ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
COLLEGE OF DEVELOPMENT STUDIES
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By Girma Tesfaye

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A thesis submitted to the school of graduate studies of Addis Ababa University in partial fulfillment of the requirements for the degree of Master of Science in Population Studies

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Abstract

Available studies indicate that, sometimes people do not perceive their risk of HIV adequately and therefore, they are less motivated to protect themselves and others from HIV infection. In Dessie town, as in many other Ethiopian towns, city and other settings of the world, the sexual behaviors and self assessment of the risk of HIV infection of the current cohort of young people will strongly influence the course of HIV/AIDS The purpose of this study is to identify the socio-economic and behavioral factors that affect risk perception of HIV infection among young adults in the age 15- 29 years.

Method: *This study is a cross-sectional survey research that was conducted in Amhara Region, Dessie town form15 February to 15 March 2008. A total of 721 youths in the age group 15-29 were selected using cluster sampling method followed by simple random sampling method. A self-administered structured questionnaire, FGDs and interview with key informants were used to collect the required data from the study participants. The data were edited, coded entered, cleaned and analyzed using descriptive statistics and multivariate analysis with SPSS.*

Results *show that about half of the study participants are sexually experienced. Of these, 55.6% had sex with one partner only, about a quarter used condoms consistently and about 19% had multiple sexual partners and did not use condom. Nearly 12% of the sexually active participants had ever contracted at least one STIs. Overall, 7% of males and 11.5% of females perceived high risk of HIV infection; and 12% of male and 15.8% of female respondents perceive themselves to have a moderate chance of getting HIV. In general, female respondents were considerably more likely than males to report themselves at a higher risk of HIV infection. Sex, exposure to media, religiosity, age at first sex, the number of life time partners, age difference between partners, condom use, taking HIV test, are found to be the predictors of risk perception of HIV infection among young adults in Dessie town.*

Conclusions: *The findings of this study provide justification for intervention targeting on key factors that influence the risk perception of HIV infection. Providing the necessary information in a way that could bring about behavioral change among the young adults is recommended.*

Acronyms

AIDS: Acquired Immuno-Deficiency Syndrome

BCC: Behavioral Change Communication

CSW: Commercial Sex Workers

EDHS: Ethiopian Demographic and Health Survey

FGAE: Family Guidance Association of Ethiopian

FHAPCO: Federal HIV\AIDS Prevention and Control Office

HAPCO: HIV\AIDS Prevention and Control Office

HIV: Human Immuno-Deficiency Virus

IEC: Information, Education Communication

ILO: International Labor Organization

MOH: Ministry of Health

OSSA: Organization for Social Service for AIDS

PLWHA: Peoples Living with HIV\AIDS

SPSS: Statistical Package for Social Sciences

STDs: Sexually Transmitted Diseases

UNFPA: United Nations Fund for Population Activities

UNICEF: United Nations International Children's fund

USAID: United States International Aid for development

Table of content

page

List of tables **Page**

List of Figures

CHAPTER ONE

INTRODUCTION

1.1 Background

The HIV/AIDS pandemic is now a global crisis. It constitutes one of the most formidable challenges to development and social progress. It poses significant treats in the world with impacts that will be felt for many decades in the future. In the most affected countries the pandemic is eroding decades of development gains, undermining economies, threatening security and destabilizing societies. AIDS remains the most serious of infectious disease that challenge the public health. It is a leading cause of mortality worldwide and the primary cause of death in Sub Saharan Africa, illustrating the tremendous long term challenge that lies ahead for provision of treatment services with the hugely disproportionate impact on Sub Saharan Africa ever more clear (ILO, 2002; UNAIDS, 2007)

The pandemic killed more than 25 million people globally. The UNAIDS, 2007 Report estimates that 33.2 million people are living with HIV/AIDS in the world today. Everyday over 6800 persons become infected with HIV and over 5700 persons are dying from AIDS. In 2007 alone 2.1 million people died of AIDS and 2.5 million were newly infected by HIV (UNAIDS, 2007).

The sub-Saharan region continues to be the region worst affected by the HIV/AIDS epidemic. Hence out of the 10% of the world's population that are living in Sub-Sahara Africa, 68% adults and nearly 90% of children infected with HIV are found in this region. (i.e. over two-third of the global total). Estimates have also shown that in sub Saharan Africa , there were about 1.7 million newly infected people and roughly 1.6 million deaths (76% of the global death) of AIDS only in 2007.(UNAIDS, 2007).

Young people between the ages of 15 and 24 are the most threatened by the HIV/AIDS pandemic. Globally, half of all the new cases of HIV infection are among young people (15-24). Sub Saharan Africa is home to 62% of these young people living with HIV (UNAIDS, 2004). Besides this, women are at least 1.2 times at greater risk of infection than men. The ratio is highest among young people aged 15-24 year, where 75% of those infected are girls. And young girls are found to be 2.5 times more infected with HIV than young men (UNAIDS 2004).

Ethiopia is among the Sub-Sahara African countries where the HIV/AIDS epidemic is at a critical phase and has become a threat for the country's overall socio economic development. According to the UNAIDS(2004), Ethiopia is one of the countries highly affected by the epidemic and has become the third largest population of HIV infected people living in Africa, which represents about 9% of the world's HIV/AIDS cases UNAIDS(2004).

Currently, the HIV prevalence in Ethiopia is estimated to be 3.5% (10.5% among urban and 1.9% among rural population). The estimated HIV incidence was 0.26% in 2005, while the projected incidence rate shows a rising trend up to 2010 where it will be 0.28% (MOH and FHAPCO, 2006). The same source also indicated that a total of 1,319,795 persons were estimated to be living with HIV/AIDS in 2005. The estimated number of new HIV infection was 128,922 in 2005 and the projected number of new HIV infections is expected to rise up to 2010 whereby it will be 144,737 (ibid).

At the regional level, the Amhara region is one of the regions with the highest prevalence of HIV (4.5%) only next to the two administrative cities, Addis Ababa and Dire Dawa and the dominantly urban region (Harari); which have a prevalence rate of 11.7 percent, 6.8 percent, and 5.2 percent respectively. In the region, the urban prevalence is 13.5% only next to the urban prevalence of Afar region (14.1 percent), while the rural prevalence is 3.2. In general, the region has the highest number of people living with HIV/AIDS in the country (i.e. 33.7% of the total number of PLWHA) (MOH and FHPCO, 2006).Thus it is important to study the sexual behavior of people, especially, young adults who are at great risk of getting and spreading the epidemic and give appropriate recommendations that could help in preventing the epidemic.

1.2 Statement of the Problem

Young adulthood is a stage in which human beings brought about many developments; biological, physical, psychological, social, etc. And these developments are accompanied by positive or negative behaviors depending on the environment in which the person grow.
Sexual risk behaviors, including early sexual debut, unprotected sexual intercourse, and multiple sexual partners, occur in a broader context. The intensity of involvement in sexual

risk behavior ranges from no sexual relationship to unprotected sexual intercourse with multiple partners and prostitution. Sexual risk behaviors, including early sexual debut, unprotected sexual intercourse, and multiple sexual partners, occur in a broader context. The intensity of involvement in sexual risk behavior ranges from no sexual relationship to unprotected sexual intercourse with multiple partners and prostitution. Although risky sexual behavior does not always indicate a high-risk lifestyle, sexual risk behaviors often cluster with other risk behaviors, including substance use, exposure to media, and religiosity. Youths who engage in sexual intercourse at young ages are at higher risk for outcomes that can compromise their health.

The trends in sexual activity of adolescents at younger ages are increasing alarmingly in the world. In many countries, the majority of young people are sexually active before age of 20 and premarital sex is common among 15-19 years old (UNFPA, 1997). In most Sub-Saharan African countries, more than 70 percent of young women begin sexual activity during adolescence period. Males engage in sexual activity younger than females and the age at first sexual intercourse in Sub-Saharan Africa ranges from 16-17.6 years(UNICEF,USAIDS and WHO, 2002).

In high HIV/AIDS prevalence sub Saharan Africa, the mode of transmission of HIV is heterosexual sex. Most young people become sexually active in their teens, and many before their 15th birth day. Factors such as increasing urbanization, poverty, exposure to conflicting ideas about sexuality are encouraging sexual activities among young people. These factors have a profound influence on their current and future health, most directly through exposure to unsafe sexual practices (UNICEF, 1995; UNAIDS, 2004).

Despite the high prevalence of HIV/AIDS in Sub Saharan African countries and in the presence of high risk factors for acquisition of HIV(multiple sex partner, sex with CSW, and failing to have a protected sex);young people in these countries often perceive themselves as being at low risk of HIV infection(Barden,2004;Shabbir et al ,1997;Kermyt et al ,2007).One explanation for this is that youth may underestimate risks in general because of feeling of invulnerability. Persons in this situation are therefore less motivated to protect themselves and others from being infected by HIV. On the other hand sometimes young people at low

risk of HIV infection may perceive themselves at a higher risk. Sexually inexperienced youth may perceive such a risk if, for example, they doubt their potential to maintain consistent condom use or to identify partners who are at low risk of infection once they become sexually active (Macintyre, 2004).

Several studies have found that perception of risk is strongly related to an increase in self protecting behavior (Adih and Alexander, 1999; Akeara, et al., 2001).This is because the adoption of protective behavior is unlikely to occur unless the person is aware of the risk of HIV infection.

Even though individual's knowledge of HIV transmission and accurate assessment of their own risk are among the key factors in adoption of safer sexual practice (Prata et al, 2006); these relationships are poorly investigated and understood, particularly in our country, Ethiopia. Therefore, studies on individuals perception of their risk of acquiring HIV and their past and existing sexual behavior is very important for designing and implementing effective interventions that can bring about behavioral change. Thus, this study attempts to investigate the relationships between the socioeconomic, cultural and demographic factors and the existing sexual behavior as predictors of risk perception of HIV infection of young adults (15-29) in Dessie town.

.1.3 Rationale of the study

Prata et al, (2006) and WHO (2006) have mentioned three basic reasons why studying young adults behavior is of special interest, and these reasons are also pertinent for this study.

1) The number of life years saved is greater when infections are averted in relatively young individuals
2) Preventing HIV infection of young women reduces the transmission of HIV from mothers to children
3) It may be easier to change sexual attitudes, practices and risky behaviors among the young than older people.

Moreover today's youth is the largest in history, and those between 15 and 24 are both the most threatened and the greatest hopes for turning the spread of the HIV/AIDS epidemic(UNAIDS,2004). In many regions of the world, new HIV infections are heavily concentrated among young people (15-24 years of age). Among adults 15 years and older, young people accounted for 40% of new HIV infections in 2006(UNAIDS, 2007).

Dessie town is one of the urban center of the highly affected region, Amhara Region, of Ethiopia. The town is the largest and representative urban center of the eastern half of the region; having relatively large and socio economically and culturally diversified population. Moreover, the town is geographic and trade center of north eastern Ethiopia having a high in and out movement of people from all directions, which may have an effect on the HIV/AIDS spread. So studying the sexual behaviors of young adults in Dessie town and giving an appropriate intervention has a crucial role in the effort to prevent the spread of the epidemic in the town and the country at large.

1.4 Objectives

The main objective of this study is to investigate the extent of risky sexual behavior of young adults and to explore and understand the factors that influence their risk perception of HIV infection; thus the specific objectives of the study are to:-

1) describe the sexual behavior of young adults in Dessie town
2) explore the knowledge about HIV/AIDS and extent of condom use among young adults in Dessie
3) identify factors that influence risk perception of HIV infection among young adults in Dessie.
4) give possible recommendations that could assist the prevention and control efforts taking place in the study area.

1.5 Research Questions

To fulfill the stated objectives, the study attempts to answer the following research questions.

Primary Research Question

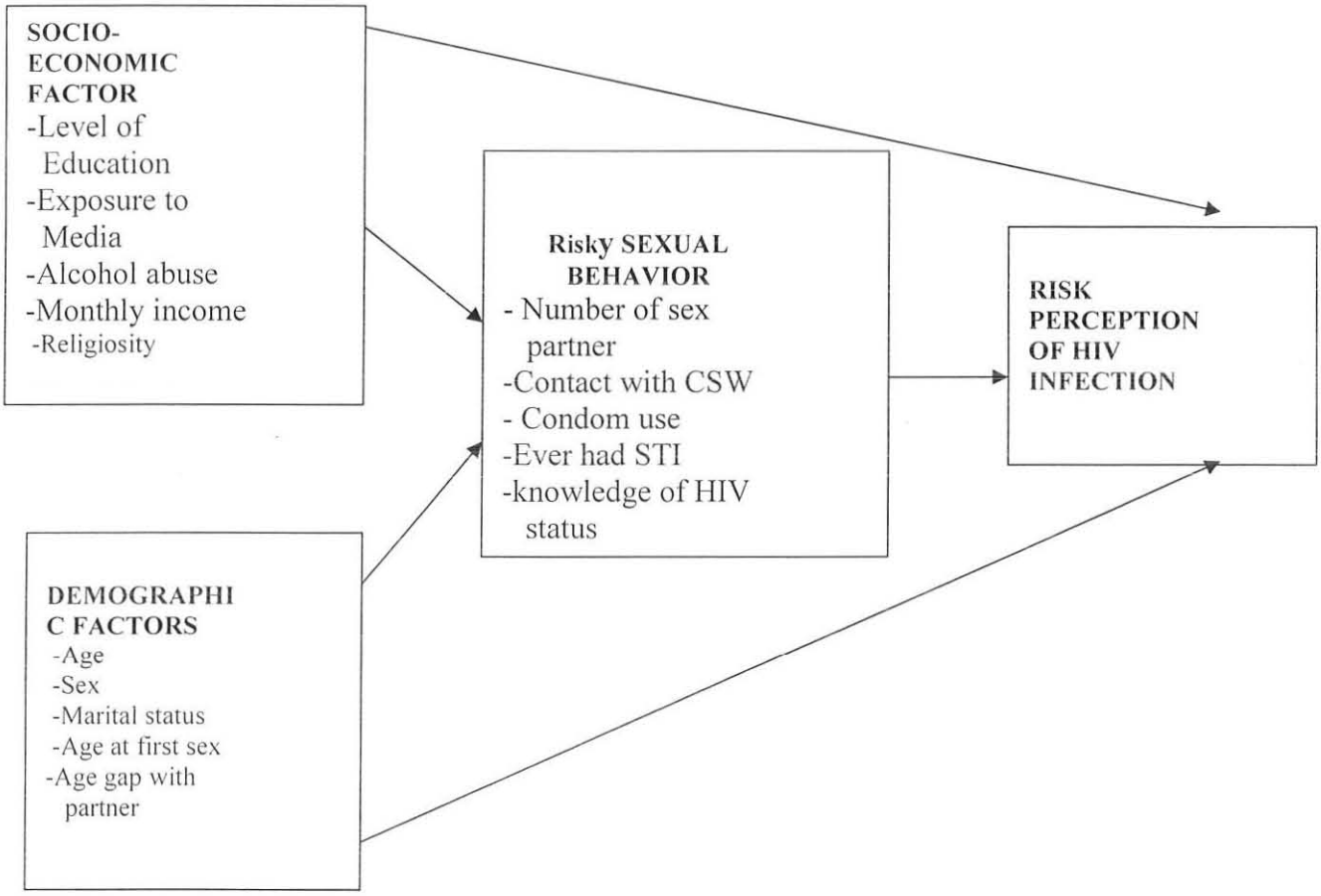
What are the socio-economic, demographic and behavioral factors that determine the level of risk perception of HIV infection among young adults?

Secondary Research Questions

1) How do young adults in Dessie behaving sexually?
2) How do young adults in Dessie perceive their risk of HIV infection in relation to their sexual behavior?
3) What are the factors that influence risk perception of HIV infection among young adults in Dessie town?

1.6 Conceptual Framework

To examine the risk perception of HIV infection among the young adults in relation to their sexual behavior the following pattern of relationship between variables is developed from the literature review by the author.



Source:- Developed by the author

1.7 Operational Definition of Terms and Concepts

Sexuality: - is a general term referring to various sexually related aspects of human life, including physical and psychological development and behaviors, attitudes and social customs associated with the individual's sense of gender, relationships, sexual activity and mate selection (Encarta, 2006).

Sexual intercourse: refers to heterosexual vaginal penetration

Sexual behavior: the investigation of issues related to sexual intercourse and the number of sexual partners ever had as well as the use of prevention methods of HIV.

Risky sexual behavior: involvement in unsafe sexual intercourse that could expose to HIV infection.

Religiosity: the frequency of attending religious services.

Young adults: those persons who are found in the age group between 15 and 29.

Risk perception: one's own judgment about the chance of being infected by HIV based on his own sexual behavior and related factors.

Higher risk behavior: are those who had two or more partners in their life time and did not use condoms during sex with one or more of their partners.

Lower risk behavior: are those who have never had sex or have had sex but not after taking VCT; and those who had one faithful partner during their life time and used condoms consistently during sex; and those who had two or more partners in their life time and used condoms always

1.8 Significance of the Study

Young people are a critical focus for behavioral change programs, since people 15-29 years old make up an estimated one-half of all new infections. However, young people in different places and settings face different kinds of risks, and prevention programs should be designed accordingly. This study may offer important lessons towards understanding the intricate relationship between perceived risk and actual sexual behavior. It will also provide an understanding of how youths in Dessie judge their risk to HIV infection. Thus the findings of this research are expected to contribute a little to show the gap in understanding between the risk sexual behavior of young adults and their risk perception of HIV infection. The findings will be helpful to policymakers, program developers, providers of health services, health educators, parents and those who provide support and guidance to young adults to enable them to live healthy sexual and productive lives.

Besides, research organizations and other interested groups, that are working on HIV/AIDS prevention and control would benefit from the findings of this research either in planning their activities or using them as references for further investigation.

1.9 Ethical consideration

A statement of confidentiality and, need and benefits of conducting the study were attached on the cover page of the questionnaire. In addition participants were informed that they have had full right to reject, to discontinue or to unaccept participating in the study at all. No identity was attached to the questionnaire and the data was handled confidentially. Respondents were informed on the purpose of the study and the consent of them was taken.

1.10 Limitation of the study

Due to the sensitivity and privacy of the issue under investigation, questions were designed and asked under a great caution so as to get the needed information. However the study has certain limitation. The independent variables considered in this study are those directly related with the respondents' sexual experiences. Due to time and resource limits variables related to knowledge about HIV/AIDS and attitudes towards PLWHA (stigma and discrimination, etc) and information about partner characteristics were not incorporated in this study.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

2.1 The Young Adults and Sexuality

The young adulthood is a period of transition to experience physical, psychological and social changes and sexual experimentation. This is accompanied by little awareness of the danger. In fact, risky sexual behavior is part of a large pattern of behavior including alcohol and drug use. Lacking to the judgment that comes with experience, the young adults often cannot appreciate the adverse consequences of their action (Kiragu, 2001).

Policies toward young people and religious doctrines reflect the view that sexual activity should not occur before marriage. However, premarital sexual practice has become more common, as the age at first marriage is rising and the age at puberty is failing (Graham, 2000,). Various studies conducted at different settings confirmed that adolescents are at risk because of unprotected sex. For example, in Western and South Nyanza areas of Kenya, community based studies have shown that as high as 25 percent of boys aged 15-19 with a sexually transmitted infection were also HIV positive (Johnston,2000:cited in Nzioka,2001).Having another STI both make HIV positive persons more infectious and make HIV negative persons more susceptible to infectious. Some STIs increase the replication of HIV (Iversen ., 2002).

Young women are particularly vulnerable to STDs, including HIV/AIDS, for biological and cultural reasons. Adolescents in general are at high risk of contracting HIV and other STDs because they often have multiple, short term sexual relationships, do not consistently use condom, and lack of sufficient information on how to protect them selves from HIV/AIDS. Adolescent women, in particular, are at a biological disadvantage because they have fewer protective antibodies than do older women, and the immaturity of the cervix increases the likelihood that exposure to the infection will result in the transmission of the disease (PRB, 2004).

Numerous pressures arise for girls and boys to engage in sexual activity, not the least being their emerging sexual desires. Biological, social and economic pressures may encourage young people to have sex, while tradition, a sense of morality, and religious

and family pressure are likely to discourage them from engaging in sex (OSDA, 2002).

There are many factors that affect the sexual behavior of young people directly and indirectly. Due to lack of adequate knowledge about sexual reproductive health information and appropriate guidance, the vast majority of young people make unrealistic decisions about initiating sexual activity in their early teens, without understanding their vulnerability to problems such as teenage pregnancy, unsafe abortion, STIs, HIV/AIDS drop out from the school and separation from their family (UNAIDS 2004).

The trends in sexual activity of adolescents at younger ages are alarmingly increasing in the world. In many countries, the majority of young people are sexually active before age of 20 and premarital sex is common among 15-19 years old (UNFPA, 1997). In most Sub-Saharan African countries, more than 70 percent of young women begin sexual activity during adolescence period. Males engage in sexual activity younger than females and the age at first sexual intercourse in Sub-Saharan Africa ranges from 16-17.6 years(UNICEF,USAIDS and WHO, 2002).

Tesemma (2003) in his study of sexual behavior and its correlates indicated that almost 47 percent of his respondents have already initiated premarital sexual activities. Approximately 42 percent of the sexually active young people had reported to have two and above sexual partners in their sexual lives. Sixty-two percent and 60.4 percent of the sexually active respondents reported to have used condom at the first and the current sexual practices, respectively.

2.2 Socio-economic and demographic factors affecting risk perception

Young people are not a homogenous group. They have different needs depending on many factors, including gender, age, marital status, income or employment status, cognitive development stage, education level, access to media, and cultural norms. However, research has shown that consistent trends and culturally sexual activity out side marriage, including weakening of social ties, later age at marriage, changing sexual norms, economic pressures social norms often condone or even force young people into sexual activity (Hughes and McCauley, 1998).

Young people who are sexually active are not in a stable sexual relationship and may have frequent changes of partner. They are often ignorant of the health risk of their sexual behavior, and they may have poor access to health care services. In addition, they are sensitive to messages from the media and other sex focusing films and magazine. Those who are engaged in drug use (including alcohol) may become more vulnerable to sexual related infections including HIV. These facts help to explain why in many countries 60 percent of all new HIV infections are among 15-24 years old. The highest rates of STIs are usually found in the age range of 20-24 years, followed by 15-19 years (UNAIDS, 1997).

One of the potential negative outcomes of young people and unsafe sexual practices are high risk of contracting HIV, through high rates of unprotected sex with multiple partners (Encarta, 2006). As the AIDS epidemic continues to spread across Asia and Africa, there is growing concern that the prevalence of risky sexual activity among young people may be rising. Such concerns are prominent in the continent as the whole, where the market reforms that were initiated during the late 1980s have introduced a variety of new media from abroad, and encouraged the growth of consumer culture and migration to urban areas among younger individuals (UNAIDS, 2004).

Langer, et al.,(2001) identified six significant predictors of risky sexual practices using regression analysis. These included the number of partners in last six months, religious values, condom attitudes, age at first sex, alcohol intake, and residential locus. Additionally, their literature review identified nine risk factors, which have been shown to be significantly correlated with risky sexual attitudes and behaviors which included age (sexual practices increase as youths get older), gender, race/ethnicity (ethnic minorities tend to engage in more risky sexual practices than do non-Hispanic whites), age at first sex, number of sex partners, age of first alcohol use, binging on alcohol (defined as having four or more drinks on a single occasion), and self-esteem (low self-esteem) has been found to correlate with risky sexual behaviors; (Langer *et al*, 2001).

Religiosity refers to the frequency of visiting religious service places. Some studies indicated that youths who report higher levels of religiosity are less likely to engage in sexual intercourse (Mc gill, 2000). Young people who attend religious activities frequently are expected to enter later in to sexual intercourse than peers who do not attend regularly (Abraham and Kumar, 1999). However, other studies have noted religiosity not to be reliable predictor of sexual risk behavior (Jemmott, 1992; Miller, et al., 2000).

2.3 Sexual Behavior and Risk Perception

Several studies have found that perception of risk is strongly related to the self protecting behavior of individuals (Adih and Alexander, 1999; Diamond and Madise, 2001). This is largely because the adoption of protective behaviors, which is unlikely to occur unless the person is well aware of the risk of HIV infection. Studies show that people can judge their risk of HIV infection (Maharaj, 2004). However, sometimes people who are at risk may not perceive their risk and are less motivated to protect themselves (Varga, 2001).

A study conducted in Nepal found out that in a high HIV prevalence situation, over four-fifth of the young factory workers (82 percent) think that they have no risk of getting AIDS, seven percent perceive that they have little chance, about three percent think they have moderate chance and about two percent believe that they have a great chance of getting HIV.A similar study conducted in Kenya depicts that the majority of men and women perceived themselves at risk of HIV infection. Nearly46% of women and 28% of men perceived themselves at medium or high risk of HIV infection (Mahesh, 2002).

Individuals who feel that they have little or no influence over what happens to them are more likely to engage in risky sexual behavior-women are more likely to feel that they do not have control over their situation (Verga, 2001). The risk of HIV infection may also appear vague and distant. For instance, in south Africa, underground workers on the gold mines did not use condom because they perceived the risk of developing AIDS as minimal compared with the risk they face living and working on the mine (Campbell, 1997). Two garage mechanics in their twenties in a study in Africa, said that AIDS is not a danger for them because; "we are too poor to travel to all those foreign places. Any way, our girl friends are young and healthy school girls." (Brooke, et al., 2006). In Sub-Saharan Africa, socio-cultural norms and practices are major determinants of sexual risk

taking behavior (Caldwell, et al., 1999).

A study conducted in South Africa has revealed that the level of perceived HIV risk was fairly low: among males, 58% perceived no risk and 31% small risk; the proportions among females were 60% and 29% respectively. Only 5% of males and females perceived their risk as great (Kermyt et al; 2007). Prata et al., 2005 highlights the relationship between young people's assessments of their HIV risk with assessments based on current and past sexual behavior, where more male than female who considered themselves to have no risk or a small risk of contracting HIV were actually at moderate or high risk in relation to unprotected sex (Prata et al., 2005).

Knowledge about HIV/AIDS and Sexual Behavior

Individual's knowledge of HIV transmission and accurate assessment of their own risk seem to be among the key factors in adoption of safer sexual practice (UNAIDS, 2001).Knowledge of HIV/AIDS issues and related sexual behavior among youth age 15-29 is of particular interest because the period between sexual initiation and marriage is for many young people a time of sexual experimentation that may involve high-risk behaviors.

As indicated in EDHS (2005) only around one –fifth of women and one-third of men age 15-24 know all of the basic facts about HIV/AIDS. The level of knowledge about HIV/AIDS does not vary greatly by age within the young population. As revealed in EDHS (2005) Knowledge about HIV/AIDS is much more common among urban than rural youth. The document also indicates that knowledge about HIV/AIDS rises with the level of education; and youth in the highest wealth quintile are much more likely to have better knowledge than other youth.

A cross-sectional study using DHS data from Uganda, Kenya and Zambia showed that knowing somebody with AIDS was predictive of protective sexual behavior, as were knowledge of HIV prevention method and correct beliefs regarding AIDS patients (Macintyre et al., 2001). Knowledge of someone who had AIDS or who had died of AIDS may increase an individual's awareness of the consequences of HIV and AIDS and may lead to safer sexual practices including taking voluntary counseling and testing

(Ndola et al., 2006). A study in Nepal has found out that about 74% of the respondents felt to know that a healthy looking person can have AIDS , 15% did not think so and 24% are not sure about it Maheshi (2002).

Knowledge of HIV Status

Knowledge of HIV status helps HIV-negative individuals to make specific decisions to reduce risk and increase safer sex practices so that they can remain disease free. For those who are HIV positive, knowledge of their status allows them to take action to protect their sexual partner, to access treatment and to plan for the future. A study in South Africa depicts that young men who had been tested for HIV were significantly more likely than those who had not been tested to have used a condom during their recent sexual intercourse ($p=0.001$). Testing of pregnant women is especially important to prevent the mother to child transmission. However, in Ethiopia, as revealed in the EDHS (2005) knowledge of HIV status is very low. Only 6% of men and 2% of women have been tested (EDHS, 2005).

A research conducted by Ellen et al (2006) on predictors of condom use among young adults in south Africa revealed that, young men who had been tested for HIV were significantly more likely to have used a condom during their more recent sexual intercourse ($p=0.001$) whereas young women who had been tested for HIV were less likely than those who had not been tested to have used a condom during their most recent intercourse ($p=0.012$).

Contact with CSW

HIV prevalence is generally higher among sex workers than in the general population. Surveys of sex workers in some urban areas between 1998 and 2002 detected extraordinarily high rate of infection: 74% in Ethiopia, 50% in South Africa, 45% in Guyana and 36% in Nepal (UNAIDS, 2002). Rising level of HIV among sex workers can provide early warning of increasing probability that the epidemic will expand to the general population.

Age at First Sex

There seems little doubt that first sexual intercourse remains an event of immense social and legal importance, is technically defined in terms of experience of sexual intercourse. The first sexual event has clear health implications. Since it marks initiation into the sexual act, which if unprotected, and carries risk of adverse outcomes such as unplanned pregnancy and STIs including HIV\AIDS.

Compared to youth who initiate sex at an early age youth who delay sex spend fewer years of their lives at risk of HIV infection. For this reason, earlier age at first sexual intercourse is considered as an HIV risk behavior.

Unprotected sexual relations taking place at earlier age give rise to increased risk of different reproductive health problems including HIV infection. Studies show that, people who begin sexual activity earlier are likely to have sex with more number of partners who have been at risk of HIV infection; and they are not likely to use condoms (WHO, 2000; Kermyt et al, 2007).

A study in South Africa has shown that, the age at sexual initiation is still early. Fourteen percent of both men and women aged 15–24 reported they had had sex before age 15, and 63% of women and 47% of young men had had sex before the age of 18.4 Even if young people 15-19 were the most likely age group to have used a condom at last sex (27% of women and 47% of men), this percentage is still low. Their increased vulnerability to HIV infection is still compounded by the fact that most sexual encounters are without the benefit of consistent and correct condom use. Furthermore, among women who had sex in the last 12 months, 7.6% (15-19) and 3.8% (20-24) years had 2 or more sexual partners (Kermyt et al., 2007).

According to UNICEF, UNAIDS and WHO (2002,), 17 percent of young women and 14 percent of young men ages 20-24, were sexually active by age 15. Among women age 25-49, 32 percent had sexual intercourse before age 15, about 65 percent before age 18, and by age 25 most of the Ethiopian women have had sexual intercourse. The median

age at first sexual intercourse for women ages 25-49 years is 16.1 years (EDHS, 2005).The EDHS (2005) also indicates that, 16% of young women and 2% of young men had sex by age 15 while 35% of young women and 9% of young men had sex by age 18. Among the respondents of age 15-24, only 1% of women and 17% of men used condoms during their first sexual encounter. Higher educational attainment, greater wealth and urban residence are related to greater likelihood that condoms were used at first sex. (EDHS, 2005).

Condom Use

It is also important to note that perception of risk is also likely to be influenced by condom use. Young men are more likely than young women to know where to obtain a condom (56 and 34 percent, respectively).

The 2005 EDHS has documented that knowledge of condom source does not vary consistently with age. Never married women are much more likely to know the sources of condoms than married women. Among both young women and men, those in urban areas are more likely than those in rural areas to know of condom source youth who are better educated and live in wealthier households are more likely than other youth to know a source of condoms (EDHS, 2005).

The most common mode of transmission of HIV in Ethiopia is through unprotected sex with an infected person. To prevent HIV transmission, it is important that young people practice safer sex through the much advocated ABC method: according to EDHS (2005) young people (15-24) have engaged in higher risk sex in the 12 months period preceding the survey. One quarter of the women and just under half of the men reported condom use in their last higher risk encounter (EDHS, 2005). In Kenya; Kisumu, 25% of sexually active young boys and 33% of young girls said they had not used a condom during their first and subsequent sexual intercourse (UNAIDS, 2004).

Alcohol use

A growing body or research shows that excessive alcohol consumption plays a key role in gender based violence and the occurrence of risky sexual activity that exacerbates the spread of HIV (the voice, 2003). The long-term effects of substance use on sexual behaviors can be serious. Graves and Leigh (1995) examined the connection between acquiring HIV and substance use. Their results indicated that the presence, frequency, and quantity of substance use over time is associated with an increased likelihood of having sexual intercourse, having more than one sexual partner, and not using a condom, thus increasing one's risk for contracting HIV. In short, it appears that alcohol/drug use can impact sexual behaviors both at the time of sexual activity (i.e. deciding whether to engage in sexual activities under substance influence) and over long-term periods (i.e. drug) alcohol use increases one's overall engagement in risky sexual behaviors (Brooks, 2007). A study on young people in Kenya reveals that females who take alcohol are nearly 3 times more likely to be sexually active than those who do not. Similarly, males who take alcohol are nearly 3.5 times more likely to be sexually active than those who do not. Alcohol (and other substance) abuse affects people's risk assessment process (AIDS in Africa, 2006).

2.4 Misperception about HIVAIDS

The routes of HIV transmission are well documented by scientists, but health officials and concerned social behavioral scientists continually grapple with the public's unfounded fears concerning the potential for HIV transmission by other means. HIV differs from other infectious viruses in that it dies quickly if exposed to the environment. No evidence has linked HIV transmission to casual contact with an infected person, such as a handshake, hugging, or kissing, or even sharing dishes or bathroom facilities. Studies have been unable to identify HIV transmission from modes common to other infectious diseases, such as an insect bite or inhaling virus-infected droplets from an infected person's sneeze or cough (Encarta, 2006).

A study in Nepal has found out that about 74% of the respondents felt to know that a healthy looking person can have AIDS , 15% did not think so and 24% are not sure about

it (Maheshi, 2002). Similarly, many Ethiopian adults lack accurate knowledge about the ways in which the AIDS virus can and cannot be transmitted (EDHS, 2005). Particularly critical is the fact that 51 per cent of women and 69 per cent of men know that a healthy-looking person can have (and thus transmit) the virus that causes AIDS. Many women and men also erroneously believe that AIDS can be transmitted by mosquito bites; only 47 percent of women and 57 percent of men rejected these common misconceptions. Larger proportion of women and men are aware that the HIV virus cannot be transmitted by super natural means (70 per cent and 84 per cent respectively) and by sharing food with person who has AIDS (63 per cent and 80 percent respectively) (EDHS, 2005).

To sum up, the relationships between individual's risk perception of HIV infection and their sexual behavior is complex and poorly investigated and understood, particularly in Ethiopia. Studies conducted in different cultures have associated HIV risk perception with a wide range of variables, such as sex with CSW, age at first sex, number of sex partners, condom use, knowledge of HIV status, and other socioeconomic and cultural variables like exposure to media, religiosity, monthly income and level of education. Thus, this study attempts to assess the relationships between the currently existing risk perception of HIV infection and the sexual experience of young adults in Dessie town.

CHAPTE THREE

DATA SOURCE AND METHODOLOGY

3.1 The Study Area and Target Population

The study will be conducted in Dessie city, which is located in South Wollo, Amhara Region. Dessie is found 401Km north of Addis Ababa. The city is a good representative of the urban Amhara region. According to the 2006 statistical Abstract, the town has a total population of 177,116 with nearly equal proportion of females and males which makes the city the second most populous urban center of the region (CSA, 2004). The target population of this research is young adults in the age 15 to 29, who are currently living in the city. As is indicated in the introduction this age group is highly threatened by the HIV/AIDS pandemic.

3.2 Sources and Methods of Data Collection

Survey questionnaire: a well organized and structured questionnaire was prepared for the data collection process. The questionnaire was first developed in English, translated to Amharic and translated back into English so that accuracy and consistency in the wording are ensured. The questionnaire contained six main parts. The first Part of the questionnaire was contained demographic and socio-economic characteristics of participants; the second part was dealt about sexual behaviors of participants,; the third part was about the knowledge of the respondents concerning HIV\AIDS and STIs, followed by knowledge and use of condoms among the participants; the fifth part was knowledge about HIV/AIDS and other STDs. The final part of the questionnaire was dedicated to see the level of risk perception of HIV infection among the youth.

Focus group discussion (FGD): was conducted to generate qualitative data that can supplement the results of the questionnaire. And because of the sensitiveness and personal nature of the issue under investigation, conducting FGDs play irreplaceable role. The FGDs were conducted in all the three kebele centers. There were two groups at each kebele: one group for each sex in each kebeles. The participants were selected from those young adults who were willing to participate on discussion. Six FGDs with a group of 8-10

discussants participated in the discussion. The principal investigator was the facilitator only for the male FGDs. And the female FGDs were facilitated by an employed female supervisor. Most discussion guides are open ended to give more opportunity for discussion. Discussions were held in local language- Amharic, recorded by a tape recorder and later translated into English and analyzed by the researcher.

In-depth interviews with selected key informants were also made to substantiate and cross-check the information obtained from the questionnaire.

The data collection process had the following components of activities in order to obtain a quality data in the time given.

1) Recruitment of 12 (6 male and 6 female) data collectors and 3 supervisors with minimum requirement of 12 grade completion and some experience of data collection.
2) Provision of the necessary training for the data collectors and supervisors- two days training

3.3 Sample size Determination

Sample size is usually determined based on the required precision, variability of the characteristics to be measured and the resource available. Based on the sampling formulae of the United Nation, which is appropriate for house hold survey, a sample of 721 young adults were selected for responding to the questionnaire, Under the following assumptions.

1 The desired level of confidence is 95%, which corresponds to a Z value of 1.96
2 The proportion of young adult (15-29) to the total population in Dessie, which is represented by P, is 0.33 (calculated from CSA , 2006).
3 Contingency =10%
4 The key predictor of risk perception (r) is high risk sexual intercourse among youth and it has an estimated rate of 22%(EDHS, 2005)

Applying the sample size determination formula

$$n = \frac{Z^2(r)(1-r)(f)(k)}{P(n)(e^2)}$$

Where

n_h= is the sample size in terms of household

z= the desired level of confidence interval 95% (1.96)

r= is an estimate of the key indicator of risk perception; high risk sexual inter course among (15-24), which is 22% taken for this study (i.e. r=0.22) EDHS(2005)

f= the sample design effect, of high risk sex in EDHS (2005) it's 1.5

k= anticipated rate of non response, 10% (k=1.1)

p= the proportion of young adult to the total population of Dessie (0.33) (calculated from CSA,

2006)

n= the average household size: that of urban Ethiopia is taken for this study i.e. 4.2 EDHS

(2005)

e= margin of error. 15% of the value of the key indicator is taken for this study i.e. 0.033

When we substitute all the above values in to the given formula

$$n_h = \frac{1.96^2(0.22)(0.78)(1.5)(1.1)}{(0.33)(4.2)(0.033)^2}$$

n_h =**721**

However, only 706 questionnaires were gathered having adequate information from the field. And the remaining 15 questionnaires were either incomplete or were not returned back to the principal investigator.

3.4 Study Design and Sampling Procedure

A cross sectional study design was applied so as to complete the research work in the given time and cost. In order to obtain representative respondents from the study area; the 10 kebele centers of the city were clustered into three clusters based on socio-economic and geographic consideration. Kebele centers two to four (Arada and Piazza areas) are the core kebeles of the town in which peoples are living in high concentration. Moreover, high business activities including hotel services are found in this kebeles. Kebeles 5, 6, and 7 are categorized as middle cluster of the city, which are relatively less active than the core areas in terms of economic activities and density of population. The periphery kebeles of the town are kebeles one, eight, nine and ten which are categorized as the third cluster. One kebele from each cluster (kebeles four, five, and eight) were selected using simple random sampling method. Households within selected kebeles were then listed by their heads and the numbers of households from the three kebeles were determined on the basis of probability proportion to size (PPS). Then from the household lists in each kebele centers 721 households were made to be included in the study by using systematic simple random sampling method. Finally, one eligible respondent per household was randomly selected to participate in the study. In cases where there were no young adult in the selected households young adults from the neighboring households were asked to participate in the study. The table below shows the procedure of selecting the unit of analysis of this study.

Table 3.1 The distribution of the sampled individuals by selected kebele centers in Dessie, 2008

Selected kebele centers	Total population	Number of households	Number of sampled households	Number of individuals selected for the study
04(from the core)	13,135	2919	241	241
05(from the middle)	14,020	3338	276	276
08(from the periphery)	10,351	2465	204	204
Total	37,506	8722	721	721

Source: author's field survey

Considering almost equal proportions of male and female residents are living in the study area, equal number of both sexes were selected to respond to the questionnaires.

3.5 Method of Data Analysis

Following the data collection in the field using various instruments; editing (both in the field and in the office), data entry and data cleaning processes of all questionnaires were carried out. The analysis was carried using the statistical package for social science (spss). The analysis part contains descriptive statistics (frequencies and cross tabs), bivariate analyses, and multivariate logistic regression. Besides this the focus group discussion results are incorporated where ever needed to answer the why and how questions.

At the bivariate stage, chi-square test was employed in order to identify the important explanatory variables which then be retained in the multivariate analysis for further investigation. A multivariate logistic regression analysis was also conducted to assess the net effect of each determinant factor after controlling all other factors for the binary dependent variable.

3.6 Variable specification

Dependent variable

The dependent variable in this study is individual's level of risk perception of HIV infection. In order to measure the risk perception of getting infected by HIV, respondents were asked a key question 'do you consider your chance of getting HIV to be high, medium, low or no chance at all?' For the purpose of analysis, respondents were divided into the categories 'medium-high' and 'low or no risk' according to their responses.

Independent variables

The explanatory variables that influence perceived risk of HIV infection were selected on the basis of the literature review. These factors can be categorized into socio-economic, demographic and behavioral factors. The socio-economic variables include level of education, exposure to media, alcohol use, monthly income and religiosity. The demographic factors included in this study are age, sex, marital status. And the behavioral factors included are age at first sex, number of life time sex partners, contact with CSW, condom use, ever having an STI, knowledge of HIV status, and age difference with sex partner.

Most of the variables mentioned above are self explanatory, but the derivations of some variables require some more explanation.

Exposure to media: to measure this variable respondent were asked about their frequency of attending any form of mass media (television, radio, or newspaper). Then respondents were divided into two categories (exposed and less media attendants) based on their response to the suggested question. And those respondents who often have exposure to media were categorized as exposed and those who have rare exposure to media were categorized as less media attendants.

Alcohol use: was measured in terms of the frequency of respondent's use of alcohol. Those respondents who drink enough alcohol (that stimulate the person) at least once in a week were considered to be alcohol users.

Religiosity: to measure the religiosity of respondents a question was asked about their frequency of attending religious services. In this study those respondents who attend religious services at least once in a week were considered to be religious, and those who attend less than once in a week were considered to be not religious.

Work status: involvement in any form of income generating activities.

Monthly income: an average amount of money in birr that respondents get every month including gifts from relatives.

CHAPTER FOUR

BACKGROUND CHARACTERISTICS OF RESPONDENTS

Taking into account the major objective of the study and specific objectives too, this chapter assesses selected demographic and socio-economic characteristics of participants, some risk related factors, sexual behavior, knowledge about HIV/AIDS and other STIs.

4.1 Demographic and Socio-economic characteristics of Participants

The distribution of participants by selected demographic and socio-economic characteristics include sex, age, level of education, religion, exposure to media, monthly income and the like.

Among the determined samples of 721 individuals, 706 completed questionnaires were returned back to the researcher. And the remaining 15 questionnaires were either not returned back or disregarded by the principal. The research participants considered in this study were both males 358(50.7%) & females 348(49.3%). As it is indicated in Table 4.1, slightly more than 41 percent of the participants were found in the age group 15-19 and almost 39.8 percent in the age group 20-24 years old and the remaining 20 percent in the age group 25-29.The majority of participants (610\86.4%) had an education level of grade 9 and above .

Regarding the participant's religion, 63 percent were Orthodox Christians, 32.9 percent were Muslims, whereas the proportion of Protestants and Catholics were 3.4 and 0.4 percent respectively. The survey result further revealed that, the majority of participants (64%) lived in the study town (Dessie) before age 12, seventeen percent in other town, 19 percent in rural areas.

According to the survey finding, 33.4% (18% males and 15.4% females) of participants of the current study have reported some form of income generating activities. More than 47 percent of the respondents have a monthly income (including gifts from relatives) of more than 100 birr.

Table 4.1 Percentage Distribution of participants by selected background characteristics,

Respondents' characteristics		Sex of respondents				Total	
		Male		Female			
		N	%	N	%	N	%
Age	15-19	138	47.4	153	52.6	291	41.2
	20-24	154	54.8	127	45.2	281	39.8
	25-29	66	49.3	68	50.7	134	19
Marital status	Never married	336	55.7	267	44.3	603	85.4
	Currently married	16	23.9	51	76.1	67	9.5
	divorced	4	18.2	18	81.8	22	3.1
	Separated	2	20	8	80	10	1.4
	Widowed	0	0	4	100	4	0.6
level of Education	<= grade 8	41	43.6	53	56.4	94	13.4
	9-10 grade	110	46.6	126	53.4	236	33.4
	11-12 grade	130	51.4	123	48.6	253	35.8
	>12 grade	77	62.6	46	37.4	123	17.4
Religion	Orthodox	236	53	209	47	445	63
	Islam	104	44.8	128	55.2	232	32.9
	Protestant	14	58.3	10	41.7	24	3.4
	Catholic	2	66.7	1	33.3	3	0.4
	Others	2	100	0	0	2	0.3
Monthly income	<=100 birr	190	51.2	181	48.8	371	52.5
	> 100 birr	168	51.1	167	49.9	335	47.5
Attending religious services	Daily	110	45.8	130	54.2	240	34
	Once in a week	108	47	122	53	130	18.5
	Once in a month	42	58.3	30	41.7	72	10.2
	once in a year	42	60	28	40	70	10
	never	56	59.6	38	40.4	94	13.3
Work status	working	127	53.8	119	46.2	236	33.4
	Not working	231	49.1	239	50.9	470	66.6
Ever seen sex film	yes	171	59	119	41	290	41.1
	No	187	45	229	55	416	58.9
Exposure to media	Daily	90	45.7	107	54.3	197	27.9
	Most often	106	59.9	71	40.1	177	25.1
	Occasionally	72	54.5	60	45.5	132	18.7
	Rarely	83	48.3	89	51.7	172	24.3
	Not at all	7	25	21	75	28	4

Source: author's field survey, 2008

According to the survey finding (shown in Table 4.1), about one-third (34%) of the participants attend religious services regularly, 32.6 percent once or twice a week, 20.1 percent attend sometimes and almost 13.3 percent never attended any religious services. Besides this, a quarter (25 percent) of the participants used some of the substances (like chat, cigarette and alcoholic drinks). More than two percent of them took at least one type of the substances regularly, 7.1 percent once or twice a week and 18 percent some times. Eight percent of those taking substances want to do sexual intercourse after taking the substance they like (not shown). The FGD results on substance use confirmed that, it is common to use substances like chat, cigarette, and alcoholic drinks among youths in Dessie. The discussants further explained that such persons are sexually active and also have many-sexual partners.

The mass media play a major role in increasing awareness and knowledge of various aspects of life and is instrumental in bringing about attitudinal change both at individual and societal level. Although mass media exposes audiences to different values and role models, only about half (53%) of the respondents have enough access to one form of the media (TV, Radio, newspaper and the like). 290 persons (41.1% of the respondents) had at least one exposure to sex film or magazine in the past.

4.2. Sexual behavior of participants

This section presents the percentage distributions of some risk related factors which will further be investigated using chi-square test and then binary logistic regression to assess the net effect of individual factors on risk perception of HIV infection.

Table 4.2 depicted that 48.9 percent (345 participants) of the respondents reported ever having sex; the percentage was slightly higher among males (49.3%) than among females (48.5%). This figure is consistent with separate studies conducted in Awasa and Nazreth, in which 49.3% and 47% of the respondents (15- 24) had started sex Dejene (2005) and Tesemma (2003). In the current study, among the respondents who ever had sexual intercourse, more than two-third (68.4%) began sex in their age 15- 19. Even though the majority of the respondents began sex by ages 18 (23.2%) and 17 (19.4%) years, about 10.7% of the respondents had their first sexual debut before their 15^{th} birth day.

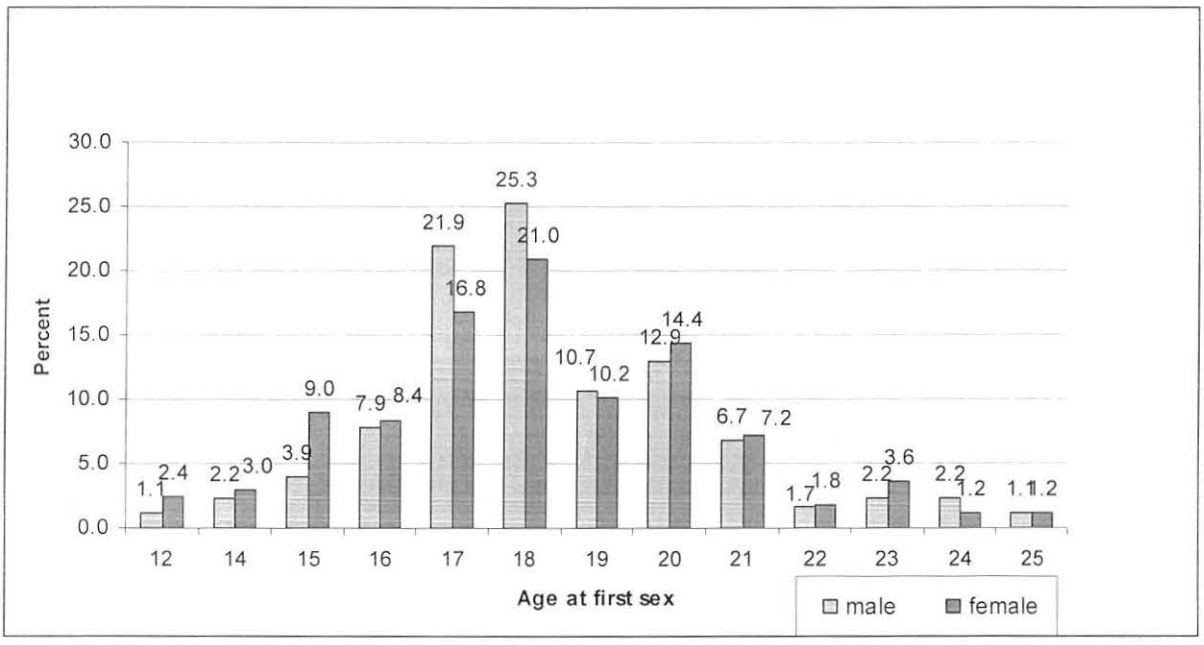
Table4.2 Mean age of sexually experienced respondents at their first sex, Dessie, 2008

Current age	Mean age at first sex		
	Male	Female	Average
15-19	16.81	16.80	16.80
20-24	18.07	18.06	18.07
25-29	19.59	19.28	19.43
Total	18.31	18.14	18.23

Source: author's field survey,2008

As can be seen in Table 4.2 above the median age of the respondents at first sex has no significant difference between male and female respondents. However, this value shows increment as the current age group increase from 15- 19 to 25- 29. The possible explanation for this increment is the presence of youths who begin sex later for different reasons (Figure 3). In this study the minimum age at first sex reported was 12 years and the maximum age was 25 years.

Figure 1:- Respondents who had sex by their age at first sex, Dessie, 2008

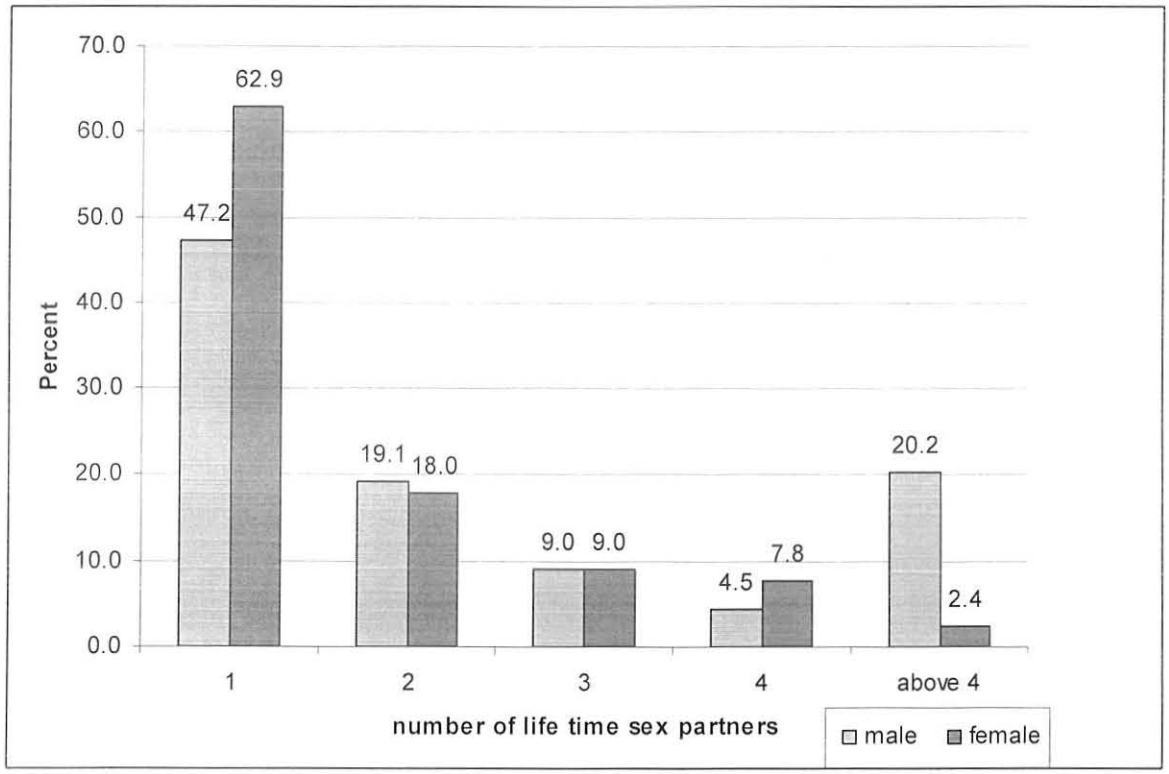


Source: field survey result, 2008

The median age at first sex was 18 years. However, the FGDs which were conducted separately by sex confirmed that females start sexual intercourse at earlier age (16 years) than their male counter parts (18 years).

Among those 345 respondents who ever had sex, about 156(45.2%) had at least 2 sexual partners. Of these, 61 respondents(17.7%) have reported four and above sex partners, 31respondents (9%) had exactly 3 partners, 64 respondents(18.6%) had two sex partners, about 189 respondents(54.8%) had only one sex partner.

Figure 2:- Percentage of respondents by the number of sex partners they ever had



Source: author's field survey, 2008

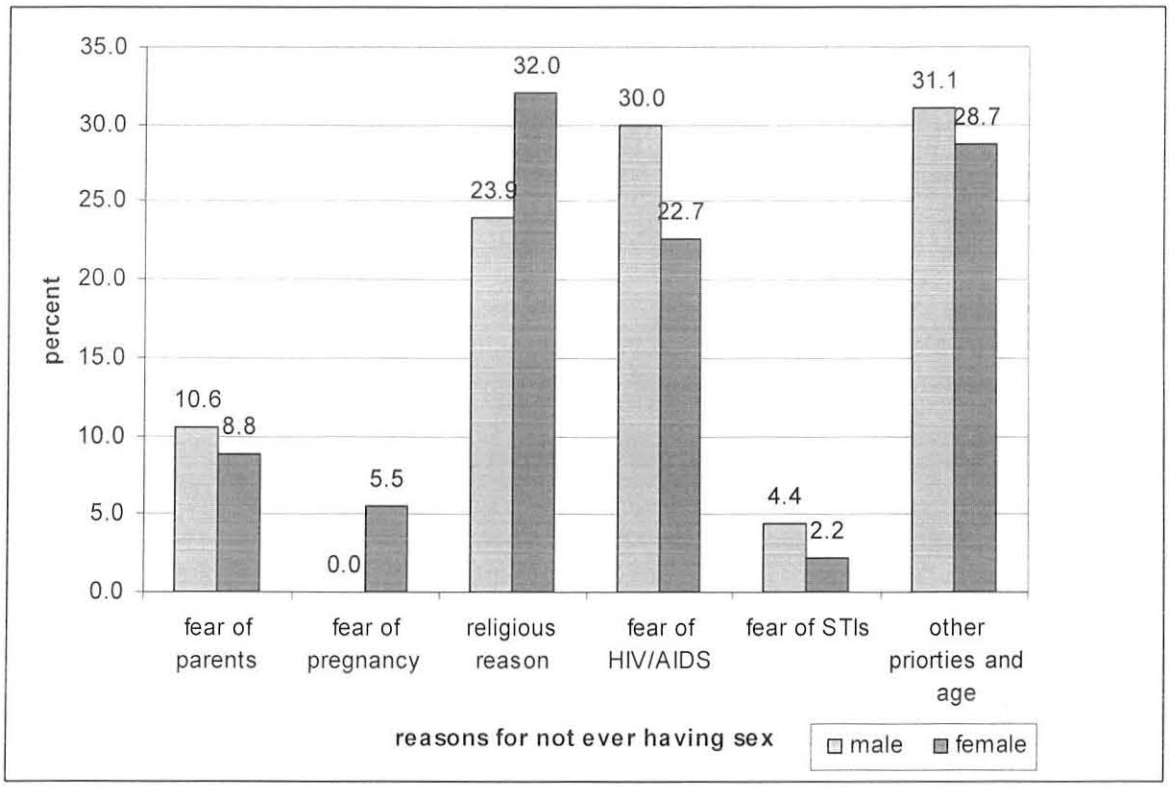
Sexually initiated males reported an average of 2.1 life time partners, where as females reported 1.6 life time partner. To that end FGDs results confirmed that, it is usual among the youth to have sexual intercourse with more than one sexual partner. Surprisingly the

FGD results of females show that, students consider having sex with more than one sexual partner as a sign of modernity.

Among the respondents who ever had sex, 161 persons (46.7%) did their first sex with their boy\girl friends, 63 persons (18.3%) did it with their spouse, while 60 (17.4%) and 13(3.8%) of the sexually active respondents did their first sex with causal persons and CSW respectively. Seven female respondents reported their first sexual intercourse was forcefully done.

On the other hand more than 50% of the respondents have never started sex. The major reasons for not involving in sexual activities were religiosity (28%), fear of HIV (26%), giving priority to other duties and being too young (29%), fear of parents (9.7%), and fear of STIs was reported only by 3.3%.

Figure 3: Respondents who never had sex by reasons for not involving in sex



Source: author's field survey, 2008

FGDs results further explained that, the main reasons for earlier initiation of sexual intercourse were:

- The negative aspect of globalization (i.e. exposure to western medias, sex films…etc).
- lack of open discussion with parents about sexual issues
- peer pressure
- use of different substances (like chat, cigarette, alcoholic drinks, etc)

Table 4.3 percentage distributions of respondents by variables related to risky sexual behavior,Dessie, 2008

Sexual behavior of respondents		Sex of the respondents				Total no.
		male		Female		
		N	%	N	%	
Ever had sex	Yes	178	51.6	167	48.4	345(48.9)
	No	174	49.7	176	50.3	350(49.6
Ever had sex with CSW	Yes	21	60	14 *	40	35(10.1)
	No	157	50.8	152	49.2	309(89.9)
No. of sex partners ever had	1	84	44.4	105	55.6	189(54.8)
	2	34	53.1	30	46.9	64(18.6)
	3	16	51.6	15	48.4	31(9)
	4	8	38.1	13	61.9	21(6.1)
	>4	36	90	4	10	40(11.6)
Age at first sex	10- 14	6	40	9	60	15(4.3)
	15- 19	126	53.4	110	46,6	236(68)
	20-24	44	48.9	46	51.1	90(26.1)
	>24	2	50	2	50	4(1.2)
First sex partner	Spouse	11	17.5	52	82.5	63(18.3)
	Fiancé	23	59	16	41	39(11.3)
	Boy(girl) friend	86	53.4	75	46.6	161(46.7)
	Causal person	45	75	15	25	60(17.4)
	CSW	13	100	0	0	13(3.8)
	Forcefully done	0	0	7	100	7(2)
Age gap between partners	< 5 years	131	68.2	61	32.8	192(55.7)
	>= 5 years	68	44.2	85	55.8	153 (44.3)
Ever used condom	Yes	110	56.1	86	43.9	196(56.8)
	No	72	52	77	48	149(43.2)
Ever had HIV test	Yes	160	46.2	186	53.8	346(49)
	No	198	55	162	45	360(51)
Ever had STIs	Yes	18	45	23	55	41(5.8)
	No	340	51.1	325	48.9	665(94.2)

*=respondents who are CSW

Source: Author's Field Survey Result

4.3 Knowledge of the respondents about HIV/AIDS and Other STIs

Having knowledge about sexually transmitted diseases is believed to have greater importance to protect oneself from risky sexual behavior. Participants were asked some questions to find out their knowledge about HIV/AIDS and other STIs.

About 100 percent of participants have heard of HIV/AIDS. 99.2 percent of participants know that HIV can be transmitted through sexual intercourse. And 89.2% of the respondents believe that needle and other sharp materials can transmit HIV. Mosquito bite was considered as a risk factor of HIV infection by 8.8% of the respondents. Mother to child transmission of HIV was seen as a risk factor of HIV transmission by 80.4% of the respondents. Sharing food with PLWHA was considered as a method of HIV transmission only by5.1% of the respondents.

Regarding the HIV prevention methods more than 94% of the respondents have understood that abstinence from sex and faithfulness to one sex partner can prevent one from being infected by HIV. However, only about 74.5 % of the respondents mention that consistent condom use can prevent the transmission of HIV.

Despite a strong national and local HIV risk reduction campaigns and more than two decades history of the epidemic, only 75.8 % of the respondents reported that an HIV positive person could look healthy. Moreover 66.9% knew that the presence of an STI can increase the risk of HIV infection and about 81% believe that HIV can be transmitted by the first time sexual contact. Furthermore about 50.4% knew that HIV/AIDS can be treated, and 74.1% reported that the pandemic has no cure at all.

Regarding other STIs, 97.7 percent of participants know at least one STI other than HIV/AIDS. The most known STIs were: gonorrhea (91.2%), syphilis (94.3%), cancroids (77.6%) and granule inguinal (74.8%) respectively (multiple responses were possible).

Table 4.4 Percentage Distribution of Respondents by Knowledge about HIV/AIDS; its transmission and prevention method

knowledge about HIV/AIDS	Percentage of respondents having the right knowledge		
	male	female	average
Methods of transmission			
Sexual intercourse	99.4	98.9	99.2
Needle and sharp materials	95	83.3	89.2
Mosquito \insect\ bite	91.1	91.4	91.2
Blood transfusion	83.2	71.8	77.6
Mother to child	86	74.6	80.4
Sharing food with PLWHAs	96.6	93.1	94.9
Methods of prevention			
Abstinence from sex	96.1	92.5	94.3
Faithfulness to one partner	95	93.1	94.1
Consistent condom use	78.8	70.1	74.5
Other attitudes			
Ever heard about HIV/AIDS	100	99.7	99.9
Ever heard about STIs	98.9	96.6	97.7
STIs have impact on HIV transmission	73.7	59.8	66.9
A healthy looking person can have HIV	88.3	62.9	75.8
First sexual contact can transmits HIV	88.3	75.3	81.9
HIV/AIDS can be treated	45.8	55.2	50.4
HIV/AIDS can be cured	79.3	68.7	74.1

Source: Author's Field Survey Result

Eventhough there is awareness about the methods of transmission and prevention of HIV; results also show that there is a miss match between knowledge about HIV/AIDS

and the ways in which the respondents behave sexually. For instance a 22 years old girl from the model youth center of FGAE in Dessie mentioned that:

> *"I have more than enough knowledge about HIV/AIDS, and I am in the front side to educate others to bring about better awareness and behavioral change; however the way in which I am behaving is different... on an occasion I was introduced and exchanged phone number with a man. And I did unsafe sex with him in the second day we meet. After a month I understand that I have conceived a child. After while, I decided to abort the child; and did it."*

4.4 Condom Use

One of the mechanisms of protecting any kind of STDS including HIV/AIDS is using condom while doing sex. Condom, which is ubiquitous and easy to use, is one of the three methods for protecting sexually active people from the risk of HIV infection. Condom, as a method of safer sex practice, has gained greater importance especially at a time when the spread of HIV/AIDS is increasing rapidly. In this context, it is imperative for men and women to be aware of the importance of condom use. In this study it was attempted to see the attitude of respondents towards the effectiveness as a prevention method of HIV transmission.

As observed from the table, 56.8 percent of sexually experienced participants ever used condom. However, only 32.5% of the sexually active respondents used condom in their first sex. Among those individuals who have ever used condom 88(44.9%) use it consistently. In other words 25.5 percent of sexually experienced participants used condom consistently. Some of the reasons reported for not using condom were: lack of access (2%), religious case (23.5%), shame of asking partners (9.4%), it decreases sexual satisfaction (18), cultural taboo (13%) and 24.5% percent trust to their sexual partner (multiple responses were possible and not shown).

Table 4.5 Percentage Distribution of sexually experienced Participants by Condom Use, Dessie, 2008

Condom use experience	Sex of the respondents					Percentage from who Ever had sex
	male		female		Total	
	N	%	N	%	N	
Never used condom	72	48	73	52	149	43.2%
At least once in the past	110	56	86	44	196	56.8%
At first sex	71	63	41	37	112	32.5%
At the last sex	74	54	62	46	136	39.4%
Consistently	58	66	30	34	88	25.5%

source: Author's Field Survey Result

Condom use is relatively better among male than female respondents. The main reason for this may be the fact that females are less capable to negotiate condom use during their sexual encounters. The FGD result supported that, use of condom while having sex among the youth is not usual. However, there is progress as compared to the previous times due to the serious efforts of the concerned bodies working on preventing and controlling the HIV/AIDS pandemic. According to the FGDs results the following were the major reasons for not using condom consistently:

Negative attitude towards condom (it reduces sexual satisfaction,
There is special cream that harm sex organs and the like)
It hinders sexual satisfaction
Cultural influence (fear to buy and use condom)
Less knowledge about how to use condom properly and
Fear to loose partner if I ask to use condom while having sexual intercourse.

According to key informants from FGAE Dessie model youth center, the majority of youths in Dessie start sex in their early ages. Most of the youth began sex in their high

school level education. Beside the biological maturity of the youth peer pressure (verbal, to be included in a certain group), the need to define themselves, and exposure to western media channels (video, sex films and magazines) are highly influencing the behavior of young adults in Dessie. The lack of universal condom accessing mechanisms, miss-informing institutes(FBOs), and the fact that youths do sexual matters in a very hidden manner have influenced the use of condoms. Besides these, youths themselves, focus on preventing pregnancy rather than HIV infection. However, the quantitative results show that fear of HIV is one of the major reasons for not ever having sex.

People in Dessie have enough awareness about HIV/AIDS- transmission and prevention methods. However, the expected behavioral change is not reached yet. For instance most of the youth know that taking VCT has multi-advantages, but a very small proportion of the people used this service. Among those who took the service the majority took pre-marriage VCT, while pre-sexual VCT is very minimal.

4.5 Levels of risk perception of respondents

Overall, 7% of males and 11.5% of females perceived high risk of hive infection; and 12% of male and 15.8% of female respondents perceive themselves to have a medium chance of getting HIV. In general, female respondents were considerably more likely than males to report themselves at a higher risk of HIV infection.

Despite their risky sexual behavior only 5.85 and 6.4% of the young adults in the age groups 15-19 and 20-24 perceived high risk of HIV infection respectively. However 23.1% of those respondents in the age group 25-29 perceived high risk of HIV infection. Generally as age of the respondents increase their level of risk perception of HIV infection increases too. Surprisingly ever married youths are found to perceive higher risk of HIV infection compared to never married youths. As can be seen in table 5 below 38.6% of ever married and 20.4% of never married respondents perceive high or medium risk of HIV infection. Respondents whose level of education is above grade 12 perceive high risk of HIV infection compared to those in the lower categories (table4.6).

Table 4.6 levels of risk perception of HIV infection by some background characteristics of respondents

Some background characteristics		Level of risk perception of HIV infection				Total
		High N (%)	Medium N (%)	Low N (%)	No N (%)	
Sex	Male	26(7)	43(12)	145(41)	144(40)	358(50.7)
	Female	40(11.5)	55(15.8)	109(31)	144(41.4)	348(49.3)
Age	15-19	17(5.8)	30(10.3)	114(39.2)	130(44.7)	291(41.2)
	20-24	18(6.4)	44(15.7)	113(40.2)	106(37.7)	281(39.8)
	25-29	31(23.1)	24(17.9)	27(20.1)	52(38.8)	134(19)
Marital status	Never married	51(8.5)	71(11.9)	234(39.2)	241(40.4)	597(84.6)
	ever married	15(13.8)	27(24.8)	20(18.3)	47(43.1)	109(15.4)
Level of education	<grade 8	10(10.6)	15(16)	30(31.9)	39(41.5)	94(13.4)
	grade 9-10	20(8.5)	38(16.1)	65(27.5)	113(47.9)	236(33.4)
	grade 11-12	19(7.5)	29(11.5)	114(45.10	91(35.9)	253(35.8)
	>grade 12	17(13.5)	16(12.7)	46(38.1)	44(35.7)	123(17.4)
Exposure to media	Not exposed	28(8.9)	35(11.1)	113(35.7)	140(44.3)	316(44.8)
	Exposed	38(9.7)	63(16.2)	141(36.2)	148(37.9)	390(55.2)
Religiosity	Religious	42(9.1)	40(8.7)	174(37.8)	204(44.3)	460(65.2)
	not-religious	24(9.8)	58(23.6)	80(32.5)	84(34.1)	246(34.8)

source: Author's Field Survey Result

It is expected that risk perception of HIV infection is highly influenced by the sexual experience of the respondents. Table 4.7 shows the level of risk perception of respondents by their sexual experiences.

As can be seen from the Table 4.7, 17.1% and 23.2% of the ever had sex respondents perceive high and medium risk of HIV infection respectively. However, only 2% and 4.9% of the never had sex respondents perceive high and medium risk of HIV infection respectively. This shows that risk perception of HIV infection is dominantly influenced by the sexual behavior of respondents. The number of life time sex partners respondents ever have is one of the expected determinant factors of risk perception. The number of sex partners respondents ever had is expected to influence their risk perception of HIV infection. Even though, the table below shows that the level of high risk perception increases with increasing in the number of sex partners respondents ever had, it seems that they did not assess their risk correctly. Because respondents who ever had multiple sex

partners were not found at higher rate of high risk perception as expected. For instance only 33.3% and 42.9% of the respondents who ever had exactly four sex partners perceive high and medium risk of being infected by HIV respectively. However the remaining 24% of the respondents who ever had four sex partners perceive no risk of HIV infection.

Young adults who begin sex early are found to perceive higher risk of HIV infection. 52% of those respondents who began sex before their 18th birth day and about 33% of those who began sex after their 18th birth day perceive high or medium risk of HIV infection. More than 86% of respondents who had sexual contact with CSW have perceived high or medium risk of infection. However the remaining 14% perceive low or no risk of HIV infection despite the fact that contact with CSW is a high risk behavior.

Out of the 40 respondents who have ever been contracted by one of the STIs 35%, 27.5%, 15%, and 22.5% perceived high, medium, low and no risk of HIV infection respectively. Here it is important to see the gap that about 37.5% of the respondents who ever had STIs have reported to be at a lower (low + no) risk of HIV infection. But studies have shown that the presence of STIs is a high risk factor for HIV transmission.

Never have been tested individuals are found to perceive higher risk of HIV infection. 12.5% and 14.4% of the never been tested respondents perceive high and medium risk of HIV infection; and 6.1% and 13.3% of the ever have been tested respondents perceive high and medium risk of HIV infection respectively.

Table 4.7 levels of risk perception by the sexual experiences of respondents

Sexual experiences of respondents		Level of risk perception of HIV infection				Total
		High	Medium	Low	No	
Ever had sex	Yes	59(17.1%)	80(23.2%)	102(29.6%)	104(30.1%)	345
	No	7(2%)	17(4.9%)	151(43.1%)	175(50%)	350
No. of sex partners ever had	One	16(8.5)	29(15.3)	64(33.9)	80(42.3)	189
	Two	4(6.3)	26(40.6)	20(31.3)	14(21.9)	64
	Three	15(48.4)	4(12.9)	12(38.7)	0	31
	Four	7(33.3)	9(42.9)	0	5(23.8)	21
	> four	17(42.5)	12(30)	6(15)	5(12.5)	40
Age at first sex	<18 yrs	28(21.2)	41(31)	34(25.8)	29(22)	132
	>=18 yrs	31(14.6)	39(18.3)	68(31.9)	75(35.2)	213
Age gap between partners	< 5yrs	26(13.5)	30(15.6)	78(40.6)	58(30.2)	192
	>= 5yrs	31(20.3)	47(30.7)	22(14.4)	43(28)	153
Ever had sex with CSW	Yes	17(47.2)	14(38.9)	2(5.6)	3(8.3)	36
	No	43(13.9)	65(21)	100(32.4)	101(32.7)	309
Ever used condom	Yes	41(37.6)	52(27.1)	51(26.6)	52(27.1)	192
	No	8(5.2)	15(9.8)	65(42.5)	75(49)	153
Ever had STI	Yes	14(35)	11(27.5)	6(15)	9(22.5)	40
	No	52(7.8)	87(13.1)	248(37.2)	279(41.9)	666
Knowledge of HIV status	Tested	21(6.1)	46(13.3)	126(36.4)	153(44.2)	346
	Not tested	45(12.5)	52(14.4)	128(35.6)	135(37.5)	360

Note that numbers in parenthesis are percentages

source: Author's Field Survey Result

CHAPTER FIVE

FACTORS AFFECTING RISK PERCEPTION OF HIV INFECTION

In this chapter the effects of factors that have suspected relationship to risk perception of HIV infections among the young adults have been explored using both bi-variate and multivariate regression analysis. Evidence has shown that the over all risk perceptions of HIV infection of the respondents are shaped by risk related factors such as demographic, socio-economic and cultural factors.

5.1 Bivariate analysis

Risk perception of HIV infection among young adults varied under the influence of various factors. Under this section the suspected relationship between the dependent variable and the selected independents were examined by the Pearson chi-square test. This test gives a preliminary foothold for further investigation of independent variables to see their net effects. A higher value of Pearson chi-square and small value of p (<0.01) shows the presence of causal association between the dependent and its specified predictor.

5.1.1 Demographic and Socio-economic Characteristics and Risk perception of HIV Infection

The dependent variable considered here was risk perception; the lists of variables included in the analysis were age of the respondents, sex, educational level, exposure to media and sex film, religiosity and monthly income. The causal association between the dependent and independent variables is presented in table 5.1.

Table 5.1 Demographic and Socio-economic Characteristics, and perceived level of HIV risk among young adults, Dessie, 2008

Respondents' characteristics		Perceived risk of HIV infection		X^2	p-value
		Lower chance (Low Risk + No Risk)	Higher chance (High +Medium Risk)		
Age in completed year	15-19	244(83.8%)	47(16.2%)	32.519	0.000
	20-24	220(78.3%)	61(21.7)		
	25-29	79(59%)	55(41)		
Sex	Male	290(81%)	68(19%)	6.853	0.009
	female	23(72.7)	95(27.3%)		
Educational level	< grade 8	69(73.4%)	25(26.6%)	4.185	0.242
	Grade 9-10	179(75.8)	57(24.2%)		
	Grade 11- 12	205(81%)	48(19%)		
	>12 grade	90(73.2%)	33(26.8%)		
Exposure to media	Daily	158(80.2%)	39(19.8%)	22.919	0.000
	Most often	154(87%)	23(13%)		
	Occasionally	96(72.7)	36(27.3%)		
	Rarely	115(66.9%)	57(33.1%)		
	Never	20(71.4%)	8(28.6%)		
Exposure to sex film	Ever seen	204(70.3%)	86(29.7%)	11.954	0.001
	Never seen	339(81.5%)	77(18.5%)		
Religiosity	Daily	196(81.7%)	44(18.3%)	17.311	0.002
	About once a week	185(80.4%)	45(19.6%)		
	About once a month	55(76.4%)	17(23.6%)		
	About once a year	45(64.3%)	25(35.7%)		
	Never	62(66%)	32(34%)		
Work status	Working	164(69.5%)	72(30.5%)	10.993	0.001
	Not working	379(80.6%)	91(19.4%)		
Monthly income	<100 birr	305(82.2%)	66(17.8%)	12.359	0.000
	>=100 birr	238(71%)	97(29%)		
Drinking alcohol	At least once in a week	33(51.6%)	31(48.4%)	25.469	0.000
	Less than once in a week	510(79.4%)	132(20.6%)		

Source: Author's Field Survey Result

Note: numbers in parenthesis indicates percentages

X^2 = Chi-square

P-value=Significant level at P<0.05

Age: it is obvious that older youths are more likely than younger youths to have had sex. In addition, a positive relationship between age and perceived risk of HIV has been found in South Africa (Macintyre K.2004). The result of this study also shows that, age is one of the predictor variables as it has association with the dependent variable at (x^2=32.519; P<0.01). The proportion of participants that had higher risk perception shot from 16.2% in the age group 15-19 to 41% in the age 25-29 years. Therefore, from this result we can say that risk perception increases as age increases.

Sex is one of the predictor variables and has association with the dependent variable at (x^2=6.853; P<0.01). The proportion of females who perceive higher risk of HIV infection is higher than that of males (i.e, 27.3% and 19%, respectively). Therefore, we can say that females have a higher risk perception of HIV infection than males and this result is supported by the findings of Maharaj P. (2004).

Educational Level: Education was expected to be an important protective factor leading to later age at first sex and lower the level of risk perception. However in this study, it has no association with perceived chance of HIV infection as revealed in the chi-square (x^2=4.185; P>0.05). The possible explanation for this might be the fact that more than 85% of the respondents have an education level of grade 9 and more as a result of which they might have similarities in their sexual behavior.

Exposure to media: The mass media plays a major role in increasing awareness and knowledge of various aspects of life and is very vital in bringing about behavioral change both at individual and societal level. This variable was statistically significant in explaining differences in perceiving the risk of HIV infection among the respondents in this study. The Chi square test(x^2=22.919; p<0.01) revealed that there is association between respondent's exposure to media and risk perception of HIV infection.

Exposure to sex film and magazine was found to be a significant variable to predict the level of risk perception of HIV infection. The chi square test(x^2=11.954; p<0.01) showed that there is association between the dependent and this particular variables.

Religiosity: of participants show significant association with perceived risk of HIV infection at (x^2=17.311; p<0.01). The proportion of those who never attend religious services are more likely to perceive higher risk of HIV infection than those who attend regularly (34% Vs 18.3%). Those respondents who attended religious services once or twice a week were found to perceive lower risk of HIV infection when compared to all others.

Work status: an attempt was made to see whether or not there is any associations between ones work status and level of risk perception of HIV infection. The chi square test of association revealed that(x^2=10.993; p<0.01) there was an association between respondents involvement in some form economic activities.

Monthly income: this variable has also shown the presence of statistical association with perceived risk of HIV infection with a chi square value of x^2=12.359; at P<0.01. The result of this study indicated that the risk perception of HIV infection increased as their monthly income decreased.

Drinking alcohol: was found to have an association with risk perception of HIV infection as expected. As revealed in the chi square test(x^2=25.469; p<0.01) , 48.4% of those respondents who drink alcohol at least once in a week perceive higher risk of HIV infection , while only 20.6% of those who drink alcohol less than once a week perceive higher risk of HIV infection.

5.1.2 Sexual Behavior and Risk Perception of HIV Infection

In this section respondent's sexual experience, number of sex partners, age at first sex, age gap between partners, ever having sex with CSW, ever used condoms, ever had STI, and ever having an HIV test were treated as independent variables to examine their relationship with the dependent variable. The bivariate results of these independent variables are presented in Table 5.2.

Ever had sex: is an expected strong predictor variable of risk perception of HIV infection. As expected the chi square test(x^2=106.76; p<0.01) depicts that 40% of those respondents who ever had sex perceive higher chance of HIV infection, while only 6.9% of those respondents who never had sex perceive higher chance of HIV infection.

Number of sex partners; is one of the expected variables to influence the dependent variable. The chi square result(x^2=54.218; p<0.01) also indicates that there is a very good association between the two variables. As the number of sex partners raises from one to four and above their risk perception of HIV infection increases.

Age at first sex; is another predictor variable believed to have an influence on ones own risk perception of HIV infection. However, the results of Pearson's chi-square test(x^2=4.644; p>0.05) indicated that there is no significant association between the dependent variable and age at first sex.

Age gap between partners; is a significant variable to influence the level of risk perception of HIV infection. The chi-square result (x^2=5.488; P<0.05) shows the presence of causal association between substance use and the dependent variable.

Sex with CSW; As expected the respondent's history of ever having sex with CSWs has a strong association with the dependent variable. The result of Pearson's chi-square test ($x^{2=}$ 34.238; p<0.01) indicated that more than 85% of those respondents who ever had sex with CSW perceive higher risk of HIV infection. However, more than 14% of the respondents who ever had sex with CSW perceive lower risk of HIV infection.

Condom use; has a highly significant association with the dependent variable. As shown in the chi-square test(x^2=90.679; p<0.01). About 53% of the respondents who have the experience of using condom are found to perceive lower risk of HIV infection.

Ever having STI; it is obvious that the presence of an STI has an impact on the transmission of HIV. The chi square test(x^2=32.535; $p<0.01$) also show that there is a significant association between the respondent's history of ever having STI and the level of risk perception of HIV infection.

Knowledge of HIV status; is another predictor variable that has a significant association with the respondent's level of risk perception of HIV infection. As can be seen from the table, the chi square test result (x^2=5.298; $p<0.05$) shows that respondents who have never been tested for HIV perceive higher risk of HIV infection than those who had HIV test.

Table 5.2 Chi-square test between behavioral factors and risk perception of HIV infection among young adults in Dessie,2008

Sexual behaviors		Perceived chance of getting HIV		X^2	P-VALUE
		Lower risk	Higher risk		
Ever had sex	Yes	207(60%)	138(40%)	106.76	0.000
	No	326(93.1%)	24(6.9%)		
No. of sex partners ever had	One	144(76.2%)	45(23.8%)	54.218	0.000
	Two	34(53.1%)	30(46.9%)		
	Three	12(38.7%)	19(61.3%)		
	Four	5(23.8%)	16(76.2%)		
	> four	12(30%)	28(70%)		
Age at first sex	<14 yrs	9(60%)	6(40%)	4.644	O.200
	15-19 yrs	133(56.4%)	103(43.6%)		
	20 –24yrs	62(68.9%)	28(31.1%)		
	>24 yrs	3(75%)	1(25%)		
Age gap between partners	< 5 years	136(70.8%)	56(29.2%)	5.488	0.019
	>= 5years	121(79.2%)	32(20.8%)		
Ever had sex with CSW	Yes	5(14.3%)	30(85.7%)	34.238	0.000
	No	202(65.4%)	107(34.6%)		
Ever used condom	Yes	103(52.6%)	93(47.4%)	90.679	0.000
	No	83(54.3)	70(45.7%)		
Ever had STI	Yes	16(40%)	24(60%)	32.535	0.000
	No	527(79.1%)	139(20.9%)		
Knowledge of HIV status	Tested	279(80.6%)	67(19.4%)	5.298	0.021
	Not tested	264(73.3%)	96(26.7%)		

source: Author's Field Survey Result

5.2 Multivariate analysis

As it has been indicated in the review of related literatures and bivariate analysis; lots of demographic, socio-economic, socio-cultural and behavioral variables have relationship with risk perception of HIV infection. Logistic regression analysis was carried out in order to determine the predictors of perceived chance of getting HIV\AIDS. The dependent variable which was categorized into high risk, medium risk, low risk and no risk was converted into a numerical scale, with the following values; 1(high risk), 2(medium risk), 3(low risk) and 4(no risk). These were later regrouped into lower risk (low risk + no risk) and higher risk (high risk + medium risk) categories.

Applied to the current study, regression analyses were used to predict the likelihood that respondents would demonstrate their level of risk perception.

Binary logistic regression was used to see the net effects of each risk related factor on the dependent, by controlling the effects of other variables. The dependent variable was level of risk perception of HIV infection coded as dummy of 0 (lower level of risk perception of HIV infection) and 1(higher level of risk perception of HIV infection). Those variables that show significant relationship in the bivariate analysis were entered into logistic regression. The variables included in the model were sex, age, education level, marital status, monthly income, exposure to media, alcohol use, religiosity, ever having sex, sex with CSW, age at first sex, number of sex partners, age gap between partners, and respondent's history of condom use, having HIV test and ever having contracted with STI. The results of the analysis are discussed below.

Men and women do not evaluate their risk of contracting HIV simply on the basis of their own sexual behavior. Other factors, such as whether persons perceive themselves at risk because of the sexual behavior of their partners, may also influence risk perception of HIV infection (Pranitha P., 2004). The multivariate analysis results of this study also show that sex is a significant variable to predict perceived risk of HIV infection. Being female is found to be a risk factor for perceiving higher risk of HIV infection. As can be observed from Table 5.3 females are 3.418 times more likely to perceive higher risk of HIV infection than males.

It is obvious that older youths are more likely than younger youths to have had sex. In addition, a positive relationship between age and perceived risk of HIV has been found in a study in South Africa (Macintyre K.2004). However, results of this study shows that age is not a significant predictor of the perceived risk of HIV infection. But, it was expected that those respondents in the older age group (25-29) are more likely to perceive higher risk of HIV infection compared to respondents in the younger age group (15-19), for the reason that as age of the respondents increase they are more likely to practice sex; whether it is safe or risky.

Education was expected to be an important factor to later age at first sex and lower the level of risk perception. Even though educational level was found to be associated with the dependent variable in the chi square test, it is not found to be a statistically significant predictor of perceived risk of HIV infection in the logistic regression model.

Monthly income is another insignificant variable to determine risk perception of HIV infection among the respondents. The current study shows that the relative risk of monthly income on risk perception is not considerable. The mass media plays a major role in increasing awareness and knowledge of various aspects of life and is very vital in bringing about behavioral change both at individual and societal level. Exposure to media has an effect on risk perception of HIV infection among the respondents of this study. The multivariate analysis result shown that the likelihood of perceiving higher risk of contracting HIV reduces as the respondents become more media attendants. Those respondents who have better exposure to Medias (like television, radio and newspaper) are 59.2 % less likely to perceive higher risk of HIV infection.

Religiosity of respondents is another important predictor variable that show significant relationship with the dependent variable at $p<0.05$. The multivariate result of this study have also shown that, respondents who did not attend the religious services regularly or at all are 2.153 times more likely to perceive higher risk of HIV infection than those who attend religious services at least once or twice a week.

Another unexpected result was the relationship between risk perception and alcohol use. Studies on sexual behavior have shown that the use of alcohol increases the likelihood of engaging in risky sexual behavior (Tamang et al 1998). However, the result of the present study contradicts this finding. In this study alcohol use makes no difference in the level of risk perception.

The odds of the level of risk perception of HIV infection among the respondents are significantly associated with their sexual experience with CSW. The result indicated that, the likelihood of those respondents who ever had not sex with CSW is 73.7% less likely to perceive higher risk of HIV infection than those who had sex with CSW. Regarding age at first sex, compared to youth who initiate sex at an early age youth who delay sex spent fewer years of their lives at risk of HIV infection (Kermyt, 2007). The result of the multivariate analysis of this study also showed that those respondents who begin sex after age 18 years are 64.2% less likely to perceive higher risk of HIV infection than those who began sex earlier.

Reported risk perception was also significantly associated with the number of life time sex partners respondents ever had. Regarding the effect of respondent's number of life time sex partners on the dependent variable, the multivariate results show that it has strong relationship with the dependent variable. Those respondents who reported more than one sex partners are 3.384 times more likely to perceive higher risk of HIV infection than those who had only one sex partner.

Concerning the effect of the maximum age difference between the respondents and one of their sex partners, it was found to have strong effect on the perceived level of HIV infection. The logistic regression model shows that respondents who had sex with partners whose age differs by a minimum of 5 years from them are 2.045 times more likely to perceive higher risk of HIV infection than those respondents ever having sex partners less than five years older or younger than themselves.

It is also important to note that perception of risk is also likely to be influenced by condom use (Pranitha M., 2004). Similarly, Condom use was found to be another predictor variable that explains variation in the likelihood of risk perception of HIV infection in this study. As can be observed from the logistic regression model respondents who had used condom consistently or at all are 53% less likely to perceive higher risk of being infected by HIV than the non users.

Having another STI both make HIV positive persons more infectious and make HIV negative persons more susceptible to infections. Some STIs increase the replication of HIV (Iversen., 2002). In this study ever having STI is one of the predictor variables which is found to have a significant effect on the dependent variable. Respondents who had never been contracted by STIs are 74% less likely to perceive higher risk of HIV infection than those who ever had STI.

Knowledge of HIV status helps HIV-negative individuals to make specific decisions to reduce risk and increase safer sex practices so that they can be less susceptible to HIV infection. For those who are HIV positive, knowledge of their status allows them to take action to protect their sexual partner, to access treatment and to plan for the future (EDHS, 2005). A study in South Africa depicts that young men who had been tested for HIV were significantly more likely than those who had not been tested to have used a condom during their recent sexual intercourse (p=0.001) (Ellen S. et al., 2006). Similarly in the present study, knowledge of HIV status is found to be a strong predictor variable to influence the level of risk perception of HIV infection among the respondents. Those respondents who had never been tested for HIV are 2.772 times more likely to perceive higher risk of HIV infection than respondents who took VCT.

Table 5.3 Logistic Regression Results on the predictor variables of perceived risk of HIV Infection among young adults in Dessie; 2008

covariates		B	S.E	Sig.	Exp(B)
Sex	Male (RF)				
	Female	1.229	0.37	0.001	3.418
Age	15-19(RF)				
	20-24	-0.208	0.42	0.622	0.812
	25-29	0.492	0.49	0.316	1.636
Marital status	Never married(RF)				
	Ever married	0.778	0.41	0.055	0.459
Level of education	<= grade 8(RF)				
	Grade 9-10	0.001	0.47	0.999	1.001
	Grade 11-12	0.053	0.48	0.912	1.054
	>grade 12	-0.445	0.53	0.397	0.641
Monthly income	<=100 birr(RF)				
	> 100 birr	-0.435	0.33	0.185	1.545
Exposure to media	Not exposed (RF)				
	Exposed	-0.896	0.31	0.004	0.408
Alcohol use	At least once a week(RF				
	Less once a week	-0.347	0.45	0.444	0.707
Religiosity	Religious(RF)				
	Non-religious	0.767	0.3	0.010	2.153
Sex with CSW	Yes(RF)				
	No	-1.334	0.58	0.021	0.263
Age at first sex	< 18 years(RF)				
	>= 18 years	-1.027	0.33	0.002	0.358
No. of sex partners	1 partners (RF)				
	> 1 partners	1.219	0.34	0.000	3.384
Max. age difference	< 5 years(RF)				
	>= 5 years	0.716	0.32	0.026	2.045
Ever used condom	No (RF)				
	Yes	-0.757	0.35	0.029	0.469
Ever had STIs	Yes (RF)				
	No	-1.344	0.47	0.004	0.261
Ever took VCT	Yes(RF)				
	No	1.02	0.31	0.001	2.772

source: Author's Field Survey Result, 2008

Note: RF=reference category

ß = represent the increase or the decrease in the log odds of occurrence of risk perception

P-value= Significant level at P<0.05

Exp (ß) =indicates the multiplicative estimates in the odds of risk perception of young adults for a unit change in the predictor variable when the effects of others is statistically controlled.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Summary

The primary objective of this paper is to examine the relationship between risky sexual behaviors and risk perception of HIV infection among young adults aged 15- 29 years in Dessie town. Having correct assessment of personal risk of HIV infection is important for the target population to take appropriate measures to protect themselves against HIV/AIDS.

This study used data from a survey conducted in the city of Dessie to explore the risk perception of HIV infection among young adults aged 15 – 29 years. The results of this study provide an insight for understanding the relationships between the existing sexual behavior and level of risk perception. So that programme interventions can be designed accordingly. A descriptive analysis of respondents' socio- economic, demographic and behavioral factors was made to obtain a general description of sexual behavior and risk perception of HIV infection. Logistic regression analysis was also applied to examine the strength of association that each variable has with the perceived risk of HIV infection.

This study depicted that 48.9 percent (345 participants) of the respondents reported ever having sex; the percentage was slightly higher among males (49.3%) than among females (48.5%). Among the respondents who ever had sexual intercourse, more than two-third (68.4%) began sex in their age 15- 19, of which the proportion of women (74.6%) is greater than that of men (64.3%).The median age at first sex was about 18 years. However, the FGDs which were conducted separately by sex confirmed that females start sexual intercourse at earlier age (16 years) than their male counter parts (18 years). Moreover, among those respondents who ever had sex, about 156(45.2%) had at least 2 sexual partners.

Several studies have shown that the risk of HIV infection increases with the number of ones sexual partners (Hunter, et al., 1994; De Zoysa et al., 1996). Men and women who engaged in multiple sexual partnerships are directly at risk of HIV infection because of their own sexual behavior. Respondents with multiple sexual partners in this study have an

elevated risk of HIV infection and are therefore defined as "high risk". Some of the male respondents who were at a high risk of HIV infection stated that they were very concerned about HIV and were forthright in declaring that they have felt at risk because of their own sexual behavior. It would seem that it is relatively common for men in the study area to have multiple sexual partners.

Slightly more than 56 percent of sexually experienced participants ever used condom at least once. However, only minority (32.5%) of sexually experienced participants reported having used condom during their first sexual encounter. Condom which have dual way of protection, do not appear to be used consistently. Only 25.5 percent of sexually experienced participants reported that they always used condom with their sexual partner. Negative attitude towards condom, cultural influence, less knowledge about how to use condom properly, and fear of loosing sexual partner were the main reasons raised by the discussants of the FGDs for the low level use of condom.

Knowledge and awareness about HIV is very high. Correct knowledge is generally higher among males than girls. However, a considerable proportion of the respondents have some form of misperceptions about the possible modes of transmission of HIV/AIDS and the possible treatments of the diseases. Although the respondents of this study reported that fairly low proportions of the respondents perceive higher risk of HIV infection, both the questionnaire and FGD results depict that risky sexual activities are common among young adults in Dessie.

Given that risky sexual behavior among males or vice-versa it is translated into risk for the opposite sex. It is surprising that significantly higher proportions of females (27.3%) perceived themselves to be at a higher HIV risk compared to males (19%). Yet higher proportions of males are involving in risky sexual behavior. This situation is however not unique to Dessie as many studies conducted particularly in countries where HIV is prevalent have shown that higher proportions of women than men perceive themselves as being at a higher HIV risk (Richard K. et al.,2007; Pranitha .,2004). A study in Uganda has shown that men has twice as likely as women to bring an HIV infection into a marriage,

emphasizing that the risk of HIV and other STIs for married women is more likely to come from their husbands' behavior than from their own (Kengeye, et al.,1999).

6.2 Conclusion

The HIV pandemic has prompted massive efforts to increase awareness of the risk of HIV infection

Behavior of young people in Dessie can be expressed in two different categories. The first one is those who have risky sexual behavior but consider themselves as being at low or no risk of contracting HIV. And those youths who judge their chance of being infected by HIV consistent with their reported sexual behavior. Eventhough the majority of the respondents in this study perceived themselves as being at little or no risk of HIV infection; results from their reported sexual behavior indicate that a significant proportion of the respondents involve in risky sexual activities that could expose them to HIV infection.

There are a number of factors that are found to determine the level of risk perception of HIV infection among young adults in Dessie. This study set out to explore the link between socio-economic, demographic, and behavioral factors with the level of risk perception of HIV infection among young adults in Dessie town.

This paper set out to investigate the link between some of the background characteristics of respondents and their self-assessment of risk of HIV infection. Out of 15 independent variables that were taken to determine the level of risk perception of HIV infection eight were socio-economic and demographic while the remaining seven were related to the sexual behavior of the respondents themselves. Among these independent variables only three of the socio-economic and demographic variables (sex, exposure to media, and religiosity) and all the seven variables related to sexual behaviors were found to have significant effects on the personal risk perception of HIV infection of the respondents. Results have shown that risky sexual behaviors (multiple sexual contacts, sex with CSW, inconsistent use or non use of condom, age difference with sex partner, lower age at first sex, ever having STIs and never taking VCT) translate persons to a higher level of risk perception. However, for the sake of prioritizing the determinant factors of risk perception in this study, number of life time sex partners, sex, knowledge of HIV status, age at first

sex, ever having an STI, and exposure to media are found to be strong predictors of risk perception in their order.

Even in the face of existing perception and knowledge of self-risk, risk taking behaviors (early age at first sex, multiple sex partnership, sex with high risk partners such as CSW, non use of condom for every act of sexual intercourse, low HIV test service uptake, etc) is still high.

The belief that many sexually active respondents are not at risk of HIV infection may result in their failure to adopt preventive behavior and therefore increase their susceptibility to HIV infection. Interventions have an important role to play in improving their perception of risk. These results further emphasize the need for a holistic approach in addressing the social, economic and contextual factors that continue to put many young adults at risk of HIV infection.

6.3 Recommendations

Based on the results obtained and the conclusion drawn, the following recommendations are forwarded.

- In this study it was found that 68.4% of the respondents began sex in the age group 15-19, of which the proportion of women (74.6%) is greater than that of men (64.3%). Even though the majority of the respondents began sex by ages 18 (23.2%) and 17 (19.4%) years, 10.7% of the respondents had their first sexual debut before their 15^{th} birth day. Therefore government and non governmental organizations found in the town, particularly those working on HIV\AIDS might work on interventions that can help in rising age at first sex as well as on appreciating safer sex.

- The social, political and economic status of women as well as the attitude and perceived role of women in a society is an important factor of collective vulnerability to HIV\AIDS. The transmission and impact of HIV\AIDS is skewed towards women. That is why female respondents of this study perceive higher risk of being infected by HIV. Hence, any intervention in HIV\AIDS has to be gender sensitive: an active involvement of young females in the campaign against the pandemic.
- Knowledge of HIV status helps HIV-negative individuals to make specific decisions to reduce risk and increase safer sex practices so that they can remain disease free. For those

who are HIV positive, knowledge of their status allows them to take action to protect their sexual partner, to access treatment and to plan for the future. The current study also shows that young adults who have ever been tested are less likely to perceive higher risk as they may bring about behavioral change through the counseling service they get. Hence, the concerned bodies of the issue such as the health institutes and other organizations working in the town have to increase their advocacy on VCT.

- Access to media was found to affect the risk perception of HIV intervening through sexual behavior of the respondents. Therefore, the concerned government body have better to strengthen the media coverage of "Tossa" Radio Station for raising awareness about the epidemic and enhancing behavioral change among the residents of Dessie, particularly to the young adults. Furthermore establishing and\or increasing mini-media services for both school and out of school youths may increase access to current and accurate information about the disease.
- More than 50 percent of participants in the study area have not yet started sexual intercourse. Most of these sexually inactive respondents reported that the major reasons for not ever having sex were religiosity, fear of HIV, giving priority to their main concerns, such as education and age. Therefore FBOs have the comparative advantage of unleashing the potentials and initiatives of their followers through their well-structured and cohesive system. The respective levels of the Ethiopian Orthodox Church, the Ethiopian Islamic Affaire, and others can play key roles in IEC\BCC (promoting abstinence before marriage and faithfulness after getting married, counseling (spiritual support), and promoting VCT before marriage. Other organizations working in the prevention and control of HIV (HAPCO, EFGA, OSSA, Abyssinia, Netsebrak and the like) have to continue on their previous activities of HIV\AIDS prevention and control in a progressive manner.
- This study tried to examine the risk perception of HIV infection among young adults; however the independent variables considered here are those directly related with the respondents' sexual experiences due to time and resource limits. Therefore further research by including variables related to knowledge about HIV/AIDS and attitudes towards PLWHA is desirable, because risk perception is the cumulative result of many factors including misperceptions, behavior and knowledge.

References

Adih, W and Alexander, C (1999) Determinants of condom use to prevent HIV infection among youth in Ghana, Journal of Adolescent Health 24(1)

Brooke Grundfest Schoepf (2006) AIDS, History and struggles over meaning: HIV/AIDS in Africa,

Caldwell, J.C, Orubuloye, I.O, and Caldwell, P. Obstacles to Behavioral Change to lessen the risk of HIV infection in the African AIDS epidemic

Campbell, C (1997) Migrancy, masculine identities and AIDS: the psycho-social context of HIV transmission on the south African gold mines; Social Science and Medicine 45(2)

CSA (2005) Ethiopian Demographic and Health Survey

CSA (2004) Statistical Abstract, 2004.

Encarta (2006) Microsoft Encarta Encyclopaedia standard.

Dejene Getahun (2005) Adolescent Sexual Behavior and Risk of HIV Infection in Urban Ethiopia: The case of Awassa City , Msters thesis, AddsAbaba University

De Zoysa, I.,Sweat,M. & Denison,J.A.(1996) Faithful but fearful: Reducing HIV Transmission in Stable Relationships. AIDS 10(supplement) pp. 197-203.

Eggleston.E, (2000) Consistency of Self-Reports of sexual activity among adolescents in Jamaica. International Family Planning Perspective; 26(2): 79-83.

Grahm J (2000) Secular Trend in Age at Menarche in China: a case study of two rural countries Anhui provice JBS; 31(2)

Graves, K., and Leigh, B. (1995) The relationship of substance use to sexual activity among young adults in the United States. Family Planning Perspectives, 27:18-22.

Hunter,D., Maggwa,B., Mati, J., Tukei,P & Mbugua S.(1994) Sexual Behavior,Sexually Transmited Diseases, male circumcision and risk of HIV infection among women in Nirobi,Kenya. AIDS 8(1), PP. 93-99.

ILO (2002) HIV/AIDS and the world of work

Iversen,A. (2002).Genital Shedding in Women. AIDS Patient Care;13(12): 695- 705

Jemmott, L. S., & Jemmott, J. B. (1992). Family structure, parental strictness, and Sexual Behavior among inner-city Black male adolescents. Journal of Adolescent Research, 7(2), 192-207.

Joint United Nations Programme on HIV/AIDS, World Health Organization, AIDS Epidemic Update, Geneva: UNAIDS, 2006.

Josep H R. Oppong and Ezekiel Kalipen; (2006) Perception and Misperceptions of AIDS in Africa: HIV and AIDS in Africa beyond epidemiology.

Kermyt G Anderson, Ann M. Beutel and Brendan Maughan-Brown (2007) HIV Risk Perceptions and First Sexual Intercourse Among Youth in Cape Town South Africa : International Family Planning Perspectives vol.33, no.3

Kiragu K, (2001). Youth and HIV/AIDS: Can we Avoid Catastrophe? Population Reports, series L, No. 12

Langer, L. M., Warheit, G. J., and McDonald, L. P. (2001), Correlates and Predictors of Risky Sexual Practices among a multi-racial/ethnic sample of university students. Sexual Behavior and Personality, 29(2), 133-144.

Maharaj. P (2004) Perception of Risk of HIV Infection in Marital and Cohabiting partnerships; African journal of AIDS research 3(2)

Macintyre K (2004) Understanding Perception of HIV risk among Adolescents in Kwazulu-Natal, AIDS and behavior, 8(3)

Macintyre K, Brown L and Soster S (2001). "It is not what you know, but who you know", Examining the Relationship Between Behavior Change and AIDS Mortality in Africa, AIDS Education Prevention 13(2)

Mahesh Puri (2002) Sexual Risk Behavior and Risk Perception of Unwanted Pregnancy and Sexually Transmitted infection among young factory workers in Nepal

Miller, K. S., Forehand, R., and Kotchick, B. A. (2000). Adolescent Sexual Behavior in two ethnic minority groups: A multi-system perspective , Adolescence, 35(138):313-333.

MOH and FHAPCO, (2006) AIDS in Ethiopia, Technical Document for the Sixth Report.

Ndola P. Leo M, Elizio M, Farnaz V., and Mrk S (2006). Relationships between HIV risk perception and condom use: evidence from a population based survey in Mozambique; International Family Planning Perspectives, 32(4).

Negussie Taffa (1998), Sexual Activity of out-of-school youth,and their knowledge and attitude about STDs and HIV\AIDS in southern Ethiopia; Ethiopian Journal of Health Development, 12(1).

Njeri Mbugua (2006) Strategies for Prevention of Sexual Transmission of HIV/AIDS among adolescents: The case of high school students in Keya, 2006

Nzioka, C. 2001. "Perspectives of Adolescent boys on the risks of unwanted pregnancy and Sexually Transmitted Infections: Kenya." In Reproductive Health Matters 9(17): 108-117.

O.D. phorano, K Nthomang, D Ntseane (2005); Alcohol abuse, Gender based Violence and HIV/AIDS in Botswana: Journal of social aspects of HIV/AIDS 2(1).

Office of Sustained Development for Africa-OSDA, 2002, "Tips for developing life skills curricula fro HIV prevention Among African youth; Technical paper No. 11.

Pathfinder International (1999).Adolescent Reproductive Health in Africa: Path in to the next century. Washington D.C.

Population Reference Bureau (2004): Meeting Young Women's Reproductive and Sexual Needs.

Prata,Ndola et al (2006), Relationship between HIV risk perception and condom use: evidence from a population-based survey in Mozambique ; International Family Planning Perspective, 32(4).

Shabbir Ismael,Habteab Bitsuamlak and Kahsu Alemu(1997)."High Risk Sexual Behaviors for STD\HIV, pregnancies and contraception among high school students in a rural town ,
north western Ethiopia; Ethiopian Journal of Health Development; 11(1).

Sieving, R., Hellerstedt, W., McNeely, C., Fee, R., Snyder, J., and Resnick, M. (2005). Reliability of self-reported contraceptive use and sexual behaviors among adolescent girls, The Journal of Sex Research, 42(2), 159-166.

Tesemma Bekele(2003).Sexual Behavior and Its Correlated, the case of Young people in Adama(Nazareth),Regional State of Oromia. Unpublished Master Thesis. Addis Ababa University.

Tourangeau,R., Rips,L, J., and Rasinki,K. 2001 Survey Response, New York;
Cambridge University Press.

UNAIDS (2001) Children and Young people in a world of AIDS.

UNICEF (2002), The State of the World's Children, New York.

UNICEF, USAIDS and WHO (2002).Young People and HIV/AIDS Opportunity Incises

UNICEF Joint UNAIDS and WHO (2002). Young People and HIV/AIDS 2002

UNAIDS (2004) Report on the global AIDS epidemic, fourth report, 2004

UNITED Nation (2005) Designing household survey, practical guideline, department of economic and social affaire statistical division F. no 98

UNFPA (2002) Technical Report, country technical service team, Addis Ababa, Ethiopia.

Verga, C (2001) coping with HIV/AIDS in Durban's commercial sex industry. AIDS care 13(3)

WHO (2000) Adolescent friendly health services: an agenda for change. Website http://www.who.int/child-adolescent-health, 2000.

Wellings K. Field J. Johnson A, Wardsworth J. Sexual behavior and lifestyle in Britain: the National Survey of Sexual Attitudes and lifestyles; Penguim Books Ltc,27 London, England 1994.

WHO (2006) Preventing HIV/AIDS in young people a systematic review of the evidence from developing countries WHO Technical Report series, Geneva; No 938

ADDIS ABABA UNIVERSITY

COLLEGE OF DEVELOPMET STUDIES

INSTITUTE OF POPULATION STUDIES

Structured questionnaire for young adults in dessie town

Quesstionnaaire no_____

Kbele_____

Inclusion criteria; one young adult in the age (15-29 years) from selected households

Informed confidentiality and consent

Dear respondents

Good morning/afternoon.

This questionnaire is prepared by a graduate student of Addis Ababa University. The main objective of this study is to investigate factors that affect risk perception of HIV infection among young adults like you. So that the results of the study will be used for better understanding of those determining factors of risk perception, and for appropriate planning of interventions. The information you give will be held confidential (Your name will not be written on this form, and will never be used in connection with any of the information you tell me). Therefore your genuine participation by responding patiently to the questionnaire is highly appreciated. You have the right to skip questions which are not comfortable to you, and you can stop at any time you like. Are you willing to participate in completing the questionnaire?

1. Yes = ok

Thank you for your willingness to participate in filling this questionnaire; continue

2. No = end

Part 1: Socio-economic and Demographic Characteristic's of the Respondents

Item No	Questions	Coding Categories	Code number	Skip to
101	What is your sex? **(No need of asking)**	Male female	1 2	
1o2	How old were you at your last birth day?	_____years old		
103	What is your marital status?	Never married Married Divorced Separated Widowed Other_____	1 2 3 4 5 6	
104	Where were you born	In Dessie Other urban Rural area	1 2 3	
105	If you were born in rural area what was your age when you come to live in Dessie /similar urban area/	----------age in years		
106	Did you attend or are you attending any formal education	Yes No	1 2	Skip to 109
107	Are you attending a day time education now	Yes no	1 2	
108	What is the maximum grade you have completed or learning in?	-----grade/award		
109	What is your ethnic group?	Amahara Afar Tigere Oromo Other	1 2 3 4 5	
110	What is you religion?	Orthodox Islam Protestant Catholic	1 2 3 4	

		Other	5	
111	How often do you attend religious services /events/?	Daily At least once in a week At least once in a month At lest once in a year Not at all	1 2 3 4 5	
112	What is the extent of your exposure to mass media/radio, TV, news paper	Daily Most often Occasionally Rarely No exposure	1 2 3 4 5	
113	Which one do you prefer to listen?	Secular music Religious songs Both	1 2 3	
114	How frequently do you watch movies in cinema hall	Most often Occasionally Rarely Not at all	1 2 3 4	
115	Have you ever seen or read any films or magazines that focused on sex	Yes No	1 2	
116	Are you involving in work?	Yes No	1 2	Skip to 118
117	What is your major occupation?	Daily laborer Formally employed Home servant Other----------	1 2 3 4	
118	How much birr do you earn per month/including parental gifts?	---------amount in birr		
119	Do you drink alcoholic drinks?	Never Rarely Once or twice a week Most often	1 2 3 4	
120	How often do you go to Bars and discotheques?	Never Rarely	1 2	

		Once or twice a week Most often	3 4	
121	How do you perceive the living status of your own or your family	Rich Medium Poor	1 2 3	

Part 2 Sexual behavior of respondents				
Item No	Questions	Coding Categories	Code number	Skip to
201	Have you ever had sexual intercourse	Yes No	1 2	 Skip to 211
202	How old were you when you had sexual intercourse for the first time	---------age in years		
203	Who was your first sexual intercourse partner?	Spouse Fiancé Boy/girl/friend Causal person CSW House servant Forcefully done Other-----	1 2 3 4 5 6 7 8	
204	How old were you first time sexual partner by that time?	------year old		
205	What is the maximum age difference between you and one of your partners?	------years younger or ------years older than me	1 2	
206	How may sexual partners have you ever had?	1 2 3 4 >4	1 2 3 4 5	
207	Have you had sexual intercourse in the past 12 months?	Yes No	1 2	 Skip to 209
208	With how many partners did you have sexual intercourse during the last 12	One person Two person	1 2	

	moths?	Three person Four person Five and above	3 4 5	
209	Have you had sexual intercourse with CSW	Yes No	1 2	
210	Have you ever had sex while either you or your partner was under the influence of alcohol?	Yes No	1 2	Skip to 301
211	If you have never had sexual intercourse what is your reason	Fear of parents Fear of pregnancy For religious reason HIV/AIDS Fear of SIT and Other--------	1 2 3 4 5	

Part 3 Respondents Knowledge about HIV/AIDS

Item No	Questions	Coding Categories	Code number	Skip to
301	Have ever heard about HIV/AIDS?	Yes No	1 2	
302	Have your ever heard about SIT?	Yes No	1 2	Skip to 305
303	Which of SITs have you ever heard about?	Syphilis Gonorrhea Granule inguinal Cancroids Others-----	1 2 3 4 5	
304	Do you believe that the presence of SITs has an impact of HIV infection?	Yes No Not sure	1 2 3	
305	Can a healthy looking person be HIV positive?	Yes No Not sure	1 2 3	
306	How does HIV transmit? (multiple		Yes No	

	answer is possible)	By sexual intercourse	1 2	
		Sharing needles	1 2	
		Mosquito/insect bite	1 2	
		Blood transfusion	1 2	
		From mother to child	1 2	
		Sharing food with HIV+ person	1 2	
		A curse form God	1 2	
		Sharing toilet with HIV+ Person	1 2	
		Others----------	1 2	
307	How can one prevent HIV infection?		Yes No	
		Abstinence	1 2	
		Faith fullness	1 2	
		Condom use	1 2	
		Avoid sex with causal person	1 2	
		Avoid sex with C.S.W	1 2	
		Avoid sharing sharp edge materials	1 2	
		A void untested blood transfusion	1 2	
		Avoid mosquito bite	1 2	
		Avoid kissing	1 2	
		Avoid sharing clothes	1 2	
		Not bitten by mosquito	1 2	
		Other----------		
308	Can a person get HIV by the first time he/she has sex?	Yes	1	
		No	2	
309	Do men and women have equal chance of getting HIV in a single sexual intercourse?	Yes	1	
		No	2	
		Not sure	3	
310	Can HIV/AIDS be treated	Yes	1	
		No	2	
		Not sure	3	

311	Can HIV/AID be cured	Yes No Not sure	1 2 3	

Part 4 Condom use among the respondents

Item No	Questions	Coding Categories	Code number	Skip to
401	Have you ever heard about or seen or used a condom?	Heard about commodes? Seen a condom? Used a condom?	Yes No 1 2 1 2 1 2	 If no skip to 109 If no skip to 109
402	With whom did you used condom?	Spouse Fiancé CSW Causal person Other------	1 2 3 4 5	
403	How often did you used condoms with non regular partners?	Always Sometimes Not used yet	1 2 3	
404	What is you reason for using condoms?	To prevent pregnancy To prevent SIT To prevent HIV/AIDS Other----------	1 2 3 4	
405	Did you use condom the firs time you had sexual intercourse?	Yes No	1 2	
406	Did you use condom in the last 12 months you had sexual intercourse?	Yes No	1 2	 Skip to 408
407	How often did you use condom in the last 12 moths?	Always Sometimes Not at all	1 2 3	
408	Have you used condom in the last intercourse you had?	Yes No	1 2	
409	Do you think that condoms are	Yes	1	

	effective method of preventing HIV?	No Not sure	2 3	
410	What is/are your reason for not or minimum use of condoms?		Yes no	
		Condom not available	1 2	
		Condom are expensive	1 2	
		Ashamed to ask my partners	1 2	
		I did not like it	1 2	
		I wanted to get pregnant	1 2	
		I ashamed to buy condom	1 2	
		I trust my partner	1 2	
		I don't know how to use	1 2	
		It bursts	1 2	
		It decrease satisfaction	1 2	
		My religion prohibit	1 2	
		I was drunk	1 2	
		Other----------		
411	Have you ever had HIV test?	Yes No	1 2	Skip to 413
412	What changes in behavior do you brought after the HIV test?	Abstinence Faithfulness Consistent condom use Avoid any blood contamination Others---------	1 2 3 4 5	
413	What was the reason for not being tested for HIV?	Lack of HIV test facilities Fear of the result Had not sexual intercourse I didn't think over Other----------	1 2 3 4 5	

Part 5 Risk perception of HIV infection

Item No	Questions	Coding Categories	Code number	Skip to
501	Have you ever had contracted with one of the SITs?	Yes No	1 2	
502	Have you ever experienced the following?	 Pain during urination Painful ulcer/genital sore/ Not painful uilcer/genital sore Smelly vaginal discharge Puss discharge from penis Genital swelling Other----------	Yes No 1 2 1 2 1 2 1 2 1 2 1 2	
503	Do you believe that you partner may have sexual contact with someone else?	Yes No Not sure	1 2 3	
504	How often do you use any protection to avoid catching HIV/AIDS?	Never Some times Mostly Always	1 2 3 4	
505	How do you evaluate you risk of being contracted with HIV/AIDS?	High risk Moderate risk Low risk No risk	1 2 3 4	 Skip to 507 Skip to 507
506	Why do you believe high to moderate risk?	 Have many sexual partners Perform unprotected sex Not believe my partners Sex with C.S.W My partner has a positive test result Used contaminated materials	Yes No 1 2 1 2 1 2 1 2 1 2 1 2	
507	Why do you believe that you are at		Yes no	

	low/no risk?	Never had sex	1	2	
		I am faithful to one partner	1	2	
		My partner has no other	1	2	
		partner	1	2	
		Always use condom	1	2	
		properly	1	2	
		Had sex with virgins	1	2	
		No sex with CSW	1	2	
		Not using contaminated material			
		Other ---------- ---			

Thank you very much for your patience to complete this questionnaire

Questions for focus group discussion

1- What do you say about the sexual behavior of young adults in Dessie town for instances:- do they prevent themselves form HIV infection? How do you see the condom use situation? Causal sex practices and contacts with commercial sex workers; are they prevalent among young adults in Dessie? Lets discuss these issues by raising somebody's stories you know and if possible in relation with your own stories.

2- What are the factors that influence risk perception of individuals? Say for instance some people perceive low or no risk while they are involving in high risk sexual activities

3- How do you explain the knowledge of young adults about HIV/AIDS

- Its ways of transmission and
- Prevention methods
- Treatment and cure

4- How do you see the following situations among young adults in relation to HIV risk?

- Multiple sexual partnership/number of sexual partners/
- Age at first sex
- Taking HIV test in relation to behavioral change

5- In your opinion, what are the local practices that could put young adults at risk of contracting HIV/AIDS?

Declaration

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

Girma Tesfaye		16/07/08
Student	Signature	Date

I confirm that this thesis has been submitted with my approval as the supervisor of the same.

Asseja Hailemariam	Assja	16/07/08
Advisor	Signature	Date