ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

ATTITUDES AND PRACTICES ON HIV PREVENTIONS AMONG ADDIS ABABA UNIVERSITY STUDENTS

BY

SEMAN KEDIR OSMAN

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Attitude and Practices on HIV Preventions Among Addis Ababa University Students

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Acronyms

AAII	:	African AIDS Initiative International
AAU	:	Addis Ababa University
AIDS	:	Acquired Immunodeficiency Syndrome
ARRM	:	AIDS Risk Reduction Model
BCC	:	Behavioral Change Communication
BSS	:	Behavioral Surveillance Survey
CDC	:	Centre for Disease Control and Prevention
CSW	:	Commercial Sex Workers
EDHS	:	Ethiopia Demographic and Health Survey
EPHA	:	Ethiopian Public Health Association
EPPM	:	Extended parallel process
FGD	:	Focus Group Discussion
FHI	:	Family Health International
HAPCO	:	HIV/AIDS Prevention and Control Office
HBM	:	Health Belief Model
HIV	:	Human Immunodeficiency Virus
IDI	:	Individual In-depth Interview
IPS	:	Institute of Population Studies
KABP	:	Knowledge Attitude Behavior and Practice
MARCH	:	Modeling and Reinforcement to Combat HIV/AIDS
MOH	:	Ministry of Health
MVA	:	Multivariate analysis
OPD	:	Our Patient department
PPS	:	Probability proportionate to sample size
SCT	:	Stages of change Theory
SPSS	:	Statistical Package for Social Science
SRH	:	Sexually Reproductive Health
STI	:	Sexually Transmitted Infection
TRA	:	Theory of Reasoned Action
UNAIDS	:	United Nations Program on HIV/AIDS
VCT	:	Volunteer Counseling and Testing
VIF	:	Variance Inflation Factor
WHO	:	World Health Organization

Abstract

Focus on prevention programmes will slow down the spread of AIDS. Since university students represent a strategic and vulnerable population, and there is a large need for effective HIV prevention interventions among university students.

The study attempted to investigate attitudes and practices on HIV prevention among Addis Ababa University students. The basic objective of the study was to assess respondents' attitude, their practice on preventive measures against HIV/AIDS; and examined factors affecting attitude and practice of the students related to HIV/AIDS prevention. A cross-sectional survey was employed to carry out the study. The study participants were selected from the target population through multistage sampling. Data were collected from 606 AAU students using survey questionnaire. Two FGDs and In-depth interview were also conducted. To analyze the data, descriptive statistics (Frequency and cross-tab), and logistic regression model was used.

The findings of the study revealed that 207(34.2%) of respondents were sexually experienced. Of these, 144(23.8%) of the respondents had sexual intercourse in the last 6 months. The mean and median age at first sex debut was 17.8 and 18.0 years respectively. About 489(80.7%) did not perceive being as if they are at risk of contracting HIV/AIDS. But 65.5% of the respondent had favorable attitude on HIV prevention. 359(59.2%) of the respondents had experienced at least one of the three HIV prevention practice. Of which, more than half (52.4%) adopted abstinence as top preventive measure. The result also showed that out of the total respondents 47.2% had been tested for HIV/AIDS and more than 80% have willingness to take VCT service for HIV/AIDS. As to the Multivariate analysis result, sex, previous residence, religious participation, pornographic viewing, currently alcohol intake, chewing khat and cigarette smoking were found to be determinant of AAU students' attitude on HIV prevention. Similarly, age, having pocket money, pornographic film show and currently khat chewing were determinants of practices on HIV prevention.

As can be seen from the study result that the majority of the respondent thought as were not at risk of getting HIV/AIDS, suggesting that respondents do not acknowledge personal susceptibility to HIV infection that would necessitate the adoption of protective measures that target university students in Ethiopia.

CHAPTER ONE

INTRODUCTION

1.1 Background

We are now nearing the end of the third decade of the AIDS epidemic. Unfortunately, although we have made enormous progress in prolonging and improving the quality of life of those infected with HIV, we still have neither a cure for, nor a vaccine to prevent this disease. Perhaps most important, it has become increasingly clear that preventing the transmission and the acquisition of HIV must focus upon behavior and behavior change. AIDS is first and foremost a consequence of behavior. It is not who one is, but what one does, that determines whether he or she will be expose themselves or others to HIV (Fishbein, 2000).

UNAIDS has reported that the HIV prevalence is leveling off and there is a fall in the number of new infections globally. These positive changes are a result of the impact of HIV programs and interventions that are taking place worldwide. Although HIV/AIDS is showing a decline, it remains one of the leading obstacles to health and development for poor countries. There are still a huge number of people infected and affected by HIV. In 2007, 33.4 million [31.1-35.8 million] people were estimated to be living with HIV globally, of which 2.7 million [2.4-3.0 million] people became newly infected and 2.0 million [1.7-2.4 million] lost their lives due to AIDS in the same year. Sub-Saharan Africa accounts for 22.4 million [20.8-24.1 million] infections, which is about 67% of the total HIV burden. The number of people estimated to acquire new infections was 1.9million (1.6-2.2 million) accounting for 68% of the total number of new infections. This was noted as a significant reduction in the number of new cases since 2001. However, it was also reported that HIV/AIDS has become the leading cause of death in the region [UNAIDS/WHO, 2009].

Ethiopia is one of the Sub-Saharan African countries most severely affected by HIV/AIDS pandemic. Currently the national adult prevalence rate is estimated at 2.0 percent and an estimated number of 980,000 people are living with HIV/AIDS. An estimated 67,000 lost their lives to AIDS at the end of 2007 [Wikipedia, 2008].

In Ethiopia, higher risk sex among both women and men are most prevalent among those living in urban areas in Addis Ababa, those with a secondary or higher education and those in the highest quintile. Among men, the prevalence of higher risk sex is also notably high among men living in Gambela, Dire-Daw, Harare, Tigray and Afar [EDHS, 2006]. Although there are some encouraging signs, surveillance results indicate that the epidemic is still progressing though at a slower rate than previously predicated (BSS, 2005).

According to the second round HIV/AIDS Behavioral Surveillance Survey in Ethiopia, it was found that 9.9 percent of the in school youth [14.6 % of males and 5.3 % of females] had sexual experience. The mean and medium age of sexual debut among youth was 16 years. Only that 41.8 percent of in school youth who had sex with non-commercial partners reported consistent use of condoms. HIV/ AIDS are affecting young members of the societies especially adolescents between the age of 15 to 24 who are vulnerable and at risk of the disease. It is also estimated that most regular undergraduate university students lie within the age group of 18 to 24. In order to reduce its prevalence, one of the actions set and designed by UNICEF Ethiopia is through the use of intensive engagement of university students in HIV/AIDS prevention and peer education.

A number of studies showed that Acquired Immunodeficiency Syndrome has progressively been on the increase and constitutes a big problem among college and university students, although the extent of the problem is relatively unknown (For example, AAII,2006; Abdinasir et al.,2002; Elias,2009; Getnet, 2009; Teka,1993; Tefera et al.,2004). Evidence showed that most sexual risk behaviors among college and university students might have been acquired through period of campus life. This may be possible due to the life of independence, away from parental control, that often characterizes such setting (Teka, 1993). University students are often viewed as being at high risk for Human Immunodeficiency infection due to their propensity to engage in exploratory behavior and their needs for peer social approval and their sense of non-vulnerability (Beyne et al., 1997).

It is reasonably possible to assure that university students are educated, inspirational, flourished with information, able to practice upon the information they receive and as a result, they are among a low risk population. Nevertheless, practical observation and existing research findings show that for many campus students the opposite appears to be the case (Chetty, 2001 and Kelly,

2001 cited in Abebaw 2008), even if the information is available to them, changing in the behavior of this population is not exhibited.

A cross-sectional study done among Jimma university students revealed that over half (56.3 %) of the students who indulged in unsafe sexual practices did not perceive that they are at risk of HIV infection (Tefera, 2004). Also, a study done among Gonder university students, about one fourth (25.3%) of the study subjects reported being sexually active, of whom 5.2 % were females. The mean age at sexual onset was 17.7 years. One fourth of the sexually active student participants (24.5%) had 2-5 life time partners and 15.3 % more than 5. Only male students reported more than one life time partner. Of sexually active students, 39 (40.6%) had never used a condom and 24 (25%) used condom (EPHA, 2006).

A more recent study involving the general student population of Addis Ababa University estimated that there are more than 60 percent of undergraduate regular students who have experience of sexual engagement at least once during their stay in the university. The major factors which strongly contribute for this high prevalence of the situation include peer or partner pressure, normative pressure of the university, lack of money and initial student's expectations. The same study further explained that, most of them have multiple sexual partnerships either within the university or outside the university experiences double dating with multiple partners. Moreover, the study shows that most of them don't have enough knowledge and awareness about the cause of transmission of HIV virus as well as its prevention mechanisms. For instance, some of them tend not to use condom during their sexual intercourse and don't have the regular tendency for HIV/AIDS counseling and testing (Getinet, 2009).

In another study to assess the reproductive health needs of Addis Ababa University students, respondent were asked to list the common methods of preventing HIV/AIDS they knew. The most common methods mentioned were abstinence, being faithful to their sexual partner/ not sharing sharp material and using condoms consistently. Among the 595 (97.7%) students that responded about the methods of HIV/AIDS prevention, 506 (85.0%) of them knew three or more methods of preventing HIV/AIDS. Most students perceived their HIV infection risk to be either low 25 (41.2%) or none at all 186 (30.5%). On the other hand, 100 (16.4%) did not know their risk level and 56 (9.2%) admitted to be at higher risk of HIV infection (Yordanos, 2008).

In light of this, the students of Addis Ababa university come from all over the nation, and represent a diversified socio-cultural complex because of their relatively low level of maturity and their desire for new experiences, the peer pressure they face, the absence of immediate parental control and change of environment student are exposed to circumstances with possibilities for committing unsafe behavioral patterns that gave risk to HIV infection. As a result university students are at risk of the epidemic on campuses (Yohannes et al., 2006).

Thus, this study intends to contribute bridging the information gap and subsequently to mitigate HIV/AIDS infection at higher learning institutions in general and Addis Ababa University in particular.

1.2 Statement of the problem

HIV/AIDS has brought far-reaching consequences such as pain, loss of life, stigmatization, prejudice and other socio-economic impacts in Ethiopia. Most Ethiopian undergraduate know that sexual intercourse is the most prevalent mode of HIV transmission but get for a variety of reasons, people continue to engage in sexual behavior which are unsafe and could put them at risk of HIV/AIDS infection (Abebe, 2008).

Many university students practice risky sexual behavior as Getinet (2009) explains, risky sexual behavior indeed occurs because institutions of higher learning bring them together in close physical proximity devoid of systematic supervision, large number of adolescents at their peak year of sexual activities and experimentations. Besides, the readily availability of 'khat', alcohol and internet initiated sex by pornographic films together with the divergent level of economic status among the students population make campus an extremely risk-full environment.

Even when many undergraduates are aware that HIV/AIDS is already a major health problem in Ethiopia many seem not to have developed the attitude and behavior that would stop the disease deadly progression. Rather than adopting safe sex practices, Ethiopian undergraduates report having broad sexual network, multiple concurrent sexual partners and casual sex. Undergraduates do not maintain sexual exclusively and seem not to be practicing safer sex which involves a behavioral change in which an individual takes a decision to modify his risky behavior in order to reduce the risk of HIV infection (Abebe, 2008)

Also there are indeed many exciting and enjoyable aspects to being a university student. But the same challenges and changes which make student days potentially so life-enhancing can also present opportunities for risk to intrude. Often, universities are places where students declare their liberty from immediate parental control.

It is well known that any transition or change, however positive, entails a certain amount of stress. Indeed, for some students- especially students coming from regions – these change can add up to what is known as 'culture shock'. This means the disorienting effect of suddenly having to negotiate the new environment without many of the familiar cues, symbols, customs, values or even languages. This can be exciting, but also profoundly full of risk and anxiety-provoking.

University students are coming from all corners of the country- with different socio-cultural contexts. Due to their level of maturity and desire for new experience, the peer pressure they experience, the absence of immediate parental control, the change of environment, and the need to 'fit in,' students are exposed to opportunities that present the possibility of committing unsafe behavioral patterns that give rise to HIV infection.

For instance, a study conducted by Cheru (2009) to investigate factors which aggravate vulnerability of students to HIV/AIDS among Hawassa university students had shown that higher than one third of selected students had a life time sexual intercourse experience and the majority of them were male students but only one fifth of the students had sexual intercourse experience on the last twelve months. The study further showed that nearly one fourth of respondents had more than one sexual partner and most of them were male students. Among female students who had sexual intercourse experience on the last twelve months 43.5 percent reported that their sexual partners were married persons.

Another study done on Addis Ababa university students on HIV/AIDS and reproductive health knowledge, attitude, practice and behavior a significant number of students about 281 reported that they chew khat, drink alcohol, visit night clubs and practice sex either with their regular sexual partners (girl/boy friend) or with commercial sex workers accessible in the surroundings of the university (AAI, 2006).

Most regular undergraduate students of Addis Ababa University are estimated to be within the age of 18 to 25 and it is within this age group that the prevalence of living with HIV/AIDS disease becomes so high. Suffice to say that university campuses may be conducive to a variety of interventions that can help maintain and encourage safer sexual practices.

Little is known about the status of AIDS on university campuses and it may be possible to develop a program to address such problems if the extent and patterns of HIV/AIDS prevention practices are identified at the point of entry. Thus, there is a need to investigate the level of HIV/AIDS prevention and safer sex Practices among Addis Ababa university undergraduate students to shed light on such issues in an urban set up in Addis Ababa, Ethiopia.

1.3 Objectives of the study

The main objective of the study is to evaluate the students' attitude and their actual practices on HIV prevention methods among undergraduate students of Addis Ababa University.

The specific objectives of the study are:-

1. To assess university students' attitude on HIV/AIDS prevention;
2. To assess the preventive measures that the students practice against HIV/AIDS;
3. To examine factors affecting attitude and practice on HIV/AIDS prevention among the study group.

1.4 Research Hypothesis

In order to achieve the research objectives the following research Hypothesis were posed:-

a. AAU female students are more likely to have favorable attitude on HIV prevention than their male counterparts;
b. The majority of students practice condom use as a top means of protection against HIV/AIDS;
c. Students who are currently chewing khat have unfavorable attitude on HIV prevention and less likely to practice the main HIV prevention methods

1.5 Significance of the study

Given the prevalence of incidents of HIV/AIDS at peak in the country, it is considered important to carry out empirical research on students' attitudes and practice on HIV/AIDS prevention in higher learning institution since university students are the potential source for the future development of a country. Protecting this group from the threat of the pandemic is very important step and significant contribution to the development of a nation. Moreover, little is known about the status of AIDS on university campuses since universities are not likely to undergo HIV prevention activities. Prevention of new cases of HIV infection is crucial providing various studies indicate that university based HIV/AIDS prevention program can reduce risk behavior among youth and leads to lower HIV transmission. Thus, the findings of this study may benefit to prevent HIV/AIDS at higher learning institutions in general and AAU in particular to mitigate the disease for academic excellence and productive life.

1.6 Limitations of the study

The social desirability response biases influenced information withdrawal behavior since some questions were sensitive in nature that might negatively influced the respondents to discuss openly despite the convinence of praivacy and confidentality. Hence, some respondents have returned incomplete and blank questionnaire while other refused to return the questionnaire. As a result, expected responses like sexual practice, risk perception and behaviour, and practices on HIV prevention were not responded adequately.

Furthermore, a number of students were reluctant to respond relevant data to the study. Their loss of interest may be due to lack of provision with any sort of feedback from similar earlier studies carried out by other researchers.

1.7 Operational Definitions

ABC Method - the three main ways to prevent HIV transmission: abstinence, being faithful to one uninfected partner and condom use.

Attitude – is the study subject opinion, view and intention of participants on HIV prevention methods. In these study, for positively worded statements (have positive attitude) those who select '' agree'' were regarded as having positive attitude and those who choose '' disagree'' were considered as having negative attitude. Conversely, for positively worded statements (have negative implication) those who select ''disagree'' were clustered to have positive outlook where as those who said '' agree'' were categorized to have negative attitude.

Consistent condom use – use of condom during every sexual encounter among the study participants

Currently alcohol use – use of alcohol at least once a week among the study participants

Currently Khat use – use of Khat at least once a week among study participants

Currently Smoking cigarette – use of cigarette at least daily among study participants

Multiple sexual partners -Having more than one sexual partner

Place of origin – the place where students lived before joining the university.

Pornographic Viewing – refers to motion pictures VCDs, DVDs, clips on mobile phones or internet those are intended to sexually arouse or excite the viewer.

Practice – where respondents practice either the three main ways to Prevent HIV transmission. For this survey, the information was obtained by asking ever or never practices on the major HIV prevention methods. Those who responded positively considered as practicing the main HIV prevention methods.

Reluctance to VCT – Unwillingness to undertake HIV Test by the study group.

Risky behaviors – involvement in unsafe sexual intercourse that could expose to HIV infection.

Risky Sexual practice – practice exposing the student to HIV infection includes- practicing Sex with multiple partners, inconsistent use of condoms, and sex with CSW and reluctance to have VCT.

Safe sex - Abstinence before marriage, being faithful to partner, and consistent use of condom during each sex.

Sero-positive- Showing immunological evidence of HIV virus after having a blood test.

Sexually active: A student who had a penetrative sexual intercourse (vaginal) for the last six months before the survey.

Unprotected sex - condom non-use with any partner other than a regular partner.

Voluntary HIV Counseling and Testing (VCT) – is an HIV intervention that includes both voluntary pre and post-testing counseling and voluntary testing.

Level of study – is the year of stay in the university campus.

CHAPTER TWO

II. Literature Review

As noted by Scott C. Ratzan (1993) the greatest challenge of AIDS era may be maintaining a sense of personal control of one's involvement in some of life's most meaningful experiences, namely , love, sexuality and the nurturing of committed interpersonal relationships. He further discussed that unfortunately, for many people, especially the young, the threat of AIDS can be seen as further curtailment of an ever limited domain of personal control. In age when political cynicism, economic stagnation and diminished prospects for the future seem for most in the minds of many, AIDS poses an additional demoralizing threat to the person's final sphere of personal control, his or her ability to form and enjoy intimate relationships. In such environment, the challenge posed by AIDS may seem over whelming and foster a state of learned helplessness.

HIV prevention is the cornerstone of an effective response to the global AIDS epidemic. A wide range of approaches have proven effective to prevent transmission of HIV, and a number of countries have reduced HIV incidence and prevalence by implementing interventions targeted to the populations at risk of infection. With the rate of new infections on the rise globally, there is an urgent need to strengthen global HIV prevention efforts (UNAIDS, 2005).

HIV/AIDS is also can be prevented among students by designing HIV prevention policy in the campus aiming at ensuring them a healthy and happy life, useful to themselves, to their families and to the society. They are expected to serve the nation at completion of their studies. Therefore they must protect themselves from HIV/AIDS and remain healthier; otherwise their studies would become a losing investment. Prevention can be achieved by different strategies, applying the basic methods for HIV/AIDS control, notably abstinence, faithfulness, condom use and education (University of Rwanda, 2007).

The most striking features of universities responses to HIV/AIDS is what can be described as an awe-inspiring silence that surrounds the disease at the institutional, academic and personal levels. Notwithstanding the initiatives of few individuals, the response of higher institutions of learning to the call to fight against the HIV/AIDS epidemic is quite inadequate. In fact, lack of coordination and absence of well-developed action plan and reliance on the initiative of some

interested and committed staff members is the distinguishing features of universities (Population Reference Bureau, 2002).

2.1 Theoretical Considerations

There is growing evidence that well designed; targeted, theory-based behavior change Interventions can be effective in reducing the spread of HIV. In HIV/AIDS prevention literature there are many behavioral change models that are used to analyze how individual behavior change occurs. Different populations fit into different behavior change theories according to their stages of change (Fishbein, 2000).

Moon (2002) Points out that Knowledge, attitudes and practice in regards to HIV/AIDS are used to identify where the populations in questions are in terms of changing behavior and what interventions need to address or help create the next step to sustained behavior change.

Theoretical models used in HIV/AIDS prevention are associated with the lack of behavior change particularly in developing countries. All the HIV/AIDS prevention interventions are based on theory that some are implicit while others explicit. Initial intervention relied on the assumption that giving correct information about transmission and prevention will lead to behavioral change. How does behavior change occur? This question probably has as many as there are diverse population and cultures. Every HIV prevention program, however, is based on those answers-theories about why people change their behaviors (Nancy muturi, 2007).

At least six behavioral theories have been used to examine adolescent HIV risk behavior (Astatke et al, 2000). Four cognitive behavioral models used to predict HIV risk behaviors are: *the Health Belief model*, *the social cognitive model*, *the theory of reasoned action /planned behavior*, and *the peer influence model*. The AIDS risk reduction model and the AIDS preventive model are the two theories specifically developed for HIV risk behavior. For this particular study, Jessor's theoretical framework is also considered since the applicability of Jessor's theoretical framework for understanding the sexual behavior of Ethiopian adolescents has been tested and confirmed elsewhere (Astatke, Black, and Serpell ,2002).

Health Belief Model (HBM):- is the grandparent of other social cognitive models. Much of the literature on safe-sex practices including condom use (both actual and intention) has been greatly influenced by HBM which dates back to 1950. Basically the model argues that simple knowledge and awareness about HIV will not necessarily result in reduced risky behavior (FHI, 2002).

Instead, for an individual's knowledge to translate into preventive action (or safer sex practices) the model generally hypothesizes there must exist four interrelated conditions (elements): *perceived susceptibility*, *perceived severity*, *perceived benefits*, and *perceived barriers*. Perceived susceptibility has to do with a person's perception that he/she is personally susceptible to HIV. When an individual perceives HIV infection is a serious condition (say it is a killer disease), it is said that there exists perceived severity. The third condition, perceived benefits, presupposes that this same individual must perceive that there are benefits (e.g. prevent HIV infection) to take preventive action. Finally, this person must also perceive that the potential barriers taking preventive actions are outweighed by potential benefits.

Theory of Reasoned Action (TRA):- This model is predicted by intention (behavioral intent). The model also maintains that intention is in turn predicted by attitude and subjective norms (the perceptions that significant other think one should or should not engage in the behavior) with the strongest influence coming from sexual partners. Like other behavioral model, TRA presupposes that people are rational but addresses behaviors over which people have a volitional control.

Further the model proposes that behavioral intentions are determined by attitudes and subjective norms. According to the theory of reasoned action, intention to perform a behavior is the immediate determinant of behavior. Intention is determined by (a) attitudes toward the behavior and (b) perceived subjective norms. Attitude toward the behavior is in turn determined by behavioral beliefs, specifically the perceived outcomes of the behavior and the value placed on those outcomes. Perceived subjective norms are determined by normative beliefs i.e. perception of significant referents' beliefs about whether one should engage in a behavior and motivation to comply with those referents. It was used in HIV/AIDS intervention, smoking, drinking, contraceptive use and breast-feeding. However, it assumes that people always weigh the perceived benefits and behave accordingly (Nancy muturi, 2007).

AIDS Risk Reduction Model (ARRM):- ARRM was specifically developed to look at individuals' behavior change efforts in relation to the sexual transmission of HIV/AIDS, which is the main reason for the spread of HIV/AIDS in Ethiopia (MOH, 2006). Its model explains and predicts behavioral change efforts of individuals specifically in relation to sexual transmission of HIV/AIDS. This theory suggests in order changing behavior one must first label the behavior as risky, and then make a commitment to reduce the behavior and finally take action to perform the desired change (FHI, 2002).

For each stage the model hypothesized factors that influence individuals' efforts for successful completion. The first stage of problem perception is recognizing the problem, using three factors. These are knowledge of HIV transmission methods, the belief that one is susceptible, and the belief that AIDS is undesirable. Social norms and networks may also influence the individual by disapproving high-risk behaviors and approving safe alternatives (FHI, 2002).

In the second stage individuals make a commitment to change. The hypothesized factors that influence individuals include perceived psychological and social costs, as well as benefits to make a decision about commitment. These costs and benefits reflect three areas: knowledge of health utility (response efficacy), and enjoyment of sex, actual success in reducing the risk of HIV, and the ability to perform the action (self-efficacy). Social factors (group norms and social support) are also believed to influence an individual's cost and benefit to make a decision about commitment as well as self-efficacy beliefs.

In the final stage, individuals will take action to make the behavior change. There are three phases in this stage: looking for information, finding solutions (obtaining remedies), and carrying out the solutions. Depending on the individual phases, these behaviors may happen concurrently or some phases may be skipped. These three phases can occur through social networks and problem-solving choices (self-help, informal help, and/or formal or professional help). Prior experiences with problems and solutions; level of self-esteem; resource requirements of acquiring help; ability to communicate verbally with sexual partner and sexual partner's beliefs and behaviors also influence the successful accomplishment of this stage.

According to ARRM, there are also internal and external motivators that influence the individual movement from one stage to another. For instance, adversive emotional states and distress over HIV/AIDS may increase the perceived seriousness of the problem. External cues/motivators such as public education messages that detail risk behavior and the image of people dying from AIDS may help a person to examine his/her behavior and readiness for change (FHI, 2002).

The Stages of change Theory (SCT):- This model tries to explain why people do not easily change their behavior, even when they are knowledgeable or even directly affected by the condition. There are six stages of change individuals used to change their troubled behavior (i.e. pre-contemplation, contemplation, Preparation, Action, Maintenance and Termination).

Jessor's Theoretical Framework: - However, a major limitation of existing behavioral theories is that they often focus on individual cognitive processes. Jessor's theoretical framework for understanding adolescents risk behavior (jessor's, 1991) differs from other cognitive behavioral models in that it takes into account both individual's perceptions and experiences within the family and the larger social context. It proposes a relationship between risk and protective factors in five domains (biology/genetics, social environment, perceived environment, personality, and behavior) and adolescent involvement in sexual behaviors that increase the risk for HIV/AIDS. Risk factors lead to an increase in adolescent involvement in sexual behaviors. Protective factors decrease the risk in sexual behaviors and may lessen the impact of risk factors.

The applicability of jessor's theoretical framework for understanding the sexual behavior of Ethiopian adolescents has been tested and confirmed elsewhere (Astatke et al, 2000). This paper presented findings on the attitude and Practice on HIV prevention among university students and provided recommendations relevant for designing campus based HIV/AIDS prevention program.

2.2 An overview of HIV/AIDS in Ethiopia

As can be noted in the latest report by UNAIDS, Sub-Saharan African countries host the largest HIV/AIDS infected population: In the end of 2007, an estimated 22.4 million [20.8-24.1 Million] adults and children were living with HIV in the region (UNAIDS, 2008).

It is now one quarter of a century since the first evidence of HIV infection in Ethiopia reported to have been detected first in 1984 (MOH, 2006). Formally though, it was in 1986, two years later,

that the Ethiopian Ministry of health reported two AIDS cases. As was the case in many developing nations, the prevalence of HIV/AIDS was very low in the 1980's. In the 1990's, its spread accelerated at a very fast rate, growing from 3.2 % in 1993 to 7.3% in 2000 (Okubagzhi and Singh, 2002). Like the case of many other Sub-Saharan African Countries, HIV/AIDS in Ethiopia is reported to have spread " along traffic routes and through urban commercial sexual networks" (Sanders et al., 2003).

Ethiopia, a sub-Saharan African country is now among the countries hit hard by the epidemic. It is believed to be the country hosting people living with HIV/AIDS adult (15-49) was 980,000 at prevalence rate of 2.0 %, children with HIV/AIDS 92,000, AIDS death 67,000 and orphan due to AIDS 650,000 is reported. These make globally, the country the twenty-fifth highest prevalence of HIV/AIDS and the eleventh ranked by HIV/AIDS population (Wikipedia, 2008).

With a population of over 77 million, Ethiopia takes a big share in the number of cases at global as well as regional levels. The HIV epidemic has penetrated almost all groups including the hard-to-reach rural areas. However, with the existing socio-cultural diversity of Ethiopia, the pattern and distribution of HIV in the country widely varies. Some regions are more affected than others, urban areas more than rural areas and, generally women more than men (Getnet et al, 2008).

Available data indicate adolescents and young adults are the age groups that are at risk. In a recent study conducted by Girma et al. (2004), it is reported that 15-24 is the age group with the highest HIV prevalence. Obviously, this is the age group where most college students, particularly those in the undergraduate programs, the target group of the present study, are found. The college students are among at risk groups for HIV/AIDS that their age, lack of immediate parental supervision and apparent freedom to experiment with new things (e.g., alcohol, khat, shisha, and hashish) are some of the factors contributing to their being at risk group. In the Ethiopian context, the environment where universities are located makes the situation even riskier for students. HIV infection is acquired predominantly through behavioral factors like unprotected sexual intercourse and multiple sexual partners.

According to Addis Ababa HIV/AIDS Prevention and Control Office (2010) the prevalence rate of Addis Ababa, the city where the current study conducted is 9.2 %. Not only that, the city which hosts a number of colleges and universities is also known for its vibrant sex industry.

In short, although Ethiopia adopted a comprehensive HIV/AIDS policy to emphasize prevention, care, and support; to target vulnerable groups; and to invest much effort in the response to the epidemic, it remains unclear if the key factors driving the epidemic have been adequately addressed. One of the recognized gaps in recent years is the limited evidence available on factors fueling the epidemic in the country. Identifying these factors not only serves to strengthen effective responses against the epidemic but also indicates where to invest scarce resources efficiently.

2.3 Sexuality among Youth in Universities

In a study done among University students in China, of the 5067 students who provided valid answer sheets, 50.05% were female and 49.95% were male, 14.86% were medical students, and 85.14% had non-medical backgrounds. A total of 38.4% of respondents had received reproductive health education previously. The majority of students supported school-based reproductive health education, and acquired information about sex predominantly from books, schoolmates, and the Internet. Premarital sexual behavior was opposed by 17.7% of survey participants, and 37.5% could identify all the three types of STIs listed in the questionnaire. Although 83.7% knew how HIV is transmitted, only 55.7% knew when to use a condom and 57.8% knew that the use of condoms could reduce the risk of HIV infection (Bin Chen et al., 2008).

According to a study done in Ghana on the intention of University students, respondents who intended to use condoms consistently ("intenders") and those with no such intentions ("non intenders") were equally motivated to comply with the wishes of their significant referents (sexual partners, close friends, parents and medical doctors). The critical difference was that intenders consistently held a stronger belief than non intenders that their significant referents approved of condom use. Significantly, whereas intenders believed that their sexual partners would approve of condom use, the non intenders held the opposite belief that their partners would disapprove of such behavior (Bosompra K, 2001).

On a study done to examine HIV knowledge, perceived risk and sexual behavior of 370 undergraduate students in selected universities in southern Nigeria MANOVA confirmed females

have significantly higher overall HIV knowledge than males. In addition, more females than males reported significantly higher knowledge on the risk of HIV transmission through oral sex ($p = 0.001$). Females scored higher on the erroneous belief that antibiotics protect a person from HIV. Females showed greater knowledge on the risk of needle sharing in steroid use but less knowledge on the erroneous assumption that women are tested for HIV during their Pap smear assessments. T-test on sexual behavior risk confirmed that males engage in more risky behaviors than females. T-test showed a significant gender difference with males reporting greater overall susceptibility for HIV than females (Chag CL et al., 2005).

2.4 Studies on Sexuality among Ethiopian University Students

Tertiary education communities are particularly vulnerable to HIV/AIDS due to their age group (which constitutes the peak period for sexual activity and consequent risk of HIV infection), close physical proximity, relative autonomy from adult or community supervision, and inclination towards sexual networking. This vulnerability introduces a sizeable risk to the expected returns on investments made by families and government in the education of tertiary students. Indeed, AIDS now constitutes a new and irreversible form of "brain drain" in Africa. In spite of this risk, universities in Ethiopia have not yet established institutional policies or programs for the management and prevention of HIV/AIDS (William, 2005).

Compared to studies done among in and out of school youths, published studies conducted among university youths are few in number. Also, most of the subjects demonstrated high level of knowledge on HIV/AIDS and ways of conducting safer sex practices but then that did not translate in safer sex practices as shown on a small-scale study by Fitaw and Worku (2002). According to this study, a very small proportion of sexually active students (6.4%) are found to be use condoms consistently; 8.1% of them had sexual intercourse with commercial sex workers (of which 29.1%) did it without condoms; 7.8% reported history of STDs in the past 12 months.

The works of Petros et al (1997), examined the knowledge, attitude, practice and behavior among 1,214 randomly chosen college students attending on different colleges (other than health related programs) in Addis Ababa consistent with the findings of most of the studies conducted in Ethiopia and elsewhere, the study found that the students (despite some misconceptions) are well informed about HIV/AIDS; they have sense of invulnerability; condom use among sexually

active students (though relatively higher among older students) is very low. For instance, a survey conducted by AAI (2006) on HIV/AIDS, STDs and RH Knowledge, Attitude, Practice, and Behavior on AAU students about 62% of the respondents reported that they have got adequate knowledge as to how HIV/AIDS transmitted but only 32% of the respondents were able to tell the mode of preventing the transmission of HIV/AIDS. Accordingly, consistent use of condom, faithfulness to one's sexual partner (spouse) was mentioned as the alternatives to avoid contracting the AIDS virus.

The results from FGD analysis confirm that, on the other hand, the promotion of condom use encourage youths to be more active towards sexual interaction. Some of the group who participated in the study expressed their worries and concerns about the little behavioral change observed among the university students although they know much of the mode of transmission of the AIDS virus. It is noteworthy that there is one striking similarity across the studies reviewed: a great majority of respondents are highly knowledgeable but the awareness is not accompanied by safer sex behavior.

In a study related to low prevalence of HIV infection among high school in Gonder, Gashaw et al (2007) on their part found that abstinence, faithfulness to one's partners and use of condoms as means to prevent transmission of HIV was responded by 84.1%, 60.4% and 41.8% of the students respectively.

Wouhabe (2007) conducted sexual behavior related to reproductive health issues among single youth in Ethiopia pointed out being faithful to a single partner, condom use and abstinence which are the often promoted methods of HIV infection by 58.9%, 47% and 24.3% of male youth respectively and 45.6%, 24.8% and 12.3% of female youths respectively.

A cross-sectional study conducted on 490 Jimma university students revealed that participants had very high level of knowledge 485(97%) on HIV/AIDS and VCT. 74.4% prefer being abstinent from sex and being faithful to one's partner rather than using condom to prevent HIV. 86% of the participants had favorable attitude towards preventive measures (Tefera,2004). In the same study it was found out that over 15% believe that HIV/AIDS is not a big problem as media suggests. And 56.3% of the students who were involved in unprotected sex with casual partners do not recognize that they are at risk of HIV infection. This might be due to lack of condoms as

58.2% of the respondents in this research did not know that persistent use of condom prevents HIV infection.

Another study done on intention to use condoms and remaining faithful among Gonder University students revealed that about one fourth (25.3%) of the study subjects reported being sexually active, of whom 5.2% were females. The mean age at sexual onset was 17.7 (+2.57) years. One fourth of the sexually active study participants (24.5%) had 2-5 life time partners and 15.3% more than 5. Only male students reported more than one life time partner of sexually active students, 39 (40.6%) had never used condom and 24(25%) used condoms occasionally. About 12(12.5%) had genital symptoms of STI and 18 (21.7%) reported having sex after an alcohol bout (EPHA, 2006).

Yordanoes (2008) study to assess the reproductive health needs of Addis Ababa University students, respondents were asked to list the common methods of preventing HIV/AIDS they knew. The most common methods mentioned were abstinence, being faithful to their sexual partner, not sharing sharp materials and using condoms consistently. Among the 595 (97.7%) students that responded about the methods of HIV/AIDS prevention, 506 (85.0%) of them knew three or more methods of preventing HIV/AIDS. Most students perceived their HIV infection risk to be either low 251(41.2%) or none at all 186 (30.5%). On the other hand, 100(16.4%) did not know their risk level and 56 (9.2%) admitted to be at higher risk of HIV infection.

More recently in (2009) studies conducted by Saba on perceptions of risk of HIV/AIDS and intention to adopt preventive behaviors among Dire Dawa University students shown almost 30% of the study subjects reported ever having sexual intercourse in their life time. 59.7% of the students had sexual contact with a causal partner, 11.7% with commercial sex workers and 28.6% with a person who had multiple partners. Twisting one's partner and falling in love were the major reasons for not using condoms. 5.4% of the students perceived their risk of HIV/AIDS infection to be high, while 25.2% said there was no chance at all and 60.7% of them identified their risk of being infected as very unlikely with respect to their current sexual behavior.

Another cross sectional study was conducted based on the Extended Parallel Process (EPPM) in December 2003 among Bahir Dar University students in Ethiopia. In the study 456 second year and above students participated. The result showed that 166(34.6%) of the students, more males

than females (P< 0.001) had ever had sexual intercourse. Condom use among those who had sex in 12 months prior to the survey was about 52%. A belief of personal susceptibility was very low particularly for females, perceived severity was moderately high and the perception of efficacy was high for abstinence and seems undecided for condom. Females strongly agreed than males that they could able to be abstinent. The study participants reported low self efficacy regarding condom use. Male students moderately agreed than females for self efficacy of condom use. They had extremely positive attitude towards abstinence, good for monogamy and fair attitude towards condom use.

Correlation and regression analysis of risk communication and outcome variables also showed that perceived response efficacy, self efficacy towards condom and perception of susceptibility were predictors for condom use and self efficacy was predictor for being abstinent. Credible source of information were cited as persons living with HIV/AIDS, religious persons and health personnel. Most important type of messages was with real experience and preferred way of learning was reported as religious affiliated, peer education and discussion with families (Amsalu, 2004).

As it can be summarized from the bodies of literature reviewed so far have contributed in a number of ways by advancing our knowledge on sexuality of students in Ethiopian higher learning institutions in the context of HIV/AIDS.

2.5 Conceptual Framework of the study

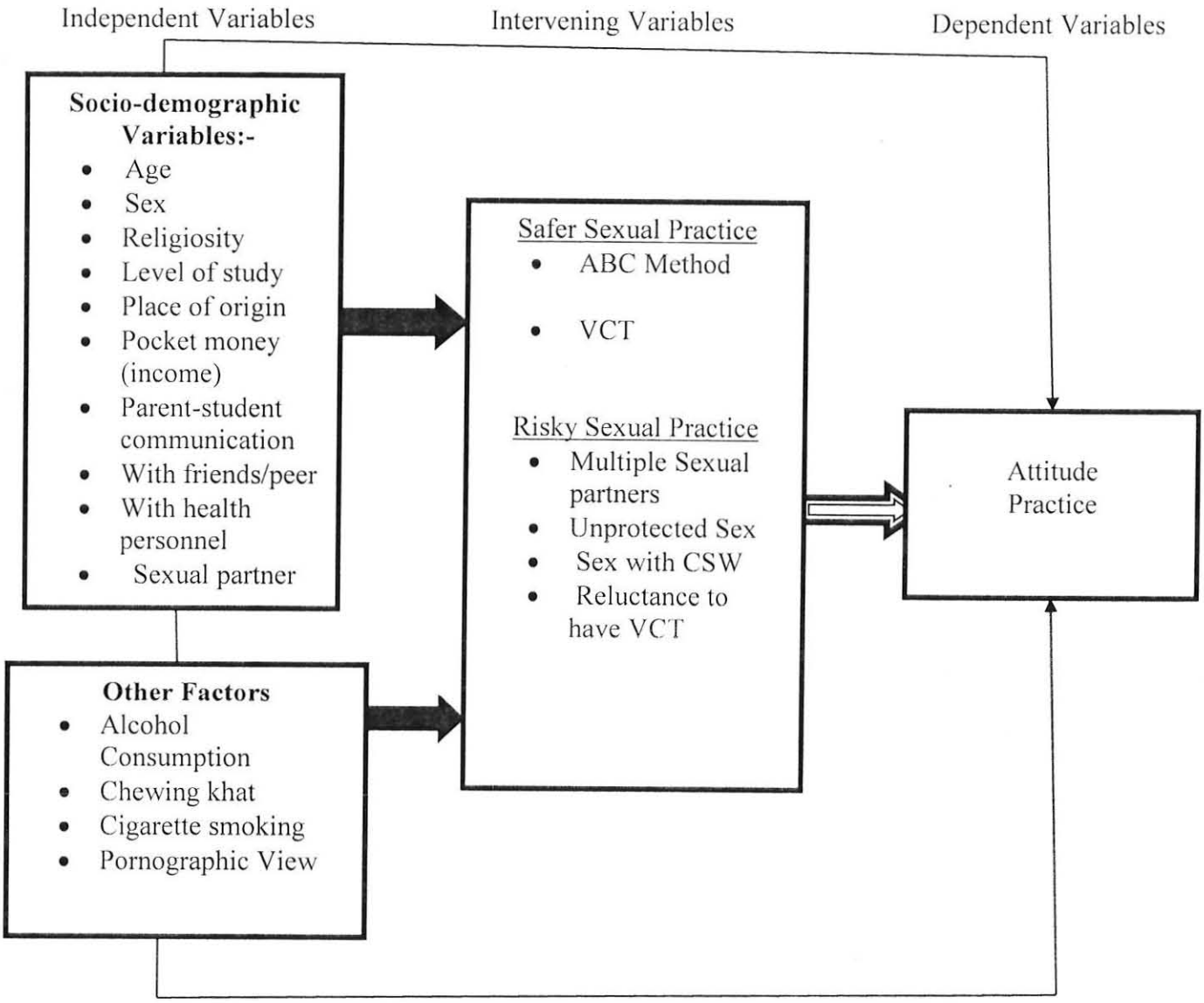


Fig 2.1 Conceptual Framework of the study

- The above figure indicates the linkages of variables outlined in the conceptual framework.
- Adapted based on literature review.

CHAPTER THREE

III. Methodology of the study

3.1 Study Area

The study is conducted in Addis Ababa University where the capital city of Ethiopia is located. Addis Ababa is located at 9° 2'N, 38°42'E. Addis Ababa University is the oldest higher educational institution in Ethiopia. It started its operation in 1950s under the name university college of Addis Ababa. In 1961, it was inaugurated as Haile Selassie I university. Following the downfall of the Haile Selassie regime in 1974, the university got its name: Addis Ababa University.

The university prides itself for being the oldest-university in the country – it is now 60 years old. Considering that it belongs to a country where modern education itself is less than a century old, it rightly claims to be the oldest higher learning institution in the country. It is now a home to over 45 thousand students in regular, extension as well as summer (continuing Education) program. The regular program includes both undergraduate and graduate programs that take the lion's share.

Being the oldest and the largest higher education institution in Ethiopia, AAU has a large number of staff with different level of ranks and qualifications. According to the office of the Associate Vice President for Academic Affairs (2009), the total number of the academic staff of the university appears to be 2078, of which 1951 are Ethiopians. While the rest are expatriate.

There are also more than 200 part-time instructors who are teaching in the various departments and program units. In each campus, there is 1 clinic serving students. Besides this, in Sidest kilo and Arat kilo, there are NGO clinics owned by African AIDS Initiative. There is also an office for project (MARCH) working at Sidist kilo campus and a VCT centre supported by Addis Ababa HIV/AIDS prevention and control office (AA/HAPCO) at commerce campus.

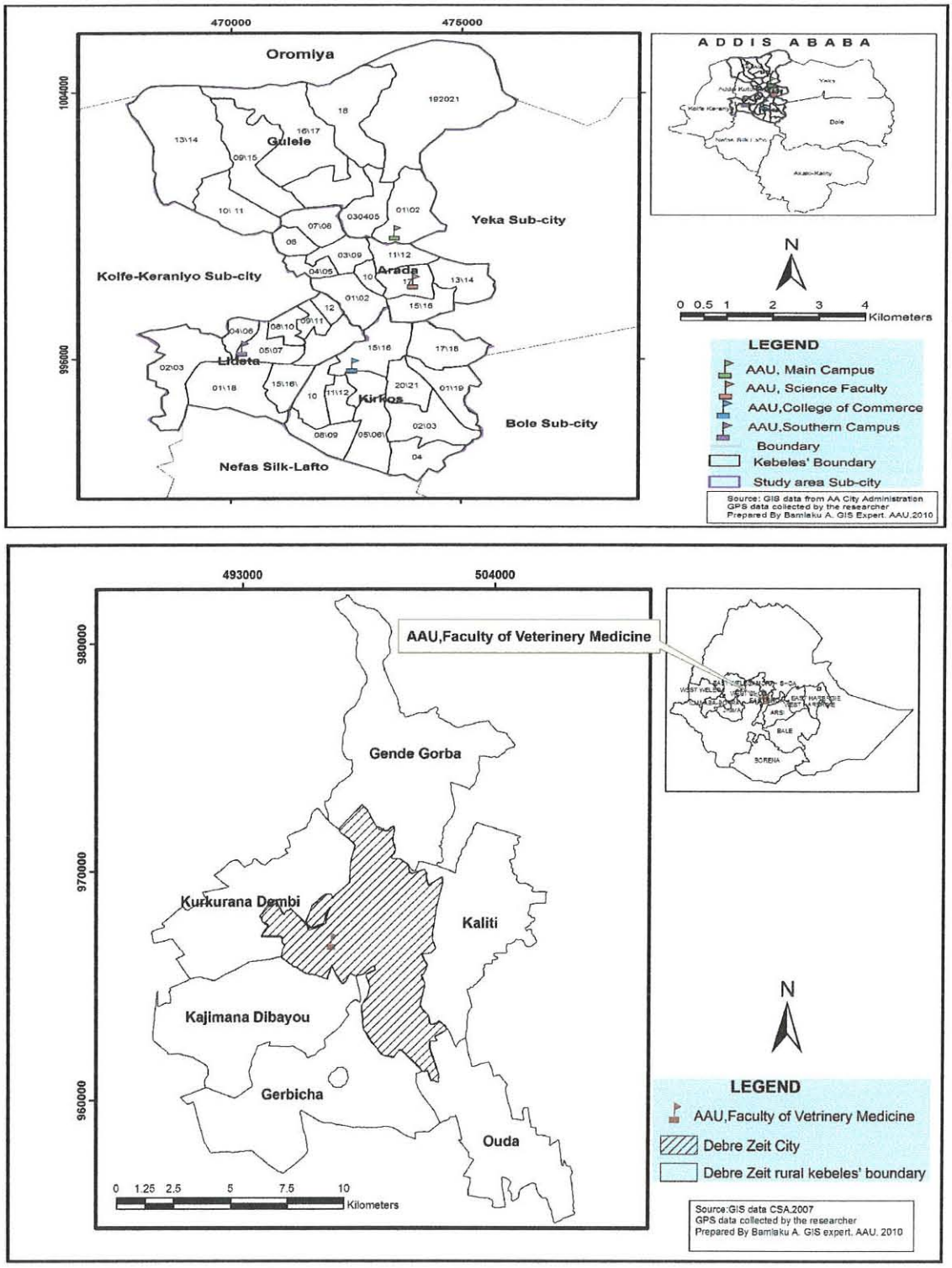


Fig 3.1 Location of the study area

3.2 Study Population

The study population includes all undergraduate regular students of AAU. Students attending in non-regular program are not included in the study since they are different from the regular ones with respect to their age, maturity and employment status.

Table 3.1: Distribution of AAU regular undergraduate students by Sex and Campus, 2009/10

NO	CAMPUS	SEX		
		F	M	Total
1	Main Campus	2353	5034	7387
2	Faculty of Business & Economics	667	2124	2791
3	Yared-Music	25	96	121
4	Techno-Pharmacy	678	1965	2643
5	Science Faculty	397	1316	1713
6	Fine-Arts	18	99	117
7	Medical-Faculty	762	1160	1922
8	Commerce	1443	1979	3422
9	Techno-South	283	856	1139
10	Akaki Campus	26	108	134
11	Deberzeit-Vet.	73	357	430
	Grand Total	6725	15094	21819

Source: AAU Registrar office 2009/10

3.3 Study Design

The study has employed a cross-sectional study design where quantitative and qualitative aspects incorporated in the survey. The quantitative information is collected using structured self-administered questionnaires and the qualitative ones through FGDs and IDIs. Both FGDs and IDIs were used to boost up the quantitative results where the quantitative missed to touch.

3.4 Sample Size

The sample size for the quantitative data was computed based on the formula proposed by Hollander (1999) for single population proportion. The value of p be taken as 57% of consistent condom used based on a previous KAPB study conducted among AAU students (AAI, 2006), that of practice on HIV prevention measures. A Z-value of 1.96 is used at 95% CI and margin of error is 5% (n = sample size, P=proportion, d= margin of error). Accordingly, the sample size (n) of the study was calculated as follows,

$$n = \frac{Z^2 P(1-P)}{d^2} = \frac{(1.96)^2 \times 0.57 \times (0.43)}{(0.5)^2} = 377$$

This result in a sample size of 377, the researcher also considered adjustment for expected non-response rate (10% contingency) and correction for Multi-stage sampling design effect (multiply of 1.5) thus, the final sample size come to [(377 × 10%)] ×1.5= (415 × 1.5) = 623 students are required for the study.

The 1.5 multiple was chosen for the design effect while the selected campuses and departments were taken in three steps and considering the homogeneity of students in one geographic area with the given number of population.

3.5 Sampling Procedures

The study participants were selected from target population through Multistage sampling technique and Probability proportionate to sample size (PPS). Addis Ababa University has eleven campuses (i.e., Main campus, FBE, Yared-Music, Techno-Pharm, Science Faculty, Fine-Arts, Medical-Faculty, Commerce, Techno-South, Akaki-campus and Deberzeit-Veterinary) having a total of 21,819 regular undergraduate students who are registered as first-semester enrolment summary of 2009/10 (2002E.C) academic year according to the office of the registrar.

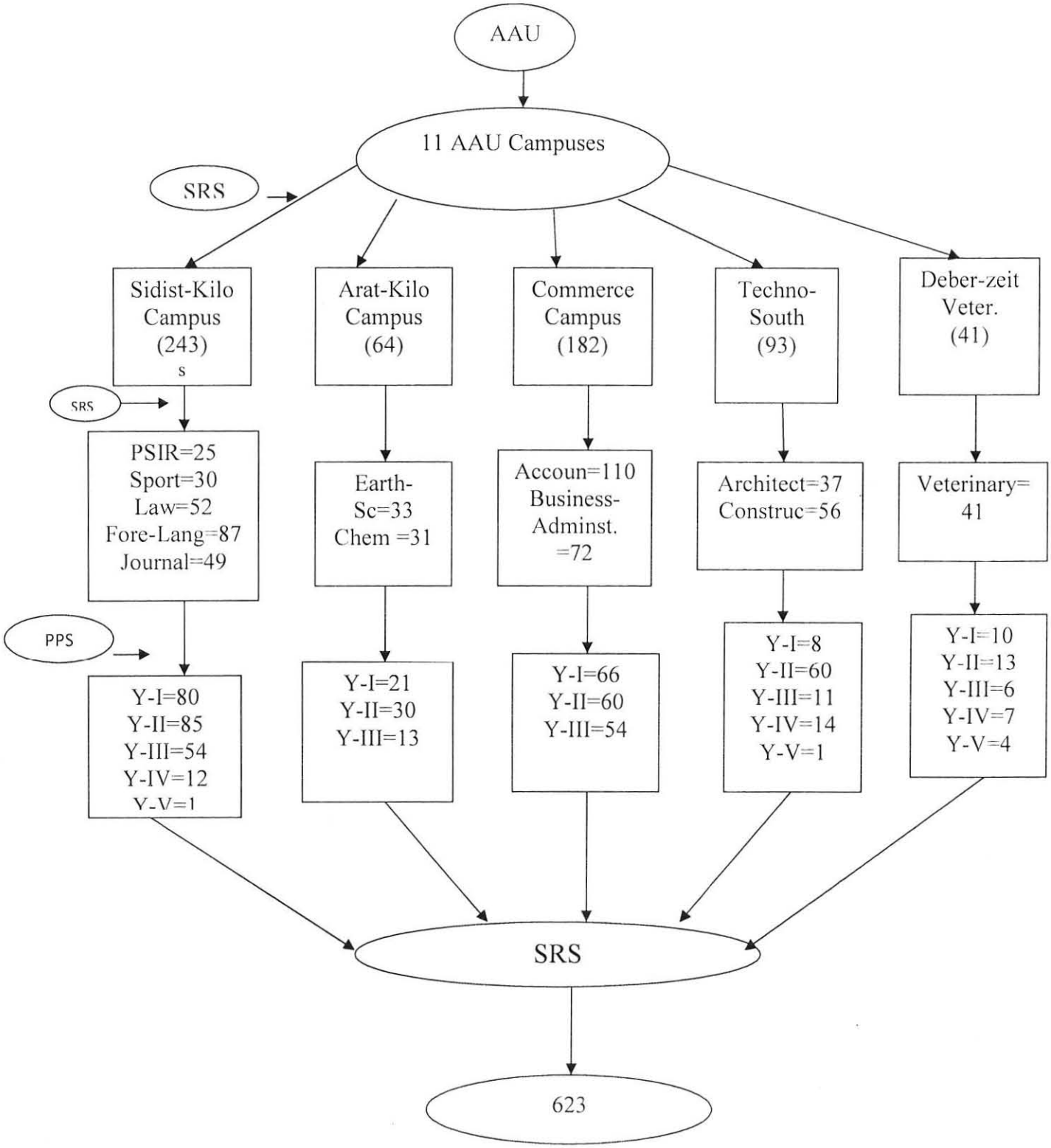
Out of the eleven campuses, five (Sidist-kilo main campus, Arat-kilo campus, Commerce, Techno-south, and Deberzeit-veterinary) were selected randomly and then the calculated sample size (623) was distributed into each of the recruited campuses using probability proportional to their size. Secondly, five departments from main campus (PSIR, Physical Education and Sport,

Foreign Lang. & Literature, Law, and Journalism); Two departments from each of the three campus : Earth Science and Chemistry from Science Faculty, Accounting and Business Administration from Commerce, Architecture and Construction Technology from Technology South were selected randomly. Finally, Veterinary medicine from Deber-zeit campus was added.

The sample size allocated to each campus was distributed to each randomly selected department proportional to their size. Eventually, the required number of respondents selected from each year of study again proportional to their size from the randomly selected departments and students from the selected department were chosen randomly. The questionnaire was distributed to randomly selected respondents and data were collected by data collectors in the presence of the principal investigator, as sat apart from each other before and after each class starts and organizers thanked students one by one when each left the classes.

While most of the study departments have three years of study, only department of Architecture has four years of study. Furthermore, department of Law and Construction management have five years of study but no students had reached fifth year level at time of the survey. Finally, even if Veterinary Medicine has six years of study, the final year of students' were not incorporated due to the list of students taken from main registrar was different from the actual. A Multi-stage sampling technique was preferred because it is difficult to manage the total 6606 regular undergraduate students of the selected campuses in AAU. The application of the procedure is depicted in figure 3.1 below using schematic presentation (See annex V, Table-3 for summary of randomly selected departments).

Figure 3.2 Schematic presentation of the sampling design



3.6 Data Collection Procedures

In accordance with the procedure stipulated in the research protocol, different methods of data collection were employed depending on the objective of the study. Secondary data were gathered through reviewing relevant materials such as books, Journals, bulletins, magazines, statistical reports, web sites as well as unpublished thesis. Primary collected through survey data were questionnaire, FGDs, and In-depth Interviews.

Survey questionnaire was initially designed and developed in English and translated into Amharic and then back to English to check for consistency and clarity taking into account similar surveys that have been carried out previously and some questions were modified to suit the context of the study.

The survey questionnaire was organized into four sections. The first part is aimed at collecting Socio-demographic information (e.g., Sex, Age, Religion, Academic class, Ethnicity, etc) that are believed to affect respondents' attitude and practices on HIV prevention. The second part was set to tap information on the subjects' sexual engagement and their use of condoms. The third section was about students' risk perceptions and their behaviors. Finally, the last section was planned to produce data on respondents' attitude and practice on HIV prevention activities.

Before conducting the actual study, the questionnaire was pre-tested at Kotebe Teachers' Training College among 30 students who were all completed and returned the questionnaire. The pre-test used to revise its clarity, order of question; skip patterns, and its consistency. Based on the pre-test feedback, some questions were rephrased, amended and the final questionnaire was prepared. It also helped to see the care that should be taken during actual data collection like sitting arrangements of the students while they fill the questionnaire in the class room.

Four university students: Two females and two males were recruited to serve as data collectors including one supervisor who supervised data collectors during data collection and to check the completeness the questionnaire. They were given one days of training by the principal investigator on the objective, relevance of the study, confidentiality, respondent's right and informed consent. Thus, the facilitators were also responsible for describing the purpose of the study, distributing questionnaires, telling the importance of honest and sincere response to

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questions rose during filling the format and lastly in collecting the filled in questionnaire. Data collection was carried out from March 3, 2010 to March 25, 2010. To ensure the quality of the data, the principal investigator checked the collected data for completeness, accuracy, clarity and consistency throughout the data collection period.

Qualitative data were generated through Focus Group Discussions and In-depth Interview that would enrich the quantitative results. FGD guide were developed containing a list of questions that was supposed to explore the purpose of the study. Two FGDs were held, one male and one female group, each comprising eight participants. The participants were from different campuses that were not included in the quantitative survey. The two FGDs were held on March 27, 2010. Unfortunately, one male participant was absent for unknown reason. The female FGD was moderated by trained female moderator after informed about the objective of the study, the content of the discussion guideline, how to guide and record the discussion assisted by note taker and tape recorder. Whereas, the male FGD was exclusively conducted by the principal investigator together with the assistance of an experienced note taker as well as tape-recorder.

In-depth Interviews were conducted with different target groups, mainly with health care providers in campus clinics, and African AIDS Initiative International, student counselors of AAII VCT clinics, proctors, guards and other faculty staffs who have a wide range of interactions with the campus community. All FGDs and IDIs were convened within the university premises that safeguard privacy.

3.7 Method of Data Processing and Analysis

In order to make the analysis manageable, the data collected through self administered questionnaire from respondents were analyzed in the following manner. The quantitative data were entered into computer for analysis using Statistical Packages for Social Science software. The data were edited, coded, cleaned and checked for its consistency by running frequencies and cross-tab among different cases prior to the actual analysis. Descriptive statistics (such as frequencies- to describe the data, cross-tab to check the association, and logistic regression to see further the net effects of each independent variable on the dependent variable) were used for analyzing the data.

Binary logistic regression is a form of regression which is used when the dependent variable is a dichotomous and the independents are any type. It can be used to predict a dependent variable on the basis of continuous and / or categorical independents and to determine the percent of variance in the dependent variable explained by the independents; rank the relative importance of independents, to assess interaction effects and understanding of the impact of covariate variables. It also estimates the probability of a certain event occurring (Garson, 2010).

Logistic regression is useful to predict the presence and or absence of characteristics or outcome based on values of a set of predictor variables which can be interval or categorical. It is similar to a linear regression model but is suited to models where the dependent variable is dichotomous. Logistic regression coefficients can be used to estimate odd ratios for each of the independent variables in the model (Hosmer, David W. et al., 1989).

Because of this, logistic regression model is preferred since the dependent variables of this study are dichotomous and appropriate for the model such as in the case of attitude (favorable/unfavorable), and in the case of practice (ever use/Never use).

Meanwhile, data collected from FGDs participants were used to integrate and support relevant issues when the quantitative data undermine to explain the subject whereas the in-depth interview analyzed separately.

3.8 Variable specifications

Dependent Variables:-

The dependent variables of the study were " Attitude and Practice on HIV Prevention". The information on ' Attitude on HIV prevention' was obtained by asking six positive and six negative worded statements that reflect the concept of HIV prevention methods and this question was responded as " agree" or "disagree" . Those who agree were considered to be having "favorable attitude" and those who were not agree were considered to be having "unfavorable attitude".

The information on 'practice on HIV prevention' was obtained by asking have you ever practiced the major HIV prevention methods. The response was also given in "Yes" or "No" type which was dichotomized. Those who responded positively considered as practicing the main HIV prevention methods. While those who responded the questions negatively considered as non user of the methods.

Independent Variables:-

Independent variables used to explain the dependent variables in Multi-level analysis were classified as socio-demographic and other variables.

Socio-demographic variables: - included in the study are age, sex, religiosity, and Level of study, place of origin, pocket money, Parent-student communication, with friends, with health personnel and sexual partner about sexual matter.

Other variables includes are:-

Other variables used to explain the dependent variables were currently alcohol Consumption, khat chewing, cigarette smoking and Pornographic View.

Intermediate variables: - they are directly influenced by independent variables and have a direct influence on the attitude and practice on HIV prevention. They were discussed on safer sexual practice and risky sexual practice.

Safer sexual practice- includes practice of ABC rules and VCT.

Risky sexual practice- is practice of multiple sexual partners, unprotected sex, sex with CSW and reluctance to have VCT.

3.9 Ethical Considerations

Ethical clearance letter was obtained from IPS, and given to the university where the study was conducted. As a result permission was obtained from the office of Associate Vice President for Academic Affairs and thus the letter was dispatched to all campuses of interest.

Participants were given general information on the study objective, confidentiality of their personal data and essentiality of their participation on a letter attached to the cover page of the questionnaire. Consequently, written consent form was signed by each study participant right before filling the questionnaire with privacy.

In addition, the respondents were notified that participation is based on willingness and they can skip questions that they do not want to answer and to quit the process at any time if they want to do so. After securing consents, the questionnaire was distributed to randomly selected students in lecture hall by data collectors accompanied by the principal investigator.

CHAPTER FOUR

BACKGROUND CHARACTERISTICS OF THE STUDY POPULATION

The study was intended to cover a total of 623 participants. However, a total of 606 respondents were included in the analysis from five campuses. 17 respondents were excluded from analysis because 4 were incomplete, 2 were returned blank, 5 were wrongly responded, and 6 were unreturned as a result the response rate of the study was 97.27 %.

Taking into account the objective of the study, this chapter assesses the socio-demographic, sexual practice, risk perception, attitude and practice on HIV characteristics of the participants.

4.1 Socio-demographic characteristics of respondents

As shown in table 4.1 below, more than half of the respondents 358 (59.1%) whose questionnaires were usable were male university students. On the other hand, a little less than a half of the subjects 248 (40.9%) were female.

The survey revealed that the age of respondents were in the range of 15-24 years. The majority of the respondents (77.1%) were fall in the age range of 20 to 24 while 22.9 % were between the age ranges of 15 to 19 years. As a whole, the majority of the study participants were either in their late teens or their early twenties. Their mean and median age of the respondents was 20.67 and 21.00 respectively with SD of 1.78.

About (92.4%) of respondents were single and 5.8% were married at the time of the survey. Therefore, vulnerability to HIV/AIDS is high in this group as their counterparts' in Bahir Dar University (Amsalu, 2004). And more than half of (59.2 %) were used to live in urban set up before they joined AAU and the remaining (40.8%) were from rural background. Regarding the current living arrangement, 54.0% of the study group was living outside the university and (46.0%) were living in campus.

Concerning religious affiliation, larger respondents (69.3 %) reported that they were Orthodox Christians, followed by protestant (16.5 %), Islam (10.4 %), catholic (1.5%) and others (2.3%). The participation of religious services found to be 535 (88.3 %) who attended the religious service while 71 (11.7 %) didn't attend at all. Respondents were asked how frequently they attend religious services at the time of the survey. About (31.4%) of respondents were attending attentively daily; 31.2 percent occasionally, 20.7 and 16.6 percent were attending at least once a week and as convenient respectively.

Regarding the ethnicity of the respondents, about 43.6% was from the Amhara, 20.5% from Oromo, and the remaining 14.0, 11.1 and 10.9 percent were from Tigre, Gurage and other ethnic group respectively.

With regards to academic stream, the highest percentage of the respondents (38.7 %) comes from the Main campus followed by Commerce (28.8%), Technology south (15.3%), Science (10.5%), and Veterinary Medicine in Deberzeit(6.8%). The allocation of respondents' grade level indicates that 29.9 % and 40.9 % were in their first and second year studies respectively. While others were from Year III (22.8 %), Year IV students (5.4 %), and Year V students (1.0 %).

Economically, most of the respondents, 455(75.1%) obtained pocket money per month. Among these, 395(65.2%) have been obtaining less than 500 Birr per month, 60 (9.9%) get between 500 and 1000 Birr per month, while 151(24.9 %) do not get pocket money at all.

Table 4.1 Percentage Distribution of respondents by selected Socio-demographic characteristics, March 2010

Variables	Frequency (606)	Percent
Sex		
Female	248	40.9
Male	358	59.1
Age Group		
15-19	139	22.9
20-24	467	77.1
Place of origin		
Rural	247	40.8
Urban	359	59.2
Current residence		
In campus	279	46.0
Off-campus	327	54.0
Religion		
Orthodox	420	69.3
Protestant	100	16.5
Catholic	9	1.5
Islam	63	10.4
Others*	14	2.3
Ethnicity		
Oromo	124	20.5
Amhara	264	43.6
Tigre	85	14.0
Gurage	67	11.1
Others**	66	10.9
Marital status		
Never Married	560	92.4
Currently Married	35	5.8
Widowed	3	0.5
Separated	7	1.2
Divorced	1	0.2
Level of study		
First Year	181	29.9
Second Year	248	40.9
Third Year	138	22.8
Fourth Year	33	5.4
Fifth year	6	1.0
Pocket money per month		
Yes	334	55.1
No	272	44.9

*= Jova witness, Hawareyat (only Jesus) and traditional religion followers.

**= Somali, Harari, Hadya, Walita, Silite, Sidema.

4.2 Sexual Practices and Experiences of AAU Students

Interviewees were asked if they ever have sexual intercourse with an individual of the opposite sex. Among all respondents, 207(34.2%) were reported to have had previous history of sexual experience. This aggregate result is slightly inconsistent with Jimma university students where 39.9% students had had sexual experience in the past (Zerai, 2002). However, the finding is consistent with the KAPB assessment on AAU students by AAI some four years ago where the result was 34.9%. But 20.6% had sex during the year before the survey with 19 years for sexual debut (AAII, 2006).

The frequency distribution result revealed that the number of students who were sexually engaged was much smaller than those who were not. As result 399(65.8%) of the respondents had no sexual experience. However, the FGD participant said that about 70% of the target population is sexually active.

Disaggregated by sex, 22.4 percent of males had had sex compared to 11.7 percent of females. These results are inconsistent with the data obtained by HIV/AIDS behavioral surveillance survey indicator for in school youth is 14.6% for males, and 5.3% for females (BSS, 2005). This can show the prevalence of sexual act is becoming common at higher learning institutions that need due attention.

The sexual activity of female was nearly reduced by half (11.7%) that of the male. Female respondents found to be far less likely to report having had sexual intercourse than their male counterpart, which could be because the information on sexual matters are usually kept too secrete and not honestly responded by all female respondents; there is a sort of social desirability responses.

The mean and median age at first sex debut was 17.8 and 18.0 years respectively. This study finding is almost consistent with other study results like Dire Dawa and AAU earlier study where the mean and median age at first sexual intercourse was 17.9 and 18.0 years respectively (Saba,2009; Yordanoes,2008). However, the median age at first sexual debut of this study is greater almost by two years than the national survey result of EDHS (2006) which is 16.1 years.

The reasons forwarded by respondents for the higher sexual activity was their age, peer pressure including the dormitory adventure talks, their freedom to act the way they want, the more time they spend with opposite sexes, the environmental factors that facilitate better access like presence of night clubs around the university campuses. Regarding the sexual activity, Male FGD participant from Fine Arts said:

"It is difficult to say the students are not sexually active!"

To have a clearer picture of sexual practice of the respondents, a cross-tabulation between sexual practice and socio demographic variables was also made. An assessment of results of the cross-tabulation has showed that only two of the demographic variables (Sex, and religious service attendance) have demonstrated some meaningful relations. An attempt to examine the sexual engagement of the subjects in terms of Sex, for example, revealed that the male respondents were more sexually engaged than their female counterparts.

Specifically, more males (22.4%) than females (11.7%) reported to be sexually engaged as explained above and a Chi-square test revealed that the difference was statistically significant, $\chi 2$ (df=1, $N = 606$, $X^2 = 6.274$, $p = .012$). The other difference in sexual practice was attributable to respondents' religious service attendance. Accordingly, Viewed from the background of their religious service attendance, the sexual practice of respondents is summarized as follows in an ascending order: at least ones a week, 5.2%; as convenient 5.4%; everyday 8.4%; and Occasionally 12.5%. The difference was statistically significant, (df=3, $N = 535$, $X^2 = 9.538$, $p = .023$).

Respondents who identified as occasionally in their religious service attendance are the most sexually active groups—12.5% of them have responded that they were sexually active. This finding is pertinent with the results of Clifford (2005) where campus-based survey in Nigeria University revealed that respondents who were affiliated to some religious groups on the campus and engaged in some religious practices had less likelihood of initiating sexual intercourse. Religious practices had more important effect than religious affiliation. It is also worth noting that the result is consistent with the findings of Astatke et al. (2000), a study conducted among Ethiopian high school students. Even though their study didn't report students' sexual behavior in

terms their specific religious service attendance, it showed that subjects who attached high importance to their religious attendance were unlikely to be engaged in sexual activities.

The other difference in sexual engagement was attributable to respondents' academic class. Accordingly, 10.11 % of respondents' sexual engagement was witnessed among first year students and close to 13 % of the second year respondents said they were sexually active. A chi-square test indicated the difference was not statistically significant, ($X^2 = 3.575$, N=606, df=4, p=.467).

The sexual practice of respondents was also examined in relation to presence/absence of sexual partner at time of survey. Only 128 (21.1%) respondents were reported that they had sexual partners currently while the majority 478 (78.9) of them had no sexual partner at the time of survey.

Those who reported affirmative were accounted for 72(11.9%) males and 56(9.2%) females. Of these, the male respondents' sexual partners were: 26(20.3%) university students, 26(20.3%) high school students, 4(3.1%) CSWs, 7(5.5%) causal partners, and 11(8.6%) were others. On the other hand, from the female respondents, the sexual partners at time of survey were: 19(14.8%) university students, 4(3.1%) high school students, 3(2.3%) causal partners and 28(21.9%) were others.

During FGD discussion, some participants mentioned that some male students have sexual contact with CSWs:

> *"...You know what the sex workers at Arat kilo said: 'I will at least get a student, if there is no client'. There are some students that look very quiet and does not tell when they fall in love. Such students are the ones that go to DC for sex. DC is an acronym used for designating a commonly used expression known as Dirty Corner which refers to shanty or modest places where sex workers do business " Male participant from Arat Kilo campus.*

Most of the participants also mentioned sex in their campuses is causal as they see students coming out of the library or from their dormitory at night and have sex in the sport fields and other darker places in the campus compound Male FGD participant from Main campus said that:

"When you see the sexual relationship in our campus, it is not based on knowing each other well. Or it will not be well taught about. It will be accidentally occurring during studying together or talking. This is what we are hearing from our friends".

The respondents were asked their sexual activity for the last six months to know whether they were sexually active or not. Accordingly, about one-fifth 144 (23.8%) found to be sexually active. Of these, 90 (14.9%) were males, and 54(8.9%) females. Among those who had sex in the last 6 months, 41(28.5%) had sex once a month, 30(20.8%) twice a month, 29(20.1%) once a week, 17(11.8%) twice a week, and 27(18.8%) other than these period had sexual frequency.

In relation to the number of sexual partners, respondents reported that 90(62.5%) of them said they had one sexual partner, 18(12.5%) had two, 15(10.4%) had three, and 21(14.6%) had more than three partners.

As a whole the average number of sexual partners was found to be one. The result however, needs to be interpreted with caution for at least two reasons. First, the finding is not in harmony with finding of the FGDs of both sexes. In the focus group discussions, there was a consensus among participants that almost everybody is sexually active. There is also strong agreement among participants of both sexes that double dating, more bluntly "promiscuity", is the campus norm. Since the FGD participants talked about other people, and not about themselves, there is likelihood for them to provide trustworthy information, and not a socially desirable response.

Out of sexually active respondents, 103 (71.5 %) used condoms. Of those who used condoms, 68 (47.21%) were males while the rest 35(24.3%) were females. However,. among 41(28.5%) respondents, 15.3% males and 13.2% females reported that they had not used condoms in the past 6 months of sexual encounter. This indicates that few of the respondents were still at high risk of contracting HIV/AIDS due to unsafe sexual practice. Intervention effort is needed to delay early initiation of sexual activity and to increase condom use among sexually active students.

Table 4.2 Percentage Distributions of Respondents by Sex and Reported Sexual Practice, March 2010

Characteristics (n=606)	Sex		
	F	M	Total
Ever had sexual intercourse			
Yes	69 (11.4%)	138 (22.8%)	207 (34.2%)
No	179 (29.5%)	220(36.3%)	399(65.8%)
Have had sexual partner currently			
Yes	54 (8.9%)	74 (12.2%)	128 (21.1%)
No	194 (32%)	284(46.9%)	478 (78.9%)
Have had sexual engagement for the last 6 months			
Yes	54(18.9%)	90 (14.9%)	144 (23.8%)
No	194 (32.0%)	268(44.2%)	462 (76.2 %)
Number of sexual partner for the last 6 months			
One	35(24.3%)	55 (38.2%)	90 (62.5%)
Two	7 (4.9%)	11 (7.6%)	18 (12.5%)
Three	6 (4.2%)	9 (6.3%)	15 (10.4%)
More than three	6 (4.2%)	15 (10.4 %)	21(14.6%)
Condom used during sex for the last 6 months			
Yes	35 (24.3%)	68 (47.2%)	103 (71.5%)
No	19 (13.2%)	22 (15.3%)	41 (28.5%)
Received money/gift to have sex for past 6 months			
Yes	10 (1.7%)	11 (1.8%)	21 (3.5%)
No	238(39.3%)	347(57.3%)	585 (96.5%)
Ever Viewed pornographic Films			
Yes	115 (19.0%)	255 (42.1%)	370 (61.1%)
No	133 (21.9%)	103 (17.0%)	236 (38.9%)

On the other hand, respondents were asked if they ever viewed pornographic movies. Of the total respondents, 370(61.1%) responded that they have viewed pornographic movies while 236 (38.9%) of the respondents did not engage in viewing pornography. Out of the 370 respondents who were viewed pornographic films, 255(42.1%) were males and 115(19%) were females.

The respondents who had exposure in viewing pornography were again asked the feeling they had learned from porno shows. About 119(32.2%) felt happy and eagered to practice, 148 (40.0%) subscribed the notion of hating porno videos', 83(22.4%) had created nothing on their sexual feeling, and 20(5.4%) claimed other than these.

During the Focus Group Discussions, male participants stated that, once students join colleges, there is a possibility of accessing Internet that negatively influencing their behavior. Although college rules forbid students accessing indecent information from websites, students violate the rules all the same. While computers are primarily meant for educational purposes, participants complain, few students pay attention to that. A male participant from main campus strongly expresses students' obsession with porno sites as follows:

> *"Here in campus, Romance films also serve as source of information on sex. Occasionally we watch erotic films, too. But I believe Kennedy Library is the major source of information on sex for students. I would say there is nobody who is unfamiliar to the different porno sites in the computer lab. Sometimes you wonder if we were given the urge to surf porno sites in the form of injection. When you go to the computer center, all you see in all the PCs is porno sites".*

Though not as strongly as male respondents notion of porno-videos, female participants also subscribe few contribution in instilling risky sexual behaviors. For female respondents, videotapes containing sex films that are cheaply rented is more influential than pornographic films shown in video houses in making them to be sexually active in their early teens or even before. Here are stories told by one participant:

> *"And do you know who do these sorts of things [start sex very early]? Girls from cities, of course! And you know why they do this? For me, that is because of the supply of information. At the age of 10 or 12 they watch films. They watch sex films. If a girl is left to enjoy watching sex films starting at the age 10, why should it be surprising if she has a boyfriend and has sex with him in her early teens?''*

4.3 Behaviors exposing undergraduate Students to HIV/AIDS and risk Perceptions

In these study most of the respondents 489(80.7%) thought that they were not at risk of contracting HIV/AIDS, while 117(19.7%) did perceive that being as they are at risk of HIV infection. Among who perceived being risk of HIV infection 94(80.3%) students perceive their HIV infection risk to be low at all.

On the other hand, only 23(19.7%) admitted to be at higher risk of HIV infection. The major reasons for low risk perception by the respondents was 49(52.1%) adherence of abstinence or sexual inactivity currently, 21(22.3%) faithfulness to only one sexual partner, 18(19.1%) mentioned that they used condom consistently during sex while few 6(6.4%) mentioned other reasons. Those that felt to be at higher risk mentioned 7(30.4%) had multiple sexual partnerships, 8(34.8%) inconsistent condom use, 4(17.4%) no condom use at all and only few respondents(4) declared other reasons for their higher HIV infection risk.

There was no any significant sex difference in terms of perceived personal risk to HIV infection (X^2=.034, df=1, N=606, p=.854). Proportionally, more male (11.6%) than female (7.8%) regarded themselves to be at risk of acquiring HIV. This result is inconsistent with findings at Ankara university, Turkey where the response result shows 45.8% believed that were not at risk for getting HIV/AIDS and 43% believe that their risk of getting HIV/AIDS was very low accompanied by 1.9% stating that they had a higher risk of getting HIV/AIDS (Figen Cok et al., 2001).

The participant admitted that they are more exposed to sexual activities and of course to HIV infection. Almost all of the participants said their freedom to act the way they like is the reason for their exposure. Some participants discussed how unsafe the students' sexual activities can be. Almost all the participants agreed the university students' sexual practices are usually unsafe. Most of the participants emphasized the presence of casual sex, multiple sexual partnerships, visiting CSW, the high rate of drug and alcohol use, and poor condom use habit to be the reason for their argument.

Respondents were also asked how they evaluate themselves the chance of being infected with HIV/AIDS with their current sexual behavior. Accordingly, of the total respondents the majority 448(73.9%) of them identified their chance of being infected with HIV/AIDS as Very unlikely with the current sexual behavior. This suggests that the respondents do not acknowledge personal susceptibility to HIV infection that would necessitate the adoption of protective measures. On the other hand, 130(21.5%) stated unlikely, with equal percentage of 14(2.3%) and 14(2.3%) considered themselves likely and very unlikely their chance of being infected with HIV/AIDS

respectively. According to FGD participants, no body to date has come out in the open to acknowledge being HIV positive at the university campuses.

The respondents' risky sexual behaviors were also assessed by asking whether they had using substances at the time of the study. According to the respondents, addiction to different substances such as khat, alcohol and cigarette are the major risk factors which directly or indirectly expose students' to HIV/AIDS infection. Based on the survey, some of the students in the university are believed to have been addicted to at least one of the above mentioned substances.

As indicated in table 4.3 below, the study revealed that 29.7 percent of the respondents were currently consuming alcohol. The respondents were asked their frequency of alcohol intake. Half of the respondent (50.0%) replied that they used alcohol rarely followed by frequently and always with 41.1 and 8.9 percent respectively. Out of the total who drank alcohol, the lion share of students (80.6%) never had sex under the influence of alcohol whereas 12.7, percent rarely 3.9 and 2.8 percent, mostly and always had sex under the influence of alcohol consequentively. Also Respondents insisting condom use under the influence of alcohol worsen slightly. Some of focus group participant said that some students resort to alcohol and drug abuse as a means of getting relief from their regular workload.

The study further revealed that 16.8 percent of the respondents reported that they currently chew khat. The respondents were further asked their chewing condition. They replied that the majority of them (62.1%) used to chew rarely, followed by mostly and always with 26.4 and 11.5 percent respectively. Furthermore in these study 58(9.6%) of the respondents found to be cigarette smoker. This result was slightly consistent the findings obtained by Yigzaw (2002) where the current prevalence of cigarette smoking and khat chewing among college students in north western Ethiopia were found to be 8.1% and17.5% respectively.

The above relationship was also analyzed by cross tabulating the intersection of the behaviors. 103(17.0%), and 69(11.4%) of the respondents who drink alcohol and chew khat consequentively had sex play. The result presented below shows the existence of the tri-circles in the behavior of the respondents.

Chewing Khat ⟶ Drinking Alcohol ⟶ Sex (may be unsafe sex)

More specifically, out of those 180(29.7%) who were found to be drinking alcohol 23(12.8%) rarely, 7(3.9%) mostly and 5(2.8%) were found to be had sex under the influence of alcohol. Those who drink Alcohol, chew khat and smoke cigarette are at a higher risk of being infected by the AIDS virus.

Also the bivariate analysis revealed that Khat chewing was positively associated with alcohol drinking. This is similar to the findings of Assefa et al (2005) where current khat chewing was positively associated with alcohol drinking. Concomitant use of khat and alcohol could probably be one of the risk factors for exposure to HIV infection.

Some of the students have either developed risk perceptions or totally ignored safer sex. Still others are at risk due to their promiscuous sexual behavior. Some female students have clearly realized that they are at risk of contracting the AIDS virus but found it difficult to bring behavioral change because they strongly depend on their multiple partners for financial and academic support.

The use of alcohol and drugs were mentioned to be prevalent in almost all of the campuses. And the participants admitted most of the sexual practices are unsafe when they take a drink. Almost all of the participants in all campuses mentioned the presence of night clubs and drinking houses in the nearby area inviting for the alcohol intake after stressful exams and assignments. Regarding alcohol intake sexual practice during FGD one said:

> *"Go to 'Aratkilo', there are bars and restaurants in the vicinity where lots of students will go. During those days when we get money for accommodations there will be lots of 'Sheb reb'. And sex is a must if you have a drink." Male participant from Arat kilo*

Table 4.3 Percentage Distributions of Respondents' Behaviors Exposing to HIV/AIDS and Risk Perceptions, March 2010

Characteristics	Frequency	Percent
Feel being at risk of HIV infection (n = 606)		
Yes	117	19.3
No	489	80.7
Level of risk perception of HIV infection (n = 117)		
Low	94	80.3
High	23	19.7
Reasons for low risk of contracting HIV/AIDS (n = 94)		
Never had sex	49	52.1
Faithful to partner	21	22.3
Use condom consistently	18	19.1
Others	6	6.4
Reasons for high risk of contracting HIV/AIDS (n= 23)		
Have multiple partners	7	30.4
Do not use condom consistently	8	34.8
Never use condoms	4	17.4
Others	4	17.4
Evaluation of their current behaviors of HIV/AIDS (n= 606)		
Very likely	14	2.3
Likely	14	2.3
Unlikely	130	21.5
Very unlikely	448	73.9
Currently alcohol intake of the respondents (n= 606)		
Yes	180	29.7
No	426	70.3
Respondents currently chewing Khat (n= 606)		
Yes	102	16.8
No	504	83.2
Respondents currently smoking cigarette (n= 606)		
Yes	58	9.6
No	548	90.4

4.4 Attitude and Practices on HIV Preventions among AAU Students

4.4.1 Attitudes on HIV prevention

Twelve attitude indicator items concerning HIV prevention were asked to determine the attitudinal level of the respondents towards HIV prevention. In this indicator items, six positive and six negative items were equally included. The twelve items were answered for the sake of analysis, '' strongly agree '' and '' agree'' were grouped as ''agree'', while '' strongly disagree'' and '' disagree'' were grouped as ''disagree''.

For positively worded statements (have positive attitude) those who select '' agree'' were regarded as having positive attitude and those who choose '' disagree'' were considered as having negative attitude. Conversely, for positively worded statements (have negative implication) those who select ''disagree'' were clustered to have positive outlook whereas those who said '' agree'' were categorized to have negative attitude.

Each responded attitudinal items was first scored, tallied and then the total of each respondents' score was ranged 0-12 (0-100%). The attitudinal items score ranged were added to obtain a score serving as a proxy variable measuring the attitude of the respondents on HIV prevention. A score of 50% and above of the total considered as '' favorable attitude'' whereas, those scores below 50% of the total was thought as '' unfavorable'' (similar procedure was applied by Abebaw, 2008; Birhanu, 2009 and Mulumba, 2008).

Table: 4.4.1 Distributions of Respondents' by Reported Attitude on HIV Prevention, March 2010

No	**Attitude Indicators**	Scale				
		Strongly agree	Agree	Disagree	Strongly disagree	Total (%)
1	In my opinion the main HIV prevention measures I should follow is abstinent	383 (63.2%)	115 (17.8%)	88 (14.5%)	20 (3.3%)	606(100)
2	In my opinion the main HIV prevention I should follow is being faithful to only one partner.	284 (46.9%)	195 (32.2%)	87 (14.4%)	40 (6.6%)	606(100)
3	In my opinion the main HIV prevention I should follow is using condoms consistently	88 (14.5%)	104 (17.2%)	217 (35.8%)	197 (32.5%)	606(100)
4	Avoiding sex other than my sexual partner makes me seem sexually week	35 (5.8%)	34 (5.6%)	126 (20.8%)	411 (67.8%)	606(100)
5	Condom use creates doubt between sexual partner	92 (15.2%)	97 (16.0%)	226 (37.3%)	191 (31.5%)	606(100)
6	I may lose my partner if I say no to sex	69 (11.4%)	112 (18.5%)	194 (32.0%)	231 (38.1%)	606(100)
7	To get a better partner I must try several partner with sexual intercourse	33 (5.4%)	31 (5.1%)	100 (16.5%)	442 (72.9%)	606(100)
8	My partner usually does not accept the idea of avoiding sex before marriage	73 (12.0%)	105 (17.3%)	186 (30.7%)	242 (39.9%)	606(100)
9	Limiting my sexual desire to only one partner will reduce my sexual pleasure	36 (5.9%)	48 (7.9%)	138 (22.8%)	384 (63.4%)	606(100)
10	From now I intend to avoid sex before marriage	272 (44.9%)	114 (18.8%)	131 (21.6%)	89 (14.7%)	606(100)
11	From now I intend to limit my sexual contact to only one sexual partner	302 (49.8%)	174 (28.7%)	79 (13.0%)	51 (8.4%)	606(100)
12	From now I intend to use condoms consistently	150 (24.8%)	133 (21.9%)	137 (22.6%)	186 (30.7%)	606(100)
	Attitude of HIV Prevention **(Summary Index)** Attitude Favorable Unfavorable	397 (65.5%) 209 (34.5%)				606(100)

As the study finding shown in table 4.4.1 above, the majority of respondents strongly agreed (63.2%) and (17.8%) agreed that the main HIV prevention measures they should follow is abstinent; respondents strongly agreed (46.9%) and (32.2%) agreed that the main HIV prevention they should

follow is being faithful to only one partner and 32.5 and 35.8 percent of the respondents strongly disagreed and disagreed respectively about the main HIV prevention they should follow is using condoms consistently.

67.8 and 20.8 percent strongly disagreed and disagreed that avoiding sex other than their sexual partner makes them seem sexually week respectively; 31.5 and 37.3 percent strongly disagreed and disagreed about condom use creates doubt between sexual partner; 70.1 percent disagreed that they may lose their partner if they say no to sex; 89.4 percent disagreed that to get a better partner they must try several partner with sexual intercourse; 70.6 percent also disagreed that their partner usually does not accept the idea of avoiding sex before marriage, 86.2 percent disagreed that limiting their sexual desire to only one partner will reduce their sexual pleasure; 63.7 percent agreed that they intended to avoid sex before marriage; 78.5 percent agreed they intended to limit their sexual contact to only one sexual partner; and 53.3 percent disagreed that the intention to use condoms consistently. In short, the summarized findings shown in figure 4.1 below, point out that 65.5 percent of the respondents' had favorable attitude on HIV prevention, while 34.5% of them had unfavorable attitude.

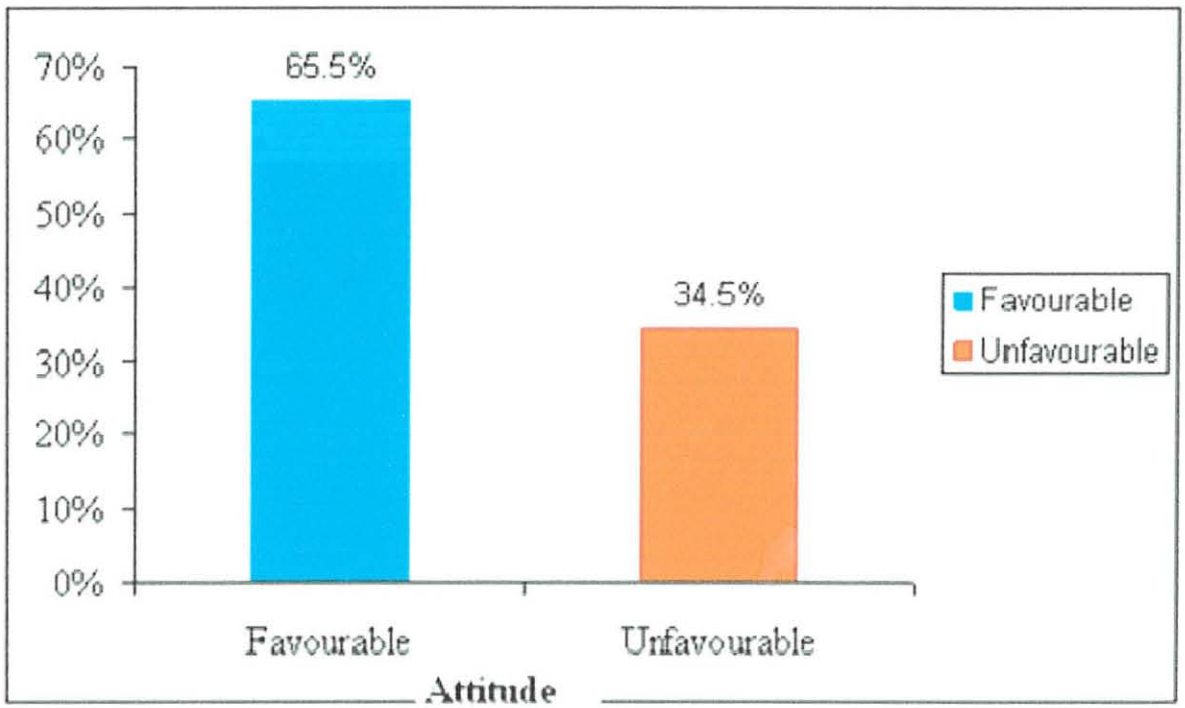

Figure 4.1 Respondents reported Attitudes on HIV prevention

Meanwhile, 21(14.6%) of the respondent who had sex in the past 6 months, 15(10.43%) and 6 (4.17%) females and males mentioning that they had sex in exchange for money or gifts respectively. Some of the participants mentioned that there are female student having sex in exchange for money or gifts. Second year female FGD participant from main campus reported:

> *"It is not uncommon to observe cars drop students at the main gate early in the morning after spending the night somewhere else"*

During a discussion about sexual experience, one participant from Commerce stated students in their campus are less sexually active because they do not have dormitory. But the idea was immediately counteracted by other participants. The opposing groups mentioned the students in Commerce do not have dormitory and are given money instead. Therefore, students live together renting a house.

The financial access and having their own houses were mentioned to be conducive for sexual practices. Some of the female participants from Commerce mentioned that due to the life expense in their campuses female students opt to have employed male partners that can cover the cost for their cell phones, for dressing and even for paying their house rentals. And the other participants argued it should be seen separately for students from Addis Ababa and the rural. They said the rural students that live by themselves should have time to cook, and do their studies at the same time. So they will not have time to think about sex. But some insisted that the conducive environment is exposing to have sexual contacts. And some mentioned students will have sexual contact with those living in their surroundings like the house owners and the young living around. Here is the telling:

> *"As you said when students from Addis Ababa rent a house the purpose is clear, it is for 'fun'. You know when you say 'fun' there will be khat chewing, drinking and the like. But I do not think the students that come from the rural parts of the country will get into this. They do not have extra money for substance use or for any other activity due to the living expenses we had currently." Female participant*

4.4.2 Practices on HIV/AIDS Prevention Methods

Respondents were asked if they ever practiced the major HIV prevention methods. More than half of the respondents 359 (59.2%) had experienced at least one of the three HIV prevention practice as a means of avoiding HIV infection. Accordingly, the majority of respondents 188 (52.4%) cited abstinence, followed by condom use 113(31.5%) and had one sexual partner 55 (15.3 %). 3(0.8%) were other methods that currently respondents practicing to protect themselves from HIV/AIDS. This result violates the hypothesis "The majority of students practice condom as a top means of protection against HIV/AIDS".

Detailed analysis of HIV prevention practice pattern indicates that of those who used abstinence 102(28.4%) students were males while the rest or 86(24.0%) were females. Thus, the majority of male respondents adopted abstinence as the top preventive practice that eventually put them at less risk for acquiring HIV/AIDS than their counterparts.

As far as sexual abstinence by college students is concerned in an opposite sex relation no more considered as a virtue. Virginity of girls, which was traditionally a non-negotiable quality for a marriageable woman in Ethiopia, no more enjoys its prestigious status among the student community. Most of the male participants in particular are of the opinion that girls' virginity has outlived its significance. Participants' own words are quite telling:

> *'' Is virginity still considered important? Not really. It is losing importance fast. At a university level, nobody expects girls to be virgins. Guys mockingly say, "if a college girl is virgin, so is my mother" [Laughter]... '' Male participant from Biology*

Respondents subscribing to sexual abstinence are reported to be dominantly students with religious background (Muslims and followers of Christianity with different denominations alike). Respondents were strictly observing their respective religions from opposite sex relations often in the form of formal engagement. These students are, thus, reported to be delaying sexual gratification until they get married.

Condom-use pattern indicated that the proportion of male condom use was higher 99(16.3%) than females 40(6.6%). Condom used during last sexual intercourse was better among males than female respondents. The reason for this may be the fact that females are less capable to negotiate condom use during their sexual encounters and responsibility for safe sex continues to be assumed by males. This is one of the contributions of culture to vulnerability of females to HIV infection. The aforementioned result agrees with the findings of Abdinasir et al., (2002) where the majority of respondents (62.5%) indicated that male decides on the use of condom.

Furthermore, those individuals who used condom during last sexual intercourse 75(54.0%) used consistently, 42(30.2%) most of the time and 22(15.8%) sometimes. This result is almost consistent with KAPB survey of AAII (2006) where 57.22 percent of the study group used condom persistently.

As shown in the tables 4.2.2.1 below some of the reasons reported for using condom were: to prevent HIV/AIDS (67.4%) followed by preventing pregnancy (21.6%) and didn't trust their sexual partners (11.1%).

Table 4.4.2.1 Distribution of Respondents by Reasons used Condom, March 2010

Characteristics	n= 140	Percentages
What were your reason for using condoms*		
To prevent HIV/AIDS	128	67.4
To prevent pregnancy	41	21.6
Don't trust sexual partner	21	11.1

*Multiple responses given by respondents

While the reasons mentioned for not using condom were: love with sexual partner (44.8%) followed by partner dislike condom (29.9%) and 25.4 percent inaccessibility of condoms (Table 4.2.2.2 below).

Table 4.4.2.2 Distribution of Respondents with Reasons not used Condom, March 2010

Characteristics	n= 55	Percentages
The reasons you didn't use condoms were*		
I am in love with my partners	30	44.8
Partners dislike condoms	20	29.9
Couldn't find condoms	17	25.4

*Multiple responses given by respondents

The sexual communication students have with family members, friends and others; their degree of openness while talking about sex amongst themselves; and most importantly the kind of talk they have with their sexual partners is thought to have great impact (positive or negative) on their sexual practices/behaviors (Astatke et al.,2000).

Respondents were also asked discussions made with any individuals about their sexual history and HIV/AIDS. As can be seen in Table 4.2.2.3 below, about half (50.6%) of respondents discussed their sexual history and exchange of ideas concerning HIV/AIDS among friends. About 18.5 percent discuss about their sexual matters and HIV/AIDS with sexual partners. On the other hand, 18.3 percent of the respondents discuss issues related to sex and HIV/AIDS with health personnel's. Only 12.6 percent of respondents discuss issues related to sex and HIV/AIDS with their parents.

Respondents' discussion about sexual matters and HIV/AIDS with parents was low may be because of the issues are not culturally sound. Open discussion about sexual matters and HIV/AIDS with family members is believed to play a crucial role in imparting accurate information about HIV/AIDS and its protective methods and help minimize the risk of acquiring HIV.

The discussions with the FGD participants disclose that, in the main, there are personal reasons and institutional constraints contributing to the rarity of the practice of VCT. At a personal level, fear of being told negative news, i.e. fear of receiving an HIV-positive status result it is the fear of jeopardizing their studies that worries students most. Participants are also of a strong opinion that the way VCT is handled in the University has discouraged the student community from having HIV test. In the first place, most of the participants feel the VCT is not publicized enough to persuade the student to go for it. VCT is promoted seasonally, once or a couple of times on occasions like AIDS day, giving them the impression that it is an annual ordeal, and not something of a serious concern.

Secondly, there is a strong feeling among participants that VCT centers' situated in the University campuses lacks appropriate location so that labeled and stigmatized by the friends were the reason that stands out prominently to prefer out campus VCT service.

Finally, most participants agreed that it is good for all campus students to know their HIV status and prevent the transmission of the epidemic by serving as a model for the society.

CHAPTER FIVE

Determinants of Attitude and Practices on HIV/AIDS Prevention: Multivariate Analysis

5.1 Determinant of Attitude on HIV/AIDS Prevention

The researcher applied chi-square test to verify the association of independent variables in the study with the dependent one. Only selected and relevant predictor variables which were statistically significant at the test of bi-variate analysis were included in the model. A p-value of less than 0.05 was considered statistically significant for all analyses. But bi-variate analysis result was not shown rather than using for checking the association of the variables. Because more focus and emphasis is given to Multivariate logistic regression model since it is used to determine individual independent effects of each variable included in the model on dependent variable by controlling (adjusting) potential confounding.

Thus, the selected and relevant independent variables were fitted in the binary logistic regression model to examine the effect of each of these on the outcome variable (Attitude). In order to employ the model, dependent variable was dichotomized and coded as 0 (unfavorable attitude) and 1 (favorable attitude). Categorical independent variables were meaningfully grouped.

5.1.1 Multicollinarity Effect and Goodness of fit:

Multicollinarity is the interconnection of independent variables that can lead the predictor variables to biased estimates and inflated the standard error. In the model, it can be assessed using Tolerance or Variance Inflation Factor (VIF), which build in the regressing of each independent on the other independent variable in the equation (Garson, 2010).

Garson (2010) also indicated that the Tolerance is $1\text{-}R^2$ for the regression of that independent variable on all the other independents, ignoring the dependents the more the tolerance will approach zero. As a rule of thumb, if tolerance is less than 0.20, a problem with Multicollinarity

is indicated. When tolerance is close to zero, there is high Multicollinarity of that variable with other independents and **b** and **beta** coefficients will be unstable. The Variance Inflation Factor (VIF) is simply the reciprocal of tolerance. When VIF is high, there is Multicollinarity and instability of the **b** and **beta** coefficients. VIF>=4 is an arbitrary but common cut-off criterion deciding when a given independent variable displays too much Multicollinarity. Values above 4 suggest a Multicollinarity problem. Hence, Multicollinarity effect among the included variables of this study was checked and VIF also checked and the result found to be less than cut-off value (>=4) See annex 4, table-2.

The overall model goodness of fit of a binary logistic regression can be assessed using Hosmer and Lemshew test. A finding of non-significance (>0.05) of this test shows that the model adequately fit the data. If the Hosmer and Lemshew goodness of fit test statistics is greater than 0.05, the model estimates fit the data at an acceptable level. But if the significance of the test is small (p<0.05), then the model does not adequately fit the data (Garson, 2010). Thus, in this study, the test result was insignificant and the model adequately fit the data, See annex 4 table-1.

5.1.2 Multivariate Analysis results of Attitudes on HIV/AIDS Prevention

The selected variables included in the Model were: *Sex*, *Age*, *Previous place of residence*, *Religious participation*, *level of study*, *Pocket money*, *Pornographic film show*, *Currently Alcohol intake*, *Currently Khat chewing*, and, *Currently Cigarette smoking*. Among the variables included in the model, as indicated in Table 5.1 below, the Multivariate analysis test revealed that the predictor variables those significantly affecting AAU students' attitudes on HIV prevention found to be:

- Sex
- Previous place of residence
- Religious service participation
- Pornographic Film show
- Currently alcohol intake
- Currently khat chewing, and
- Currently cigarette smoking. Whereas, age, Level of study and having pocket money do not have any impact on attitudes on HIV/AIDS prevention among the respondents.

Table 5.1 Determinants of Attitude on HIV/AIDS Prevention among respondents, March 2010

Predictor Variables	B	S.E.	Sig.	Exp(B)
Sex				
Male (RC)				1.000
Female	0.828	0.294	0.005**	**2.288**
Age				
15-19	0.008	0.348	0.981	1.008
20-24 (RC)				1.000
Previous Residence				
Urban	0.557	0.276	0.043*	**1.746**
Rural (RC)				1.000
Religious Participation				
Yes	1.971	0.327	0.000***	**7.179**
No (RC)				1.000
Level of study				
Year Two & Below (RC)				1.000
Year Three & Above	-0.310	0.307	0.313	0.734
Pocket Money				
Yes (RC)				1.000
No	-0.074	0.273	0.785	0.928
Pornographic View				
Yes	1.797	0.399	0.000***	**0.166**
No (RC)				1.000
Currently alcohol intake				
Yes	1.499	0.296	0.000***	**4.479**
No (RC)				1.000
Currently Khat chewing				
Yes	0.904	0.316	0.004**	**2.470**
No (RC)				1.000
Currently Cigarette smoking				
Yes	0.849	0.385	0.027*	**2.336**
No (RC)				1.000

*sig. at p<0.05 **sig. at p<0.01 ***sig. at p<0.001 RC= Reference Category

Sex:

Sex was found to be statistically significant factor for attitude on HIV/AIDS prevention. As the MVA result indicated on table 5.1 above being female respondents were found to be 2.288 times more likely to have favorable attitude on HIV prevention than their male counterparts. This result confirm the hypothesis "AAU female students are more likely to have favorable attitude on HIV prevention than their male counterparts"

Previous Place of Residence:

Respondents who resided in urban were positively associated with attitudes on HIV prevention. The likelihood of favorable attitudes of these respondents was 1.746 times as compared to those respondents having rural background. This result may indicate that respondents from rural background might have less information to HIV prevention activities.

Religious Service Participation:

Religious service attendance found to be the highest significant factor where respondents who attend the religious service were positively associated with attitudes on HIV prevention. The MVA result revealed that respondents who attend the religious service at least once a week were found to be 7.179 times more likely to have favorable attitude on HIV prevention than those who didn't attend the religious service.

Pornographic Film Show:

The result revealed that respondents who viewed pornographic movies were 83.4 percent less likely to have favorable attitude on HIV prevention than those who did not view. The Focus group participants said that once students join colleges, Internet exposure made particularly male participants' attitude on HIV prevention in influencing browsers negatively. A male FGDs participant from Sociology department reflects on what he personally witnessed that students are obsessed with porno sites and their adverse impacts on their sexual lives as:

> *"There were 53 students in our department. We are now about 43. The majority of us surf porno sites. Other than some three students, we all do surf! The funny thing is it is not only from porno sites that students watch these things. They bring porno*

films with their CDs or flash disks and watch erotic sex there. Even funnier is sometimes they watch them in groups locking themselves in the room and pretending to be doing something serious! That's I think a major source on sex, and I should add a very dangerous one".

Currently Alcohol Intake:

Currently alcohol intake was found to be significantly determinant that positively affecting the respondents' attitude on HIV prevention. As indicated in table 5.1 above currently consuming alcohol found to be 4.479 times more likely to have favorable attitude on HIV prevention than who were not currently taking alcohol. During FGD the participants claimed that majority of the students are drinking during semester breaks or in periods right after the completion of exams. In those times, students went out in mass and they drunk in groups. Say to have fun with friends and often talking about, soccer, politics, women, sex as well as about HIV. Hence, this group has more exposure to HIV information than others.

Currently Chewing Khat:

Currently chewing khat was statistically significant factor that determine respondents' attitude on HIV prevention. As MVA result indicates that respondents who were currently chewing khat were found to be 2.470 times more likely to have favorable attitude on HIV prevention than their counterparts. This result reflects that currently khat chewers are more imaginative to think about the devastating health impact of HIV/AIDS than non-chewers. However, this result violates the hypothesis that "AAU students who are currently chewing khat have unfavorable attitude on HIV prevention".

Currently Cigarette Smoking:

The result of the MVA indicated that currently cigarette smoking has a significant factor that positively affects the respondents' attitude on HIV prevention. Respondents who were currently smoking cigarette were 2.336 times more likely to have favorable attitude on HIV prevention than students who didn't smoke.

In short, the logistic regression result identified currently alcohol intake, currently chewing Khat, and currently smoking cigarette as positively affecting respondents' attitude on HIV prevention

when compared to their counterparts. However, this does not mean that respondents who do not consume alcohol, khat, and cigarette had no favorable attitude. Similarly, having favorable attitude by consuming alcohol, Khat, and Cigarette is not advisable due to their risk factor. According to Assefa et al (2005) those who drink alcohol, chew khat and smoke cigarette are at a higher risk of being infected by HIV/ AIDS virus.

5.2 Determinant of Practice on HIV/AIDS Prevention

In a similar fashion to attitudes on HIV prevention, here also MVA was applied to examine each effect of the independent variable on the practices of AAU respondents on HIV prevention and to see the direction of its association.

The dependent variable, practice, was dichotomized and coded as 1= Yes and 0= No. The Multicollinarity effect among the included variables was tested and the VIF was less than the cut off value (>=4). The Hosmer and Lemshow goodness of fit test significant (p>0.05) confirmed that the model adequately fit the data, See annex 4 table-1.

5.2.1 Multivariate Analysis Results of Practices on HIV/AIDS Prevention

Similarly, to determine variables that affect practice on HIV/AIDS prevention, variables included in the Model were: *Sex*, *Age*, *Previous place of residence*, *Religious participation*, *Level of study*, *Pocket money*, *Pornographic film show*, *Currently Alcohol intake, Currently Khat chewing*, and, *Currently Cigarette smoking*. Among the variables included in the model, as indicated in Table 5.2 below, the Multivariate analysis test revealed that the predictor variables those significantly affecting respondents practice on HIV prevention found to be:

- *Age,*
- *Having pocket money,*
- *Pornographic Film show,* and
- *Currently khat chewing.*

Table5.2 Determinants of Practices on HIV/AIDS Prevention among respondents, March 2010

Predictor Variables	B	S.E.	Sig.	Exp(B)
Sex				
Male (RC)				1.000
Female	0.195	0.184	0.289	0.822
Age				
15-19	0.424	0.216	0.050*	**1.528**
20-24 (RC)				1.000
Previous Residence				
Urban (RC)				1.000
Rural	-0.050	0.177	0.777	0.951
Religious Participation				
Yes (RC)				1.000
No	0.442	0.259	0.088	1.556
Level of study				
Year Two & Below (RC)				1.000
Year Three & Above	0.180	0.198	0.363	1.198
Pocket Money				
Yes (RC)				1.000
No	0.344	0.175	0.049*	**0.709**
Pornographic View				
Yes (RC)				1.000
No	0.469	0.187	0.012*	**1.598**
Currently Alcohol intake				
Yes	-0.273	0.214	0.203	0.761
No (RC)				1.000
Currently Khat chewing				
Yes	0.712	0.284	0.012*	0.491
No (RC)				1.000
Currently Cigarette smoking				
Yes	-0.077	0.320	0.809	0.926
No (RC)				1.000

*sig. at $p<0.05$

Age:

Age was found to be statistically significant factor in affecting respondents' practice on HIV prevention. The MVA result identified that the likelihood of practice of HIV prevention among respondents of age group 15-19 was 1.528 times more likely to practice the main HIV prevention methods compared to age group 20-24. There was a consensus among FGDs participants that AIDS is viewed as something dreadful by younger than older respondents at large that seriously affect their decision to have a safe or unsafe sex.

Having Pocket Money:

Having monthly pocket money found to be a significant factor that affects respondents' practice on HIV prevention. As indicated above in table 5.2 respondents who have no monthly pocket money found to be 29.1 percent less likely to practice the main HIV prevention methods than those who get pocket money per month. In other words, respondents who have pocket money are more likely to practice methods on HIV prevention.

Pornographic Film Show:

The finding revealed that respondents who did not view pornographic movies were 1.598 times more likely to practice the main HIV prevention methods than those who viewed pornographic movies. These may be pornography shown on regular basis through deceptive mechanisms make respondents addicted to porno viewers, eventually making them susceptible to risky sexual behaviors/ practices.

Currently Khat Chewing:

Currently chewing khat was found to be another determinant that affects respondents' practice on HIV prevention. As MVA result revealed AAU respondents who were currently chewing khat was found to be 50.1 percent less likely to practice the main HIV prevention methods than their counterparts. This result confirms the hypothesis "AAU students who are currently chewing khat are less likely to practice the main HIV prevention methods". During Focus Group discussion, participants were agreed that students were first chew chat and deliberately take liquor (chebse)

afterwards when they want to make the best out of a [pre-arranged] sexual activity—making the group prone to sexually transmitted diseases including HIV/AIDS.

5.3 Prevention Measures and Interventions

It is believed to be useful conveying information with university staff and other identified individuals who have got wide range of interactions with the university students for better understanding the situation of HIV/AIDS prevention activities in the campus. IDI was conducted with the following concerned bodies as follow:

Students' Clinics of AAU

The university clinics deliver service to students free of charge in the existing health clinics of the university. The services provided in the clinic include general medical service, sexual reproductive health, pharmacy, and laboratory including condom distribution are some among many as the head of the university clinics stated.

The most preventive activities were being undertaken by the students' clinic: "The clinic provide condoms to the students. In this clinic, we put condom in the OPD and registration room. Condom is mostly utilized by the students especially after an exam. Sometimes there was an interruption of supply, at this time students murmur at the service providers. Also sometime it will be hinging empty most of the times. I do not know whether it is being appropriately utilized or not. Regarding orientation on HIV prevention at time of freshman admission the health personnel at student clinic mentioned that:

> *''This year we have tried giving orientation for campus fresh students jointly with AAII about not to expose themselves at these risk prone environment and the way to protect themselves from HIV/AIDS'' the head of the university clinic*

African AIDS Initiative (AAI)

The African AIDS Initiative International Inc. (AAII) is an NGO affiliated with the W.E.B DU Bois Institute for African & African American research at Harvard University in Cambridge, USA. It was initiated after the first International Conferences on HIV/AIDS was held in Addis Ababa, Ethiopia in Nov.1999. In 2004, AAII signed a twelve-year agreement with Addis Ababa University to deliver HIV/AIDS prevention and control services in the university and facilitate research works aimed at curbing the incidence of HIV infections.

The agreement was to be implemented in line with the activities of AAII, which comprises: providing health education; specially HIV related; to all the students and the staffs under AAU, providing SRH services like VCT, condom distribution, providing emergency contraceptive pills, peer education training, strengthening Anti-AIDS and Gender Clubs, preparing talk show programs, preparing event driven programs like on AIDS day or Women's' day and establishment of information, research, as well as training centers.

The general goal of AAII is to contribute to the realization of an HIV/AIDS free community at all operational sites where men and women in general and youth in particular are empowered to use their potential to control the spread and mitigate the impacts of HIV/AIDS. At AAU, AAII aims at empowering youth through enhancing the knowledge, attitude/behavior and life skills of students in general and female students in particular to detect (high) risk activities that could lead to the acquisition and transmission of the HIV pandemic.

The head of AAII has opened office in the main campus of the university and VCT centers including Arat kilo campus began providing services in the middle of the 2005. The service is rendered in all campuses except Deberzeit Veterinary Medicine.

According to the head of the program not only students but also the university community at large are benefiting from their program so that people are acting to know their health status more than ever, to date for instance the total of AAII VCT clients counseled and tested from March/2005 to December 31/2009 were more than 15,000. Of these 9,756 were students in which

only 57(0.58%) students found to be sero positive comprising 35 males and 22 females in gender wise though there is a decline of VCT prevalence at time of exam.

The VCT nurse at AAII stated that they also used to distribute condom in the VCT centers at each campus including female condoms but these are not usable by the students particularly females are not comfortable about female condom. She stated about inconvenience of female condom as:

> *"The students are not happy to use female condom because it will make Sound during intercourse and also the female has to handle it with her finger so that it will not sleep off" This is the complaint we had so far.*

Before 2004, the feature of university's response to HIV/AIDS was what can be described as an awe-inspiring silence that surrounds the disease at the institutional and personal levels. Notwithstanding a few isolated initiatives individuals and their groupings carried on; there was amusing silence as if the disease does not exist. Until recently, the characteristics of AAU's response to the pandemic could be mentioned as: considerable uncertainty and failure to respond to systemic impacts, lack of coordination, and absence of well-developed action plans, minimal policy framework, and heavy reliance on the initiatives of a few interested and committed staff of the university community to HIV/AIDS.

A clock of indifference, if not ignorance, was surrounding the presence of the disease at all campuses of the universities. This cloak was amply lined with layers of secrecy, silence, denial, and fear of stigmatization and discrimination. Records that name the disease were not held in any of the administrative or academic offices, while those available in university clinics were inadequate and incomplete.

It is against this background that AAII commits itself to take the mammoth task of changing trend trough delivering quality HIV/AIDS related services to the university community. Thus far AAII has opened two VCT centers in the two campuses and helped about 10,000 students and other members of the university to know their HIV status, reached thousands of students through

prevention education activities, developed different manuals, service provision guidelines and facilitated the development of AAU's HIV/AIDS policy.

Responses from the AAU Community

Due to poor controlling of the campus, students are easily entering to the opposite sex dormitory and spend the night there. The proctor of the science campus own word stated that these days we have faced a lot of challenges with female students not alone their counterpart. Female students are found to be drunk and brought their boyfriend to dormitory to have sex play at midnight that needs due attention for its risk behavior. He explained the night adventures happening after end of class as:

> *"They (students) spend the night where they had drunk and came at mid night shouting and disturbing the campus norm'' the proctor claimed*

The poor campus security that is exposing most of the students to unsafe sexual practices and for these reason guards at main campus given their witness that student during night hours had sex play particularly after exam. Thus, unavailability of condom in the compound particularly, during evenings made things worse .He recommended to place condoms at campus where sex known to be performed.

The janitors also claimed that they are busy collecting many condoms every morning from the sport field that university administrations should give due attention for not only to their health but also to the university community at large.

In general, the researcher obtained agreement from the entire participants that all focus should be given to females and freshman students, as they are the most vulnerable groups to HIV infections. According to the respondents, female students can easily be deceived by their male counterparts and exposed not only to the AIDS virus but also to unwanted pregnancy.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 SUMMARY

This study explored students' attitude and their practices on HIV prevention methods among undergraduate students of Addis Ababa University. The study population was selected from AAU students through multistage sampling. To select respondents, probability proportional to their size was used. Though the sample size of the study was 623, only 606 respondents were filled in the questionnaires which yield the estimated response rate of 97.27 percent.

The study was based on primary data collection through self administered survey questionnaire, focus group discussion, and In-depth interview with selected respondents. Two FGDs where 15 students (7 males and 8 females) were participated in the focus group discussion (for questionnaire and FGD items, please see Appendix 1 and 2 respectively) and In-depth interview with health providers in the university clinics in addition to organizations that are working in the campus on HIV prevention were conducted.

To analysis the quantitative data, descriptive statistics such as (frequency and cross-tab) and Multivariate logistic regression were applied using Statistical Package for Social Science software. The qualitative data collected through FGDs were used to integrate and support relevant issue where quantitative data undermine to explain the subject. Whereas in-depth interview data collected from health care providers and organizations were separately analyzed.

With regards to sexual engagement of students, the qualitative and the quantitative data revealed quite a mixed result. According to the estimates given by FGD participants, a very high percentage of the student community (at least 70%) was reported to have some kind of sexual engagement. The proportion of sexually experienced students as revealed from the survey data is, in contrast, much lower than that—it is about 34.2%. Since there is a considerable gap between

the two figures, the explanation could be mainly due to social desirability bias characterizing sexuality studies, and respondents tend to underreport their sexual experience. That is the case despite assurances given by investigators to maintain confidentiality of private information and anonymity of respondents. It could thus be argued that the actual engagement of the current study could be higher than that percent.

Again, the unsafe sexual practices that were observed in the quantitative finding and strengthened by the qualitative data were alarmingly high. The finding shows that 37.7 percent of the students have multiple sexual partners. These are signs of unsafe sexual practice by this segment of the population and sense of complete entitlement to sex coupled by a feeling of absolute freedom in an environment where HIV/AIDS is widespread is indeed need a great concern. In relation to, the unprecedented access to porno sites accessed from computers in the university libraries, according to the quantitative survey 32.2 percent students motivated not only to start sexual relations but also tempted them to experiment what they watch there.

Given that risky sexual behavior, only 117(19.3%) of the respondents perceived themselves at risk of acquiring HIV. It is surprising that significantly higher proportions of respondents 489 (80.7%) did not perceive that as they are at risk of contracting HIV/AIDS. The data also revealed that 29.7 percent of respondents and 16.8 percent were currently consuming alcohol and chewing khat respectively.

The finding with regards to the attitude on HIV prevention indicates the majority (65.5%) of the respondents' had favorable attitude on HIV prevention, while 34.5% of them had unfavorable attitude. More than half of the respondents 359(59.2%) had experienced at least one of the three HIV prevention practice as a means of avoiding HIV infection. Thus, the study depicted that the majority of respondents (52.4%) cited the practice of abstinence, followed by condom used (31.5%) and had one faithful sexual partner 55(15.3 %) as well as 3(0.8%) other methods as ways of preventing HIV/AIDS.

Out of the total sexually active respondents 139(22.9%) had used condom during the last sexual intercourse, of which, 75(54.0%) used consistently. The major reasons mentioned for condom

usage were to prevent HIV/AIDS(67.4%) followed by preventing pregnancy(21.6%) and didn't trust their sexual partners (11.1%). Whereas, reasons given for not being condom use includes: love with sexual partner (44.8%) followed by partner dislike condom (29.9%) and 25.4 percent inaccessibility of condoms.

The study also indicated, respondents who discussed about sexual history with their friends were 363 (50.6%), with their sexual partner 133 (18.5%), with health personnel 131(18.3%) and with their parents 90(12.6%). Furthermore, the prevalence of HIV testing among of all the respondents, the proportion ever had tested for HIV was 80.4 percent. The major reasons mentioned for HIV test were, to know health status, to get married and pregnancy. Whereas, reasons gave for not being tested for HIV among non-tested respondents were never had sex (31.9%), don't feel at risk (27.7%), fear of stress due to the virus (if the result become HIV positive (20.2%), fear of stigma by the society (if the result become HIV positive) (4.2%) and other reason (16.0%) were reported.

According to Multivariate analysis test, the determinant that affects AAU students:

- **Attitudes on HIV prevention includes**
  - ✓ Sex, Previous place of residence, Religious service participation, Pornographic film show, Currently alcohol intake, Currently chewing khat and currently smoking cigarette
- **Practices on HIV prevention includes**
  - ✓ Age, having pocket money monthly, Pornographic film show and chewing khat currently

6.2 CONCLUSION

The current study sought to explore the sexual experiences, risk perception and behavior and attitudes and practices on HIV prevention of Ethiopian male and female undergraduate students in the context of the HIV/AIDS pandemic rampant in the country. Even though there are a number of colleges and some newly introduced 16 regional universities, the target population of the present study was taken from Addis Ababa University, by far the oldest and the largest higher learning institute hosting over 45, 000 students most of whom randomly assigned to it from all parts of the nation.

The study result shows that risky behaviors including alcohol and Khat (plant stimulant) were reported to have led the college youth to risky sexual behaviors, including sex with having commercial sex workers without condoms.

Most regular undergraduate students of Addis Ababa University are estimated to be within 20 to 24 and it is within this age group that the prevalence of living with HIV/AIDS disease becomes so high. Suffice to say that university campuses may be conducive to a variety of intervention that can help maintain and encourage safer sexual practices. Such that, it may be possible to develop a program to address such problems if the extent and patterns of HIV/AIDS prevention practices are identified at point of enter.

The majority of respondents' desire to undergo voluntary counseling and HIV test reported to be very high and students' zeal for HIV testing is a positive sign that could potentially be tapped for possible intervention.

As no body to date found out in the open to acknowledge being HIV positive at university campus, it must be encouraged person living with HIV/AIDS at university and college campuses to form association to better mitigate the epidemic and fight stigma, denial and discrimination. Among other things, the study underlined the need to raise students' favorable attitudes and practice on HIV prevention and developing students' skills and abilities in using behavior change through peer-led education and training of life skills.

In general, in terms of objectives, students were found to be favorable in attitudes on HIV/AIDS prevention including the practice that the majority of respondents had experienced at least one of the three HIV prevention practices as a means of avoiding HIV infection.

6.3 RECOMMENDATIONS

As can be realized in the concluding section above and in the discussions of the preceding chapters, there are a number of problems worth addressing in relation to the sexual experiences, risk behavior, attitude and prevention practices on Ethiopian undergraduate students in the context of HIV/AIDS pandemic. Based on the findings of the study, the following possible recommendations are forwarded:-

1. Contrary to the assumptions made by previous related studies in Ethiopia and elsewhere, the reliance on provision of knowledge about HIV/AIDS and some preventive mechanisms would do very little by way of bringing behavioral changes. Students themselves have become increasingly cognizant of this disconnect between knowledge and behavior. We should thus think of more practical and workable preventive measures.

2. Instead of making no attempt to prevent the youth from sexual engagement by instilling fear in them (e.g., a fear of catching HIV/AIDS), we need to openly acknowledge their right to sexual pleasures and help them pursue it in a more responsible manner.

3. Female students date "sugar daddies" in exchange for financial benefits which they would otherwise find it difficult to secure. Identifying poor female students and helping them earn some money through part-time jobs available in colleges may be a short-term solution.

4. The enthusiasm expressed by the student community for undertaking voluntary counseling and HIV testing could be translated into practice. Letting the students know about the availability of the antiretroviral treatment for free in the event they are sero-positive is likely to embolden them not to delaying HIV testing and facilitate linkages with services and organizations for those found positive sero-status in providing sustainable anti-retroviral treatment who do not have access in any other institutions for any reasons.

5. In sexual relations taking place in college settings, it was observed that there is disproportionate peer pressure on freshman students coming from the regions and female students in particular. Interventions targeting these groups by providing training in resisting peer pressures (e.g., saying "no" to unwanted sexual relations) and negotiating sexual relations is helpful.

6. AAU houses a large number of people highly vulnerable to HIV infection along with the fact that it is inhabited by such young population, the AAU should urge its own HIV/AIDS policy to create an enabling environment for the prevention and control of HIV/AIDS in the university community; and to play a leading role in the search for effective preventive and control strategies that can be applied to Ethiopian society at large.

7. Finally, it is highly recommended that related studies be conducted in other colleges, particularly in newly established regional universities. Studies to be conducted in the regions may give us additional data on the sexual experiences, risk perceptions, attitudes and practices on HIV prevention in Ethiopian undergraduate students whose number is on the increase.

References

Abdinasir Ahmed, Gurja Belay & Sentayehu Tadesse (2002). Knowledge, Attitude, Practice and Behavior (KAPB) Survey on HIV/AIDS among AAU Students, AAU, Ethiopia: UNFPA, ISAPSO.

Abebaw Andarge (2008). Determinants of Voluntary HIV counseling and testing Among AAU Undergraduate Final Year students. Unpublished Thesis.

Abebe HailGebriel (2008). The challenges and opportunities of main streaming of HIV/AIDS prevention, in Ethiopia Educational System: What roles territory Education? OSSREA, AAU. Pp.77-80.

Academic Staff Profile (2009). AAU Academic Staff Profile, Office of the Associate Vice President for Academic Affairs, AAU.

Addis Ababa HIV/AIDS Prevention and Control Office (2010). http://aahapco.org Accessed on 17/03/10

Africa AIDS Initiative (AAI) (2006). HIV/AIDS, STDS and Reproductive Health: Knowledge, Attitude, Practice and Behavior (KAPB) survey on AAU Students, Final Survey Report, and Addis Ababa.

Amsalu Shiferaw (2004). Response to HIV/AIDS prevention messages: based on the Extended Parallel Process Model; among Bahir Dar University students, North West Ethiopia, June 2004, MPH thesis.

Assefa Seme, Damen Haile Mariam and Alemayehu Worku (2005). The association between substance abuse and HIV infection among people visiting HIV counseling and testing centers in Addis Ababa, Ethiopia,.J.Health Dev. 2005;19(2):116-125

Astatke Hibist and Robert Serpell (2000). Testing the Application of a Western Scientific Theory of AIDS Risk Behavior among Adolescents in Ethiopia. Journal of Pediatric Psychology No 25 6:367-9.

Astatke Hibist, Maureen Black; and Robert Serpell (2002). Applicability of a Western Theoretical Framework of Risk Taking Behavior to Adolescents in Ethiopia , © *Northeast African Studies* (ISSN 0740-9133) Vol. 7, No. 1 (New Series) 2000, pp. 63-84

Behavioral Surveillance Survey (BSS) Ethiopia (2005) Round Two, MOH/HAPCO, AAU, CSA, EPHA, Addis Ababa, Ethiopia.

Beyene Petros, Solomon Belayeneh and Yared Mekonnen (1997). AIDS and college Students in Addis Ababa: A Study of Knowledge, Attitude and Behavior. Ethiopian Journal of Health development, 11(2):20-30.

Bin Chen., Yong-Ning Lu., Hong-Xiang W., Qing-Liang Ma., Xiao-Ming Z.,Jian-Hua G., Kai Hu., Yi-Xin W., Yi-Ran H., Pei Chen (2008). Sexual and reproductive health service needs of University/college students: updates from a survey in Shanghai, China, Asian J. Andrology, July 2008; 10(4):607-15.

Berhanu Desta (2009). Knowledge, Attitude and Practice of Emergency contraceptive Among Alemaya University Female Students, Eastern Ethiopia, Unpublished Thesis.

Bosompra Kwadwo (2001). Determinants of condom use intentions of University students in Ghana: an application of the theory of reasoned action, Social Science and Medicine; (52):1057-1059.

Cheru Atsmegiorgis (2009). HIV/AIDS Vulnerability among Hawassa University Students. Population Studies Thesis, AAU unpublished Thesis

Chng CL., Eke-Huber E., Eaddy S., Collins JR (2005). , Nigerian college students: HIV knowledge, Perceived Susceptibility to HIV and sexual behaviors, College Student Journal; (39): 235-252.

Clifford Odimegwu (2005). Influence of Religion on Adolescent Sexual Attitudes and Behavior among Nigerian University Students: Affiliation or Commitment? African Journal of Reproductive Health, Vol. 9, No. 2 (Aug., 2005), pp. 125-140 Published by: Women's Health and Action Research Centre (WHARC), http://www.jstor.org/stable/3583469 Accessed: 09/11/2009 01:25

Elias Worku (2009). Internet –Based Technology as source of sexual and HIV/AIDS Related Health Information among AAU students. Unpublished Thesis

EPHA (2006). Intention to use Condoms and remaining faithful in Student at Gonder University.

Ethiopian Demographic and Health Survey (2006). CSA, A.A Ethiopia, ORC Macro, Calverton, Maryland, USA

Family Health International (2002). Behavioral Change. A summary of four major Theories.2101 Wilson , Suite 700 Arlington, VA 22201 USA

Figen Cok, Lizbeth Ann Gray, and Hakan Ersever (2001). Turkish University Students' Sexual Behavior, Knowledge, Attitudes and Perceptions of Risk Related to HIV/AIDS

Culture, Health & Sexuality, Vol. 3, No. 1 (Jan. - Mar., 2001), pp. 81-99 Published by: Taylor & Francis, Ltd. Stable URL: http://www.jstor.org/stable/3986609 Accessed: 03/10/2009 04:51

Fishbein, M (2000). The role of theory in HIV prevention. AIDS care, vol.12, No 3, pp.273-278.

Fitaw Yohannis & Worku Alemayehu (2002). High-Risk Sexual Behavior and Pattern of Condom Utilization of the Gonder College of medical Sciences (GCMS Students, North-west Ethiopia. Ethiopian Journal of Health Devlopment, 16(3):335-338.

FMOH (2006). National HIV/AIDS prevention and control office. AIDS in Ethiopia 6th Report, Addis Ababa. .

Garson, G.David (2010). "Logistic Regression Overview". Stat notes from North Carolina State University, Public Administration Program. Last up date 14/4/2010. Accessed on 15/04/2010. http://faculty.chass.ncsu.edu/garson/pa765/logistic.htm

Gashaw Andargie, Afework Kassu and Feleke Moges (2007). Low prevalence of HIV Infection and Knowledge, Attitude and Practice on HIV/AIDS among High School Students in Gonder, North-west Ethiopia. Ethiopia Journal of Health Development; 21(2):179-182.

Girma Belaineh, Assefa Demeke &Tushunie Kora (2004). Determinants of condom use Among Agaro High School Students using behavioral Models. Ethiopian Journal of Health Devlopment, 18(1), 25-30.

Getinet Tizazu (2009). Self reported sexual experiences, sexual conduct and safer sex practices of AAU undergraduate male and female student's on the context of HIV/AIDS pandemics, A PhD dissertation the State University of New York at Buffalo, USA.

Getnet Mitike and Melese Tamiru (2008). The Drivers of HIV/AIDS epidemic Response in Ethiopia, Addis Ababa

Hollanders and Douglas a Wolfe (1999). Super course Lectures on survey Sample Size.Mc Gill University Montreal Canada.

Hosmer, David W. and Stanely Lemeshow (1989). Applied Logistic Regression. New York. John Wiley and sons.

Jessor Richard (1991). Risk Behavior in Adolescence: A Psychosocial Framework for understanding and Action. Journal of Adolescent Health.12: 507-605. http://www.jahonline.org/user/verifyregistration Accessed 05/12/09

Moon Karoline (2002). Knowledge, perceptions, attitudes, and practices of HIV/AIDS: A comparative study of behavior change in commercial sex workers and truck drivers in Dindigul and Coimbatore Districts of Tamil Nadu, India. University Center for International Studies, The University of Northern Carolina at Chapel Hill, NC. Spring, 2002

Mpoyi Mulumba (2008). Knowledge, Attitude and Prevention Practices of HIV/AIDS Among Primary and Secondary School Teachers in Zambia, Unpublished Thesis.

Nancy Muturi (2007). The interpersonal communication Approach to HIV/AIDS Prevention strategies and challenges for Faith-Based Organizations. Journal of Creative Communications 2(3): 307-327. SAGE Publication, Los Angles.

National University of Rwanda (2007). HIV/AIDS Control Policy.

Okubayzhi Gebreselassie & Singh Surjit (2002).Establishing HIV/AIDS Programme in developing Countries: The Ethiopian Experience. AIDS, (16), 1575-1586.

Population Reference Bureau (2002). Facing the HIV/AIDS pandemic Population BulletinVol.57No3., http: //www.prb.org/source/57.3FacingAIDSpandemi_Eng.pdf Accessed on 04/02/2010

Saba Hailemeskel (2009). Perceptions of Risk of HIV/AIDS and Intention to Adopt Preventive Behaviors among Dire Dawa University Students. Unpublished Thesis.

Sanders Eduward, Araya Tekebash and Kebede Derege (2003). The mortality impact of AIDS in Addis Ababa, Ethiopia.AIDS, 17; 1209-16.

Scott C. Ratizan (1993). AIDS: Effective Health Communication the 1990s, Washington, D.C, U.S.A

Tefera Belachew, Challi Jira and Yoseph Mamo (2004). KAP about HIV/AIDS, VCT Among students of Jimma University, Jimma Zone, SW, Ethiopia. Ethiop j Health Sci. Vol.14, Specal issue.

Tefera Belachew, Challi Jirra & Yoseph Mamo (2004). HIV-Sero Prevalence among Students of Jimma University Students, Ethiopian Journal of Health Development, Vol.14, Special issue.

Teka Telahun (1993). College Students' Attitude and knowledge of AIDS. Ethiopian Medical Journal.314:233-237.

UNAIDS (2005). Report of the Meeting of the UNAIDS Reference Group on HIV Prevention, January 11- 12, 2005, Glion, Switzerland

UNAIDS (2008). Reporting on the global AIDS Epidemic, comprehensive HIV prevention. Vol.2007, issue, Geneva.

UNAIDS/WHO (2009). AIDS epidemic update UNAIDS 20 avenues Appia CH-1211 Geneva 27 Switzerland.

Wikipedia, the free encyclopedia (2008). List of countries by HIV/AIDS Adult prevalence rate. http://en.wikipedia.org/wiki, Accessed on 30/05/10

William Saint (2005). Higher Education in Ethiopia: The Vision and its Challenges, http://www.iked.org/ethiopia , Accessed on 01/06/10

Wouhabe Maria (2007). Sexual Behavior, Knowledge and Awareness of related Reproductive Health Issues among Single youth in Ethiopia. Rev.Afr Santie Reprod; 11(1):14-21.

Yigzaw Kebede (2002). Cigarette smoking and khat chewing among college students NW Ethiopia, *Ethiop. J. Health Dev.* 2002; 16(1):9-17

Yohannes Asmare and Moges Abey (2006). The impact of HIV/AIDS information dissemination on the status of behavioral change brought among jimma University students: A case of education Faculty and Medical school. Ethio.J.Educ &Sc, Vol.2, number 1.

Yordanos Belayneh (2008). Reproductive Health needs of Addis Ababa University Students. MPH thesis.

Zerai Kassaye (2005). Sexual Experiences and their Correlates Among Jimma University Students, Jimma, Ethiopia, Ethiop J Health Sci 2005; 15(1)

ANNEXES

Annex-I

Addis Ababa University
College of Development Studies
Institute of Population Studies

Self Administered Questionnaire

Survey Questionnaire on "ATTITUDES AND PRACTICES ON HIV PREVENTION AMONG ADDIS ABABA UNIVERSITY STUDENTS"

Code No_____

Informed Consent Statement

Dear Student, this is a questionnaire designed to collect information for a study which is being conducted on "Attitudes and Practices on HIV Prevention among University Students" for a partial fulfillment of a Master's of science degree in Addis Ababa University, Institute of population Studies. The aim of this study is to evaluate the students' attitude and their actual practices towards HIV prevention measures. The result of the study and the recommendation derived are believed to be useful to enhance awareness towards HIV/AIDS at higher learning institutions.

You have been invited to take part in the study. Hence, you are kindly requested to fill this questionnaire as clearly as possible and submit it to the data collector who gave you this questionnaire. This is a personal questionnaire about your opinions. Therefore we strongly plead to you not to discuss with or show to another person while responding to this questionnaire. You do not need to write your name and all the information gathered will be kept strictly confidential. You have full right to refuse, to take part, or to interrupt the questionnaire at any time. But the information that you will give us is quite useful to complete the questionnaire and may contribute the national effort to control the spread of HIV transmission.

We thank you in advance for your kindest cooperation.

I confirm that I have been given a full explanation of the study and that I have read and understood the information sheet. I voluntarily agree to take part in the study.

Signature ----------
Date ----------

Interviewer's Name----------

For further information contact

Principal investigator: 0911-176515
0912-735987 E-mail: seman2002@gmail.com

Direction: The following are a list of items about your situation; please answer by writing on the spaces provided or by circling an option:

Part I: Socio-demographic and Economic Background

No	Questions	Answers	Skip to
101	Sex of the respondent	1.Male 2.Female	
102	What is your age (in complete years)	_____	
103	Your current residence:	1. In the university 2. outside the university	
104	Your previous place of residence:	1.Urban 2 Rural	
105	What is your religious affiliation?	1.Orthodox 2.Protestant 3.Catholic 4.Islam 99.Other(specify)_____	
106	Are you participating in religious services?	1.Yes 2. No	**If No skip to Q. 108**
107	If yes, how often do you attend religious services?	1.Every Day 2.At least once a week 3.Occassionally 4. As convenient	
108	What is your ethnicity?	1.Oromo 2.Amhara 3.Tigire 4.Gurage 99. Others_____	
109	What is your current marital status?	1.Single (Never Married) 2. Currently Married 3.Widowed 4.Separated 5.Divorced	
110	In which Department are you studying?	_____	
111	Your current year of study:	1. Year-I 2. Year-II 3. Year-III 4. Year-IV 5. Year-V	
112	Is your father alive?	1.Yes 2. No	**If No skip to Q. 116**
113	If yes, what is your father's educational level?	1. No Education 2 .Primary level 3.Secondary level 4.Tertiary level	

No	Questions	Answers	Skip to
114	Is your father working?	1. Yes 2. No	If No skip to Q. 116
115	What is his occupation?	1. Daily laborer 2. Farmer 3. Governmental employee 4. Private sector employee 5. Trader 99. Other (specify)_____	
116	Is your mother alive?	1. Yes 2. No	If No skip to Q. 120
117	If yes, what is your mother's educational level?	1. No Education 2. Primary level 3. Secondary level 4. Tertiary level	
118	Is your mother working?	1. Yes 2. No	If No skip to Q. 120
119	What is her occupation?	1. Daily laborer 2. Farmer 3. Governmental employee 4. private sector employee 5. Trader 99. Other (specify)_____	
120	How do you see the income level of your family?	1. < 1000birr 2. 1000-2000birr 3. > 2000birr 98. I don't know	
121	Do you get pocket money from any source?	1.Yes 2.No	If No skip to Part-II
122	If yes, how much per month on average?	_____Birr	

Part-II. Sexual Practice

No	Questions	Answers	Skip to
201	Have you ever had sex in the past?	1.Yes 2.No	If No skip to 203
202	What was your age when you have first sex?	_____Years	
203	Do you have a sexual partner now?	1.Yes 2.No	If No skip to Q. 205
204	If yes, who is your sexual partner?	1.University student 2.High school student 3.Commercial sex worker 4.Incidental (causal) partner 99.Other (specify)_____	

No	Questions	Answers	Skip to
205	Have you ever practiced sexual intercourse for the last 6 months?	1.Yes 2.No	If No skip to Q. 211
206	If yes, how often do you have sexual practice?	1. Once a month 2. Twice a month 3. Once a week 4. Twice a week 99.Other(specify)_____	
207	If yes, when was the time you had sexual practice for the last time?	1.One week ago 2.One month " 3.Three month " 4. Six month " 99.Other(specify)_____	
208	If yes, how many sexual partners have you had in the last 6 months?	1.One 2.Two 3.Three 4.More than Three	
209	Do you use condom when you practice sex?	1.Yes 2. No	If No skip to Q. 211
210	If yes, from where did you get condoms at need?	1. From campus clinic 2. Pharmacies 3. Hospitals 4. Shops 5. Hotels 99. Other (specify)_____	
211	Have you ever viewed pornographic (sex film) videos?	1.Yes 2.No	If No skip to Q. 213
212	If yes, what feeling does it creates in you?	1.I felt happy & eager to practice 2.I hated it 3.It creates nothing in my feeling 99.Other (specify)----------	
213	Have you ever received money/gifts to have sex in exchange in the past 6 months?	1.Yes 2.No	

Part III: Risk perception & Behaviors

301	Do you feel that you are at risk of HIV infection?	1.Yes 2.No	**If No skip to Q.305**
302	If yes, how great is your chance of contracting HIV/AIDS?	1.High 2. Low	**If low skip to Q. 304**
303	If high, why do you think that you are at higher risk of contracting HIV/AIDS?	1. Have multiple partners 2. Never use condoms 3. Don't use condoms Consistently 99.Other specify_____	
304	If low, what makes you at lower risk of contracting HIV/AIDS?	1. Have never had sex 2. Faithful to my partner 3. Use condoms consistently 99.Other specify_____	
305	How do you evaluate your chance of being infected with HIV/AIDS with your current behavior?	1. Very Likely 2. Likely 3. Unlikely 4.Very unlikely	
306	Are you currently taking alcohol?	1.Yes 2.No	**If No skip to Q. 310**
307	If yes, how often do you take alcohol?	1. Rarely 2. Frequently 3. Always	
308	Have you ever had sex under the influence of alcohol?	1.Never 2.Rarely 3.Mostly 4.Always	**If Never skip to Q. 310**
309	How is your ability to insist on using condom with your sexual partner when you drink alcohol?	1. Improve a great deal 2. Improve slightly 3. Remains the same as when not drinking 4. Worsen slightly 5. Worsen great deal	
310	Are you currently chewing Khat?	1.Yes 2.No	**If No skip to Q. 312**
311	If yes, how often do you chew Khat?	1 .Rarely 2. Mostly 3. Always	
312	Are you currently smoking cigarettes?	1.Yes 2.No	

Part IV : Attitudes and Practices Towards HIV Prevention

Attitudes Towards HIV Prevention

Show your agreement or disagreement by marking a tick (✓) in the boxes provided under your choice.

	Attitude Indicators	1.Strongly Agree	2.Agree	3.Disagree	4.Strongly disagree
401	In my opinion the main HIV prevention measures I should follow is abstinent	☐	☐	☐	☐
402	In my opinion the main HIV prevention measures I should follow is being faithful to only one partner	☐	☐	☐	☐
403	In my opinion the main HIV prevention measures I should follow is using condoms consistently	☐	☐	☐	☐
404	Avoiding sex other than my sexual partner makes me seem sexually week	☐	☐	☐	☐
405	Condom use creates doubt between sexual partners	☐	☐	☐	☐
406	I may lose my partner if I say no to sex	☐	☐	☐	☐
407	To get a better partner I must try several partner with sexual intercourse	☐	☐	☐	☐
408	My partner usually does not accept the idea of avoiding sex before marriage	☐	☐	☐	☐
409	Limiting my sexual desire to only one partner will reduce my sexual pleasure	☐	☐	☐	☐
410	From now on I intend to avoid sex before marriage	☐	☐	☐	☐
411	From now on I intend to limit my sexual contact to only one sexual partner	☐	☐	☐	☐
412	From now on I intend to use condoms consistently	☐	☐	☐	☐

2. Practices Towards HIV Prevention

No	Questions	Answers	Skip to
413	Have you ever practiced any of the major HIV prevention methods?	1.Yes 2.No	If No skip to Q.415
414	If yes, which prevention measures are you currently practicing to avoid getting HIV/AIDS?	1.Abstinence before marriage 2.Be faithful to partner 3.Using condoms 99.Others (specify)_____	
415	Have you ever used condom during the last sexual intercourse?	1.Yes 2.No	If No skip to Q.418
416	If yes, how frequently were you using condoms during your sexual intercourse?	1.Always 2.Most of the time 3.Sometimes 99. other (specify)_____	
417	What were your reasons for using condom?	1. To prevent pregnancy a. Yes b.No 2. To prevent HIV/AIDS a. Yes b.No 3. Don't trust my sexual partners a. Yes b.No 99. Other (specify)_____	
418	The reasons you didn't use condoms were?	1. Partners dislike Condoms a. Yes b.No 2. Couldn't find condoms a. Yes b.No 3. I am in love with my partners a. Yes b.No 99. Other (specify)_____	
419	Have you ever discussed your sexual history with any of the following individuals?	1. Parents a. Yes b. No 2. Sexual partners a. Yes b.No 3. Health personnel a. Yes b.No 4. Friends a. Yes b. No 99.Others_____	
420	Have you ever been tested for HIV/AIDS?	1.Yes 2.No	If No skip to Q. 422
421	If yes, how many times have you ever been tested?	1. One time 2. Two time's 3. More than Two times	
422	Would you be willing to have HIV test in the near future?	1.Yes 2.No	
423	If your answer is No what is your reason(s) for not willing to have HIV test in near future?	1.I had never had sexual intercourse 2.I don't feel at risk 3.Fear of stress due to the virus 4.Fear of stigma by the society 99.Others_____	

THANK YOU!!!

Annex-II

Guiding questions Focus group discussion with students

1. How do you see university students' attitude towards HIV/AIDS prevention?
2. How the situation of HIV prevention activities looks like among the students?
3. What do you say about the risky sexual behavior of the student and their responsibility to prevent HIV/AIDS in the campus?
4. How do you see the VCT service utilization among students? What are the major reasons for not using VCT service?
5. How do you see the efforts made by the university towards HIV/AIDS preventive activities?
6. Are you aware of any projects working on HIV/AIDS prevention activities at AAU? To what extent do you think the projects improved the university student's attitude and practices towards HIV prevention?
7. What do you recommend to improve HIV/AIDS prevention activities in the higher learning institutions?
8. In your opinion, what are the major needs of the students towards HIV/AIDS prevention?

Any other opinion----------

THANK YOU!!!

Annex-III

Guiding questions for the In-depth interview

A. With the head of the university Clinic

1. What services do you provide?
2. How do you think condom consumption of the students in preventing himself from STIs, pregnancy and HIV/AIDS?
3. What contributions will you make to help students protect themselves from HIV/AIDS?
4. Is there any activity by the clinic that incorporates the students in the prevention program of HIV/ AIDS?
5. What personal efforts will you show to stop the spread of HIV/AIDS among students?

B. With African AIDS Initiative (AAI)

1. How the African AIDS Initiative International was founded and its objectives are?
2. What are the services rendered by your organizations and who are your target groups?
3. What Behavioral and attitudinal changes have you observed over the project period on your potential target groups?
4. To what extent do you think these changes in behavior, attitude and HIV risk perception are connected with the completed HIV/AIDS intervention project?
5. How is the sustainability of the initiative towards prevention program?

C. With MARCH Project

1. What is March project, how it becomes to existence and the major objectives as well activities?
2. What efforts your organization made towards preventive activities?
3. What achievements so far the project has achieved?

Annex-IV

Table-1 Hosmer and Lemeshow Test

Models	X2	Sig.
Attitudes Towards HIV Prevention	5.933	0.655
Practices towards HIV Prevention	10.854	0.210

Table-2 Multicollinarity Test Result in the model through Tolerance and VIF values

Independent Variables	Attitude Model		Practice Model	
	Tolerance	VIF	Tolerance	VIF
Sex	0.882	1.134	0.882	1.134
Age	0.855	1.169	0.855	1.169
Previous place of residence	0.955	1.047	0.955	1.047
Religious participation	0.902	1.108	0.902	1.108
Year of study	0.892	1.122	0.892	1.122
Pocket money	0.965	1.036	0.965	1.036
Pornographic view	0.836	1.197	0.836	1.197
Alcohol intake currently	0.770	1.298	0.770	1.298
Khat chewing currently	0.742	1.347	0.742	1.347
Cigarette smoking currently	0.887	1.128	0.887	1.128

Annex-V

Table-3 Summary Table of Randomly selected departments & sample proportion of Respondents in year-level

Campus	Randomly Selected Depart.	No of students in Year-level						Tot	Sample proportion of respondents in Year-level					
		Y-I	Y-II	Y-III	Y-IV	Y-V	Total	PPS	Y-I	Y-II	Y-III	Y-IV	Y-V	Tot
MAIN-CAMPUS	PSIR	87	103	69	3	-	262	243	8	10	7	-	-	25
	SPORT	109	127	84	-	-	320		10	12	8	-	-	30
	LAW	123	185	108	103	35	554		12	17	10	10	3	52
	FORIEGN-LANG	375	352	191	-	-	918		36	33	18	-	-	87
	JOURNALISM	209	183	133	-	-	525		20	17	12	-	-	49
	Sub-Total	**903**	**950**	**585**	**106**	**35**	**2579**		**86**	**89**	**55**	**10**	**3**	**243**
Science Faculty	EARTH SCIENCE	135	150	71	-	-	356	64	12	14	7	-	-	33
	CHEMISTRY	93	175	59	-	-	327		9	16	6	-	-	31
	Sub-Total	**228**	**325**	**130**	**-**	**-**	**683**		**21**	**30**	**13**	**-**	**-**	**64**
COMMERCE	ACCOUNTING	344	429	391	-	-	1164	182	32	41	37	-	-	110
	BUSINESS-ADMI	369	221	180	-	-	770		34	21	17	-	-	72
	Sub-Total	**713**	**650**	**571**	**-**	**-**	**1934**		**66**	**62**	**54**	**-**	**-**	**182**
Techno-South	ARCHITECTUR	86	201	48	50	-	385	93	8	19	5	5	-	37
	CONSTRUCTIO	-	435	65	86	9	595		-	41	6	8	1	56
	Sub-Total	**86**	**636**	**113**	**136**	**9**	**980**		**8**	**60**	**11**	**13**	**1**	**93**
Debere-zeit	VETERINARY	**106**	**138**	**60**	**63**	**63**	**430**	**41**	**10**	**13**	**6**	**6**	**6**	**41**
	Grand-Total	**2036**	**2699**	**1459**	**305**	**107**	**6606**	**623**	**191**	**254**	**139**	**29**	**10**	**623**

Source: Data obtained from AAU Registrar office and prepared by researcher, March 2010

Annex-VI

Table-4 List of Data collectors and supervisors, List of FGD participants

No	Name of data collector	Sex	Age
1	Getamesay Behailu	M	30
2	Samrawit Getnet	F	22
3	Arsema Elias	F	22
4	Shemsu Dender	M	27

Table-5 List of supervisor

No	Name of supervisor	Sex	Age
1	Belete Wondimu	M	27

Table-6 List of Female FGD Participants, March.2010

S/No	Name	Sex	Age	Department	Year
1	Selamawit Fisseha	F	19	Fine Arts	III
2	Banchi Getaneh	F	19	App. Biology	II
3	Tiruwork Mengistu	F	20	Sociology	II
4	Nigist Mulugeta	F	19	Anthropology	I
5	Sebewongel Girma	F	20	Civil Engine.	I
6	Kefawork Kassa	F	20	Marketing Mgt	II
7	Semira Ahmed	F	20	Chemical Engine.	II

Table-7 List of Male FGD Participants, March 2010

S/No	Name	Sex	Age	Department	Year
1	Amanuel H/Kiros	M	20	Statistics	I
2	Girum G/egzighber	M	21	Sociology	III
3	Simon Nawle	M	20	Geography	III
4	Leykun Wondifraw	M	21	Fine Art	III
5	Henok Mulugeta	M	22	Physics	III
6	Bereket Tadesse	M	20	Comp. Science	II
7	Getamesay Behailu	M	27	Biology	IV

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.

Seman Kedir		02/10/12
Student	Signature	Date

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

Digafu Regassa		2/10/02
Advisor	Signature	Date