIV/AIDS

As mentioned in the previous section, results of the study of the ANOVA (Table 6) when knowledge of AIDS taken as dependent variable and age as independent variable indicated that students age ranged 14-16 and 17-19 has significant difference in knowledge of HIV/AIDS. This significant age difference in knowledge of HIV/AIDS is consistent with most of the research literature. Savaser (2003) on a study conducted with 705 Turkish high school students for the purpose of determining their knowledge and attitudes about HIV/AIDS founds that scores increased in parallel with age. Similarly Brook (1999) in a study comparing AIDS knowledge; attitude and sources of information of 1724 students in Holon indicated that knowledge increased with age. Fantatun (1996) also indicated that age is significantly related with knowledge of AIDS. But in this study students whose age was 14-16 scored higher (mean= 16.96) than whose age was between 17-19 years (mean=16.11), which is unexpected.

A significant gender difference in knowledge of HIV/AIDS is found in this research, which is in harmony with various research literatures. Savaser (2003), Yerdaw (2002), Abera (2001) found that there is significant association between knowledge of HIV/AIDS and gender

(sex). Savaser (2003) and Abara (2001) found that male were more aware than females.

But in this study it is revealed that females' score was higher (mean=16.71) than male (mean=15.95). But consistent with the studies of Brook and Green et al their explanation for this finding was that boys feel freer than girls to talk about matters relating to sex and HIV/AIDS. In the family female and male children are treated differently from their early childhood.

The grade level main effect was not significant. That means, there were no statistically significant difference ( $F(3, 229) = 2.010, p > 0.05$ ) among grade nine, ten, eleven and twelve students. Mean score for grade ix=16.74, for x=16.17, for xi=15.68, and for grade xii it was 16.31. These results were inconsistent with some similar research findings. Macek (2005) in the study to estimate the attitudes of teachers, parents and pupils grade seven and eight in primary schools towards the integrating of HIV-positive pupils into regular schools, and their knowledge about HIV/AIDS found that higher level of education had higher scores. Mezgeb (2005), Savaser (2003), Yerdaw et al (2002) similarly found that there is a significant association between knowledge of HIV/AIDS and educational level. As students' academic status increases their knowledge about HIV/AIDS also increases.

The sex by age interaction effect is significant as seen from the figure 1 in the result part, males whose age were between 14-16 have received higher mean score while males whose age were between 17-19 have got lowest score.

The grade level by sex by age interaction effect is significant. As seen from Figure 2 sex, age and grade level were found to interact significantly. Students whose age were between 14-16 show that grade 9<sup>th</sup> male students scored higher than females, grade 10 male and female students scored approximately the same, grade 11 females scored higher than males. Similarly as seen in the figure 3 there is significant interaction effect students whose age between 17-19, sex and grade level. Grade 9 female students scored higher than males similarly grade 10 and 12 females scored higher than males. But, grade 11 male scored higher than females.

#### **4.2 Risk-Reduction Behavior**

In this section risk reduction behavior score of students was examined in line with their sex, age, and grade levels.

In the ANOVA tables (Table 10, Table 11, Table 12) when risk-reduction behavior taken as dependent variable and age, sex and grade level as independent variables it shows that there were no statistically significant differences in the means. This result is inconsistency with some other past findings. Mezgeb (2005), in his

study on the sexual behavior and knowledge of HIV/AIDS and others STIs, among 1000 randomly selected school adolescents aged 15 to 19 years in Hulet Ejju Enesie District of East Gojjam, Amhara Region found that statistically significant association between sex and sexual experience of school adolescents. Similarly Ashebir 1995, in his study exploring differences in the awareness about AIDS and risk reduction behavior among the students of TTIS found that changes in risk reduction practices have shown statistically significant ( $p < 0.05$ ) difference due to sex.

The study also revealed a non-significant difference between the students age and risk reduction behavior. This result was consistent with Dagne (1999), and Adugna (2005) who found that score about risk factor is not statistically significant with age. In contrast to this Fantahun (1996), Sileshi (2005), Mezgeb (2005) found that age has a statically significant association with risk sexual behavior. The result also shows that scores in risk reduction behavior has no relation with grade level.

The ANOVA for risk reduction behavior further indicated a significant grade by sex interaction. In figure 4 grade 9 and 10 females scored higher than males, but grade 11 and 12 males scored higher than females.

Moreover the data suggest that there is no statistically significant interaction effect in grade by sex, sex by age and the three interaction effect grade sex and age together.

#### **4.3 The relation between knowledge of HIV/AIDS and risk reduction behavior**

In this study, attempt was made to correlate knowledge of HIV/AIDS and risk reduction behavior and was found a positive correlation. This finding is consistent with Ashebir (1995) who found that correlations exist between these risk reduction behavior and general AIDS awareness.

## CHAPTER FIVE

### 5. Summary, Conclusion, and Recommendations

#### 5.1 Summary

This study is designed to see if there are differences in the knowledge about HIV/AIDS and risk reduction behavior of high school students as a function of their sex, age and grade level. In addition, the study tries to see the existing relationship between knowledge of HIV/AIDS and risk reduction behavior of high school students. In order to accomplish this task, 233 subjects were randomly selected from Detach Wonderad high school of different grades (9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup>). An effort was made to review related findings of previous research work. The questionnaire was pilot tested in Lem high school in Bole sub city. It was used for the final study. The questionnaire were consisting of demographic part, knowledge of HIV/AIDS and risk-reduction behavior parts.

The result was analyzed by using SPSS 13.0; ANOVA, mean squared deviation and Pearson's product moment correlation was computed to see the existing relationship between the two dependent variable knowledge of HIV/AIDS and risk reduction behavior.

Analysis of the knowledge score show that main effects age and sex has a statically significant difference but grade level has no statistical significance. And a statistically significant interaction effect was observed for sex -by-age and grade-by-sex -by age interaction similarly

analysis of the risk reduction behavior score of these students revealed non-significant for age, sex and grade level. The interaction effect grades by sex also show significant difference but the others have not statistically significant. The correlation coefficient revealed that there was no correlation between knowledge of HIV/AIDS score and risk reduction behavior score

## **5.2 Conclusion**

1. Female students showed higher score in knowledge of HIV/AIDS as compared to the male counter part.
2. Age of students is a cause of difference in knowledge of HIV/AIDS. Students whose age were between 14-16 had better score than students whose age range between 17-19.
3. Grade level of the students has no influence on their knowledge about HIV/AIDS.
4. Sex by age interaction has shown statistically significant difference in knowledge about HIV/AIDS. But grade by sex and grade by age interaction have no significant difference in knowledge of HIV/AIDS.
5. The interaction of grade level, sex and age show statistically significant difference in knowledge about HIV/AIDS.
6. Age, sex and grade level of students have no statistically significant difference in risk reduction behavior.
7. Grade by sex interaction has statistically significant difference in risk reduction behavior of students.

8. The correlation coefficient revealed no correlation between knowledge about HIV/AIDS and risk reducing behavior of students.

### **5.3 Recommendations**

From the findings of the study the following recommendations are provided.

1. Sex and Age resulted significant difference in knowledge about HIV/AIDS among students in view of these, it is necessary to consider sex and age while designing programs related to fight against AIDS.
2. A significant interaction effect of sex and age of students were found in knowledge about HIV/AIDS. Female students whose age between 17-19 scored higher than their male counter parts. Therefore, concerned bodies must provide an effort to minimize this gap.
3. The Correlation coefficient between knowledge of HIV/AIDS and risk reduction behavior shows non significant effect. Therefore, it is important to provide students with motivational aspect of altering behavior related to HIV/AIDS.
4. Finally, I recommend a more detailed and comprehensive investigation in the same area so as to further strengthen the findings of this study.

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## APPENDICES

### ADDIS ABABA UNIVERSITY FACULTY OF EDUCATION DEPARTEMENT OF PSYCHOLOGY

The aim of this questionnaire is to gather some general information on knowledge of HIV/AIDS of High School Students.

The information obtained through this questionnaire will be utilized for research. Your being frank and honest will help the outcome of the finding. Please feel free to respond to all items. All your responses will be kept in absolute confidentiality and will not affect you, your friends, and anybody else in any way. To assure this, you are not expected to write your name on any of the questionnaire pages.

Thank you in advance

Please indicate your response by ticking or by writing response in the box provide & on the space accordingly

#### Part I General Information

1. Name of high school \_\_\_\_\_
2. Sex 1  2   
Male Female
3. Age  years
4. Grade level      
9<sup>th</sup> 10<sup>th</sup> 11<sup>th</sup> 12<sup>th</sup>

#### Part II HIV/AIDS Knowledge

- | 5. How do people get HIV/AIDS?       | Yes | No |
|--------------------------------------|-----|----|
| Mother to child transmission         | 1   | 0  |
| Sex with someone who is HIV positive | 1   | 0  |
| Sex with multiple partners           | 1   | 0  |
| Sex with prostitutes                 | 1   | 0  |
| Blood transfusions                   | 1   | 0  |
| Injections                           | 1   | 0  |
| Kissing some one infected            | 1   | 0  |
| Using public toilets                 | 1   | 0  |
| Others (specify) -----               |     |    |

6. How can people avoid getting HIV/AIDS?

|  | Yes | No |
|--|-----|----|
| Use condom each time I have sex            | 1   | 0  |
| Have fewer partners                        | 1   | 0  |
| No casual sex                              | 1   | 0  |
| No sex at all                              | 1   | 0  |
| NO commercial sex                          | 1   | 0  |
| Avoid injection with contaminated needles  | 1   | 0  |
| Seeking protection from traditional healer | 1   | 0  |
| Other (specify) -----                      |     |    |

### Part III risk-reduction behavior

7) Has your sexual behavior change since you heard of HIV/AIDS?

|              |   |
|--------------|---|
| Yes          | 1 |
| A little bit | 2 |
| No           | 3 |
| Don't Know   | 4 |

8) If yes how has your behavior changed?

|                              | Yes | No |
|------------------------------|-----|----|
| Reducing number of partners  | 1   | 0  |
| Using condom constantly      | 1   | 0  |
| Abstaining from sex          | 1   | 0  |
| Not giving blood             | 1   | 0  |
| Stopped drug use             | 1   | 0  |
| Sharing needles              | 1   | 0  |
| No have sex with prostitutes | 1   | 0  |
| Others                       |     |    |



ክፍል 2 ስለ ኤች. አይ. ቪ. ኤድስ ዕውቀት

5. የኤድስ መተላለፊያ መንገዶች ምንድን ናቸው፤

| የመተላለፊያ መንገዶች                       | 1 አዎን | 0 የለም |
|-------------------------------------|-------|-------|
| ከእናት ወደ ልጅ                          |       |       |
| ቫይረሱ ካለበት ሰው ጋር የግብረ ስጋ ግንኙነት በመፈፀም |       |       |
| ከተለያዩ ሰዎች ጋር ወሲብ ማድረግ               |       |       |
| ከሌተኛ አዳሪዎች ጋር የግብረ ስጋ ግንኙነት በመፈፀም   |       |       |
| በደም ስር የሚሰጥ ዕፅ መፎቀም                 |       |       |
| በደም ንኪኪ                             |       |       |
| በመርፌ                                |       |       |
| ቫይረሱ ያለበትን ሰው በመሳም                  |       |       |
| ኤድስ ካለበት ሰው ጋር በመመገብ                |       |       |
| የህዝብ ሽንት ቤቶችን መጠቀም                  |       |       |
| ሌላ ክላ /ይግለጽ/ -----                  |       |       |

6. በምን ዓይነት መንገድ ሰዎች እራሳቸውን በኤች.አይ. ቪ./ኤድስ መያዝን ሊያሰወግዱ ይችላሉ፤ /በምላሹ የተጠቀሱትን በሙሉ አክብብ /ከአንድ በላይ መልስ ይቻላል/

| የማስወገጃ መንገዶች                           | 1 አዎን | 0 የለም |
|--|-------|-------|
| ኮንዶም መጠቀም                              |       |       |
| በቁጥር ትንሽ ከሆኑ ሰዎች ጋር ብቻ በወሲብ ግንኙነት መወሰን |       |       |
| ጥንቃቄ ከጎደለው ድንገተኛ ግንኙነት መቆጠብ            |       |       |
| በመታቀብ                                  |       |       |
| ለገንዘብ ማስገኛ የሚደረግ የግብረ ስጋ ግንኙነት ባለመፈፀም  |       |       |
| ንፅህናቸው ያልተጠበቀ መርፌዎችን መጠቀምን በማስወገድ      |       |       |
| ከባህላዊ ፈዋሾች መከላከያ የሚሆን በመፈለግ            |       |       |
| የደም ንኪኪን ማስወገድ                         |       |       |
| ሌላ ክላ ይገለፅ                             |       |       |

**ክፍል ሶስት፡- በኤች.አይ.ቪ መያዝና አደጋን መቀነስ**

|   | <b>ጥያቄዎች</b>  | <b>መመዘገቢያ</b>   |  |  |
|---|---|---|--|--|
| 7 | ስለ ኤች. አይ.ቪ. ኤድስ<br>ከሰሙ ጀምሮ በእርስዎ<br>የወሲብ ባሕሪ ላይ<br>ያመጣው ለውጥ አሉ | አዎ.....1 <input type="checkbox"/><br>በመጠኑ.....2 <input type="checkbox"/><br>የለም .....3 <input type="checkbox"/><br>አላውቅም.....4 <input type="checkbox"/> |  |  |
|   |   |   |  | 1<br>አዎን   |
|   |   |   |  | 0<br>የለም   |
| 8 | አዎን ካሉ በምን መልኩ ነው<br>ባህርዩ የተቀየረው                                | የያታ ጓደኝነት ቁጥር መቀነስ<br>ኮንዶም በዘላቂነት መጠቀም<br>መታቀብ<br>ደም አለመለገስ<br>አደንዛኝ ስፊት አለመጠቀም<br>መርፌን አለመዋዋስና በጋራ-አለመጠቀም<br>ከሴተኛ አዳሪዎች ጋር ወሲብ አለመፈፀም                  | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> |
|   |   | ሌላ ካለ ይገለፅ  |  |  |

## DECLARATION

This thesis is my original work and has not been presented for degree in any other university and that all sources of material used for the thesis have been fully acknowledged.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Place: Addis Ababa University

Date of submission: \_\_\_\_\_

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

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_