ASSESSMENT OF PSYCHOSOCIAL HEALTH AND RISKY SEXUAL BEHAVIORS OF STUDENTS IN HIGHER LEARNING INSTITUTIONS: A COMPARATIVE CROSS-SECTIONAL STUDY BETWEEN OLD AND NEWLY ESTABLISHED UNIVERSITIES

By: ADEME TSEGAYE

ADVISOR: SOLOMON SHIFERAW (MD, MPH)

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Addis Ababa University

Faculty of Medicine

School of Public Health

By

Ademe Tsegaye (B.Sc.)

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Approved by the examining board

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Chairman Dep. graduate committee

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Signature

Advisor Examiner

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Signature Signature

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ACRONYMS

AAU	Addis Ababa University
AIDS	Acquired Immunodeficiency Syndrome
BSS	Behavioral surveillance survey
CHIPTS	Center for HIV Investigation , Prevention and Treatment Services
CORHA	Consortium of Reproductive Health Association
CSW	Commercial Sex Worker
DHS	Demographic and Health Survey
HIV	Human Immunodeficiency Virus
KAPB	Knowledge, Attitude, Practice and Behavior
NGO	Non- governmental Organizations
OR	Odds Ratio
RH	Reproductive Health
SPH	School of Public Health
SPSS	Statistical Package for Social Sciences
SRH	Sexual and Reproductive Health
SRS	Simple Random Sampling
STI	Sexually Transmitted Infection
WHO	World Health organization

ABSTRACT

Students in higher institutions are exposed to many psychosocial problems and risky sexual behaviors as they are away from their parents and possibly due to suboptimal counseling services. The problems may be more apparent in newly established universities. Despite this concern, there is no information regarding the psychosocial health status and risky sexual behaviors of students in higher learning institutions in Ethiopia.

The study aimed to assess and compare the magnitude of risky sexual behaviors and psychosocial ill health among students of newly established and old universities.

The study employed a comparative cross-sectional survey supplemented with qualitative methods. Cluster sampling technique was used to select the departments after dividing the total sample size proportionally to first year and second year students. A total of 1033 students were included in this study: 518 from DBU and 515 from AAU. Quantitative data were processed in SPSS v.13.00 statistical software. Ethical clearance was obtained from ethical review committee of the school of public health and institutional review board at Medical Faculty of Addis Ababa University. Taped qualitative data were transcribed, translated into English, and manually analyzed by grouping into predetermined thematic areas.

The response rate was 97.4%. The results indicate that significantly more students of DBU than AAU [(24.7%) versus 69(13.4%)] were likely to have had sexual intercourse [P<0.001]. More students of AAU than DBU used condom in their last sexual intercourse [40(60.6%) versus 21(22.8 %); AOR (95%CI) = 7.08 (3.00, 16.71)]. Students at DBU were significantly more likely to have multiple se xual partners than AAU students [75(78.2%) versus 42(62.7%): COR (95%CI)= 2.13(1.06,4.24)]. More students of DBU than AAU [64.9% versus 50.9 % ; AOR(95%CI)=0.60(0.45,0.8 0)]were found to have sad feelings. More students of DBU than AAU [69 (13.4%) versus 47(9.14%); O R (95%CI) =1.50 (1.03,2.27)] seriously considered suicide. In addition, more students who had psychos ocial ill health had multiple sexual partner [82(70.1%) versus 35(29.9%); COR(95%CI) = 1.82(1.20,2.75)].

Overall the findings indicate that substantial segment of the student population in both

universities have risky sexual behavior and psychosocial problems.

This calls for strengthened effort to expand the existing and initiate additional preventive measures. In both universities, proper orientation is crucially important especially when students first join the university. Preventive activities for HIV/AIDS like condom distribution, providing health information about HIV are urgently needed at DBU. In addition, mechanisms for economic support (for example loan service) should be arranged to the needy students in both universities.

1. INTRODUCTION

1.1 BACKGROUND INFORMATION

Young people (age 10-24 years) are an important population group with a great potential for physical, mental and psychological development. Recent estimates indicate that 17.0% of the global population, 20.0% of Sub Saharan Africa and 17.9% of Ethiopian population is composed of youth aged 15-24 years. In addition, 85.0% of the 1.2 billion adolescents (10-19 years) worldwide live in developing countries and comprise over a quarter of their population. In Ethiopia approximately 40.0% of the population falls between the ages of 10-29 (1).

Globally the young are facing different health problems like unwanted pregnancy, unsafe abortion, Sexually transmitted disease(STI) including Human Immuno Deficiency Virus(HIV), psychosocial ill health which comprises: hopelessness, depression and suicidal attempt. In addition adolescents are at high risk of HIV because they have a tendency to explore and experiment new phenomenon and perceive themselves as invulnerable and engaging in several risk taking activities. Besides, people who are young are usually mistakenly perceived as healthy and as if they are not in need of special health services (1,8).

HIV/AIDS is one of the common health problems of the country with an estimated prevalence of 2.1%, in 2007. The overall HIV incidence estimate for Ethiopia in 2005 was 0.26% and is projected to remain stable until 2010 (7). A considerable proportion of the youth practice unsafe sex and sex at early age.In the BSS 2005, it was found that 9.9 % of the in- scho l youth had sexual experience. Consistent use of condom during sex with all non regular partners was noted only in 41.8% of the students. A survey con ducted among AAU students showed that, 48 (37.5%) of the sexually active students had more than on e sexual partner. About 60 (47.0%) of the sexually active students had casual sex and 21 (16.4%) had visited commercial sex workers in the past one year (3,4).

Psychosocial ill health were among the health problem of adolescent. In Ethiopia, a study conducted among high School students showed a significant number of students had this problems (21).

Recently there has been a huge expansion program in establishing higher learning institutions in Ethiopia which has now reached to 21 universities from just two, few years ago in which an important segment of adolescent population reside (24). Given the large number of students assigned to some of this newly established universities it is possible that the available counseling services might not be sufficient to deal with the psychosocial problems of many of the students. In addition, such universities are also not likely to have students who are more acquainted with new environment that can give guidance and support to the new comers which is particularly true for the first cohort of students.

It is hoped that results from this study would be useful in designing comprehensive interventions that could specifically target higher learning institutions which have not yet been identified as priority groups. The findings will also add a new perspective in terms of looking at the interplay of factors that influence and shape students behaviors and psychosocial health in similar settings in Ethiopia.

1.2 STATEMENT OF THE PROBLEM

University students are of importance for one country developments , because they are

leaders of the nation and parents of the future generation. Most of them fall in the youth age group and they try to experiment different behaviors including risky sexual behaviors in addition as they are usually away from their parents, they may be exposed to many sexual and psychological problems (14,15).

There are some studies which showed students in the old higher learning institutions are involved in different risky sexual behavior and had faced its outcomes (3,13).

There are different psychosocial factors which can predispose or protect an individual to /from risky sexual behaviors and psychosocial ill health: substance use, perception of susceptibility, confide nce in sexual negotiation are among others. In addition being psychosocially ill can predispose to risky sexual behavior and in the reverse risky sexual behavior can cause psychosocial ill health (12,20).

Currently, large numbers of students are being assigned in different newly established universities. Given the large number of students assigned to some of this newly established universities, it is possible that the available counseling services might not be sufficient to deal with the psychosocial problems of many of the students. In addition, such universities are also not likely to undergo HIV prevention activities. Moreover, they lack students who are more acquainted with new environment that can give guidance and support to the new comers which is particularly true for the first cohort of students.

As a result, there is concern among the public whether students assigned in newly established universities has high risky sexual behavior and poor psychosocial health when compared with the old ones. And also, there is no information on psychosocial health status of students in higher learning institutions which is highly associated with risky sexual behavior. In light of this, this thesis will be an input for officials in designing relevant, effective & comprehensive interventions targeting the youth in universities.

Study Hypothesis.

- The prevalence of psychosocial problems among students of Debrebirhan University (DBU) could be higher than that of students of Addis Ababa University(AAU) as a result of inadequacy in of the counseling services.
- The proportion of students who practice risky sexual behaviors in DBU could be higher than that of AAU students as a result of inadequate preventive activities.

2. LITERATURE REVIEW

A cross sectional survey undertaken among 1041 students in colleges and secondary schools in Dar-es-Salaam, Tanzania to evaluate the relationship between HIV-risky sexual behavior and anti-condom bias, as well as with AIDS-related information, knowledge, perceptions and attitudes. Self-reportedly, 54% of students (75% of the boys and 40% of the girls) were sexually active, 39% had a regular sexual partner and 13% had multiple partners in the previous year. However, 30% of sexually active respondents did not always use condoms and 35% of those with multiple partners in the previous year did not always use condoms.

Similarly the study conducted in Gondar College of Health Sciences showed that:-of the 228 students who were sexually active,140(61.4%) had one partner and 88(38.6%) had more than one partner. Besides, of the sexually active students, 53% had contacts with commercial sex workers and 12% had contracted sexually transmitted disease in the six months preceding the study. Of the 53 students who had had contact with commercial sex workers 45(84.9%) had used condoms and from12 students who had history of sexually transmitted diseases only 4(33.3%) had used condoms. One hundred and nine of the 228 students (47.8%) had used condoms at least ones in the past six months. A higher condom use by male participants 106(46.5%) than, female participants 3(1.3%) was observed (16, 17).

In a study conducted to investigate young people's SRH needs and utilization of services in selected regions of Ethiopia, a considerable proportion of young people were found to be practicing risky behavior: about 39.2% reported having had sexual intercourse and 7.6% of them had early sexual debut before the age of 15 years. Moreover, 45.1% acknowledged having had more than one sexual partner, 15.8% admitted having had sexual intercourse with commercial sex workers, and 34.9% reported having had reproductive health problems, of which 28.7%, 24.1%, and 45.1% claimed to have had unwanted pregnancy, abortion and STI, respectively in their life time (18).

In the year 2000, a study was conducted in AAU to assess the SRH needs of students and it was found that 128 (68.4%) students had sex in the past one year The study showed that 48 (37.5%) of the sexually active students in the past one year had more than one sexual partner. About 60 (47.0%) of the sexually active students had casual sex and 21 (16.4%) had visited commercial sex workers in the past one year (3).

Among the problems of young adults psychosocial problem are the one which has an association with different risky sexual behavior (RSB). In our country except few studies done in high school students, there are not studies done on the psychosocial health status of students in higher institutions and its relationship with RSB. In which students are living in a separate compound and usually away from their parents, which exposes them to different health problems such as serious psychological problems includes: suicidal/parasucidal thoughts; depression; sadness and mood changes (15).

A study conducted in Dessie preparatory school and Jimma high school in which student's age are almost comparable with university students. It was found that among Dessie preparatory school, three hundred eighty –six (57.9%) students reported feeling lonely and depressed at least once in the last three months as compared to urban students, rural students were found to be significantly more likely feel lonely and depressed (6l.6% versus 53.6%) one hundred eighty two (27.3%) students reported feeling sad or hopeless almost everyday for two weeks or more in a row that they stopped doing their usual activities , 42(6.3%) students seriously considered suicide; 36(5.4%) planned suicide and 39(5.8%) attempted suicide in 12 months prior to the study.

A study in done in Jimma found out that, 48.4% have stated one or more emotional problems as their source of concern. Over 42% reported currently experience one or more emotional problem (anxiety, anger, depression and worries about career were grouped as emotional problems). problems and conflicts with family ,conflicts and physical fights with peers ,lack of social support and lack of life satisfaction with day to day life were taken as social related problems and or concern .Out of the total sample 1078(61%)reported to hold such concern (20,21,22).

There are different studies which showed the relationship between psychosocial ill health and RSB. If an individual has a pessimistic view concerning his/her future,he/she may not engage in behaviors to protect that future..A study conducted in India revealed a strong relationship between feeling depressed and sexual risk behavior, particularly among females. Each comparison between depressed and non depressed females was significant, with depressed females reporting greater risk. Specifically, females reporting feeling depressed were: 2.5 times more likely to report ever having had sexual intercourse; 47% more likely to report having sexual intercourse before age 15; 16% more likely to report having had sexual intercourse with at least three partners; 63% more likely to report non condom use at last sexual intercourse; 81%

more likely to report alcohol and/or drug use at last sexual intercourse. Three significant

differences between depressed and non-depressed males were found. Specifically, males reporting feeling depressed were: 61% more likely to report ever having had sexual intercourse; 59% more likely to report having sexual intercourse before age 14 & 14.7% more likely to report non condom use at last sexual intercourse (19).

Lack of self-esteem, psychological distress ,depression ,perception about the behavior of their peers are some of the risk factors for risky sexual behaviors where as Perceived family support parental monitoring, and parent-adolescent communication in sexual issues have each been shown to help prevent adolescents from engaging in risky sexual behavior .In our country there is no information about this psychosocial health issues.

Substance use which is one of the psychosocial factor for RSB: as individuals who uses substances lacks inhibition from indulging in unprotected sex, is a common practice among young people. A study conducted in study conducted in Ugandans youths revealed that individuals consuming alcohol were 1.4 times more likely to report inconsistent condom use. A study conducted in is also a problem to adolescents in Ethiopia, as revealed in study conducted in Ethiopian youths, Daily Khat intake was also associated with unprotected sex: adj. OR (95% CI) = 2.26 (1.92, 2.67). There was a significant and linear association between alcohol intake and unprotected sex (P-value for trend <0.01) with those using alcohol daily having a three fold increased odds compared to those not using it: adj. OR (95% CI) = 3.05 (2.38, 3.91).

A study conducted in North-West Ethiopia in out of school youths whose age was comparable with students in higher institutions, Two hundred sixty-four (42%) of the 624 study participants reported that they never drank any kind of alcoholic drinks, 113 (18%) drank alcohol about once a week, 85 (14%) drank twice a week, and the remaining 75 (12%) drank alcohol daily. Males were twice as likely to drink alcohol at least once a week than females (OR=1.98, 95% CI 1.423-2.756). Furthermore, a statistically significant association was observed between intake of alcohol and sexual behaviour of youths. Those out-of-school youths who drank alcohol at least once a week were about three times more likely to have sex either with non-regular partners or in exchange for money (OR=2.78, 95% CI 1.83-4.23) than those who did not report consumption of alcohol.. Dessie preparatory school; one or more of these were reported by 301(17%) of respondents. In a study conducted in AAU to assess students SRH needs revealed that out of the sexually active students in the past one year, 29 (22.7%) admitted they or their partner were drunk when they had sex (17,22,23).

2.1 RATIONALE OF THE STUDY

Ethiopia has a population of about 76 million. Until few years back, the tertiary level enrollment was very low (was about 1.5 % of the age cohort) and was one of the lowest in the world .Previously there were 9 public universities ;now 13 new universities are built and made operational raising the number of public higher institutions to 22 .Higher education enrollment grows at a faster rate ,the average five years growth in tertiary level enrollment was 27% (UNESCO 2006). The Government plans to increase enrollment to over 5%.Currently, over 200,000 students are enrolled in public universities, while about 70,000 students are enrolled in private higher institutions (22).

The number of students and higher institutions is increasing and in parallel the factors associated with risky sexual behavior might be diversified and there might be different psychosocial health problem in the old as well as in the new universities. In addition, there was a public rumor about students assigned in newly established universities in which they were considered as having different psychosocial ill health and were considered as being involved in different risky sexual behavior.

In light of this, this thesis will be an input for officials in designing relevant, effective & comprehensive interventions targeting the youth in universities.

OBJECTIVES

3.1 GENERAL OBJECTIVE

- To assess risky sexual behavior and psychosocial health problems among students in Debrebirhan and Addis Ababa university.

3.2 SPECIFIC OBJECTIVES

- To assess the level and compare the extent of risky sexual behavior of students in Debrebirhan and Addis Ababa University.
- To assess the level and compare the extent of psychosocial health problems among students in Debrebirhan university and Addis Ababa University.
- To measure the relationship between risky sexual behaviors and psychosocial health problems among students in the two universities.

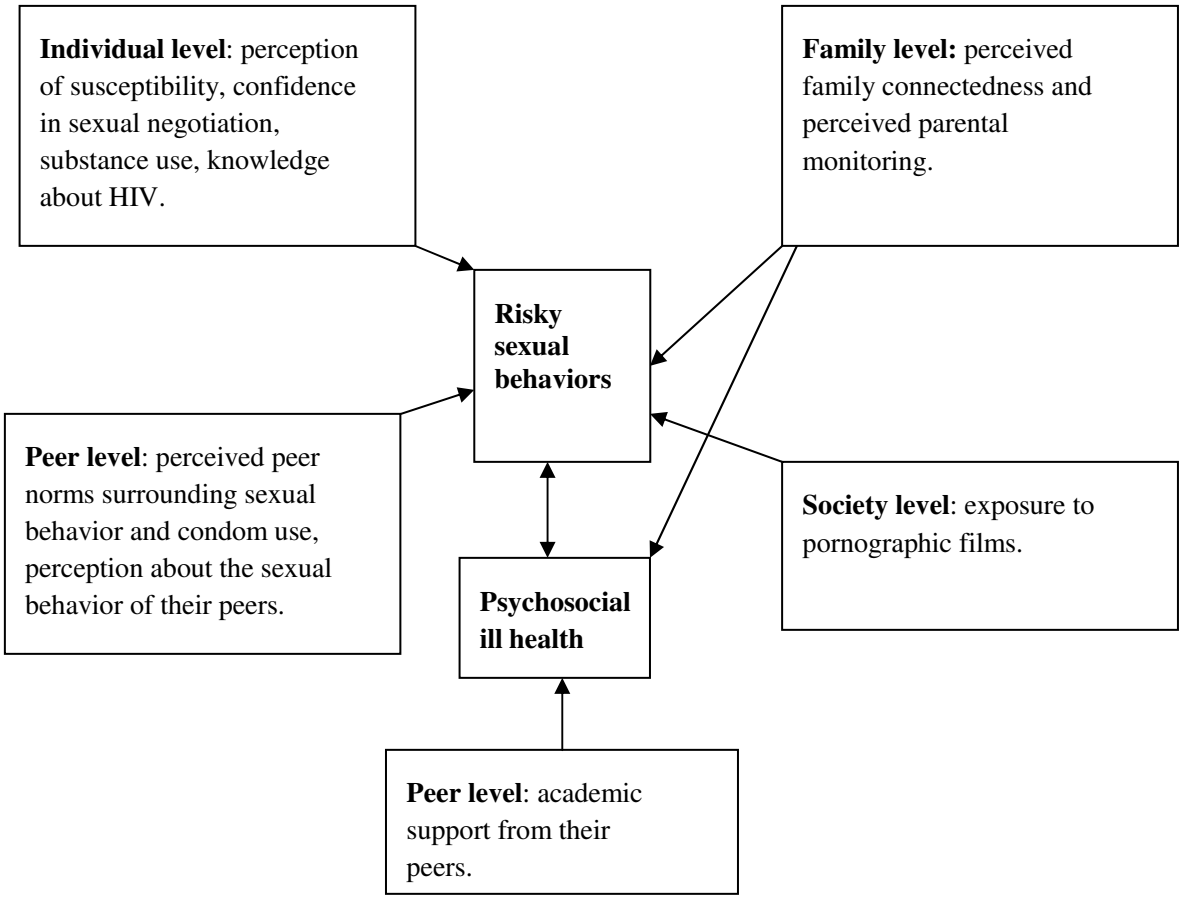

Fig .1 CONCEPTUAL FRAME WORK SHOWING PSYCHOSOCIAL FACTORS WHICH CAN BE ASSOCIATED WITH RISKY SEXUAL BEHAVIORS AND PSYCHOSOCIAL ILL HEALTH.

4. METHODOLOGY

4.1 STUDY AREA

The study was conducted in two universities, namely: Addis Ababa University main

campus which is the oldest higher educational institution in Ethiopia and from the newly established university Debre Birhan University was selected.

Addis Ababa University started its operation in 1950 under the name University College of Addis Ababa. It was re-named Haile Selassie I University in 1962 and then Addis Ababa University in 1975. It has 15 faculties and 65 departments in 10 campuses. In 2008/09, its annual intake was 10,683 for undergraduate studies.

Debre Birhan University is one of the newly established university which was opened in 2006/2007, it had 3,787 students in 7 faculties and 24 Departments. In 2008/09 its annual intake was 1,456 students.

Both universities were selected in this study conveniently by considering resource and time limitations.

4.2 STUDY DESIGN

The study design was comparative cross-sectional study which employed both qualitative and quantitative approaches. Qualitative study: in-depth interview/IDI was conducted among health care providers and counselors and focus group discussions/FGDs were conducted among first year and second year students. The Quantitative study was conducted among first year and second year students in each university.

4.3 STUDY POPULATION

The study population were first and second year regular students of Addis Ababa and Debrebirhan Universities.

4.4 SAMPLE SIZE DETERMINATION

Sample size for the quantitative study was computed based on the formula of calculating the difference between two proportions. The value of p_1 (proportion of sexually active students) was taken to be 68.4% based on last year study conducted to assess reproductive health needs among AAU students (3). And a difference of 10% was taken for p_2 (proportion of sexually active students in Debrebirhan University.

$$n1 = \frac{\left[Z\alpha/2\sqrt{(1+1/r)P(1-p)} + Z\beta\sqrt{P1(1-P1) + \frac{P2(1-P2)}{r}}\right]2}{(P1-P2)2}$$

Where :

- zα/2- is taken as 1.96(5% type I error):the z score corresponding to the probability with which it is desirable to be able to conclude that an observed difference in proportion (P2-P1) could not have occurred by chance.
- Zβ- is z value at 80% power(=0.84) :the z- score corresponding to the degree of confidence with which it is desirable to be certainly detecting a change of size (p2-p1) if one actually occurred.
- r- is ratio of sample size of AAU(n1) and sample size of DBU(n2) which is taken

  as 1(n1: n2).

- P1- is proportion of sexually active students in AAU.
- P2- is proportion of sexually active students in DBU such that (p2_p1)is the magnitude of change desirable to be able to detect.
- P- is common pooled estimator= $\frac{P1 + rP2}{1+r}$
- d- design effect of 1.5

When Allowance for possible non response (10%) was added , the total sample size in each university was 599 students[1198 in total].

4.5 SAMPLING PROCEDURES

4.5.1 QUANTITATIVE STUD

Cluster sampling technique was used to select departments for the study. Total sample size in each university was proportionally divided to first and second year students and adequate number of departments from first year and second year was taken by simple random sampling technique until the required sample size was fulfilled.

In DBU, there were 1456 first year and 1744 second year students at the time of data collection. When the total sample size, 599 was divided proportionally to first and second year students, it became 273 and 326 respectively. From first year, department of Geography, Nursing and Health officer were chosen by simple random sampling and all students in each department were included in the study. From second year, department of plant science, chemistry and health officer were selected by simple random sampling and all students in the respective departments were included in the study. The average size of one cluster was 101 students.

Similarly in AAU, total sample size was proportionally divided to first and second year students and adequate number of departments was taken by simple random sampling until the required sample size is fulfilled. There were 10,683 first year and 5,172 second year students during the time of the study. When the total sample size, 599 was divided proportionally to first and second year students, it became 404 and 195 respectively. From first year, department of Biology, Geography and Sociology were chosen by simple random sampling and all students in each department were included in the study. From second year, department of Public Administration, History and Biology were selected by simple random sampling and all students in the respective departments were included in the study. The average size of one cluster was 101 students.

4.5.2 QUALITATIVE STUDY

In-depth interviews were conducted with head of the campus health service providers in each university clinic and Guidance personnel.

A total of eight FGDs, Four (2 males group and 2 females group) in each university were conducted with the purposively selected discussants. Students who were included in the quantitative survey were excluded from the focus group discussions (FGDs). Qualitative data collection continued till information gathered became saturated so that new ideas no longer emerged.

4.6 SURVEY INSTRUMENT

The quantitative study employed a self-administered questionnaire prepared in English and translated into Amharic. The questionnaire was back-translated into English by an independent English language graduate and corrections were made where inconsistencies were discovered. The questionnaire had detailed questions on socio-demographic characteristics, psychosocial health status and risky sexual behavior of students, and others.

Discussions and interview guides were prepared to moderate the FGDs and IDIs respectively. These were used to address issues related to students' judgment of the magnitude of psychosocial ill health, risky sexual behavior and the factors associated with those problems, students' perception of the magnitude of substance use and its associated factors.

Universities

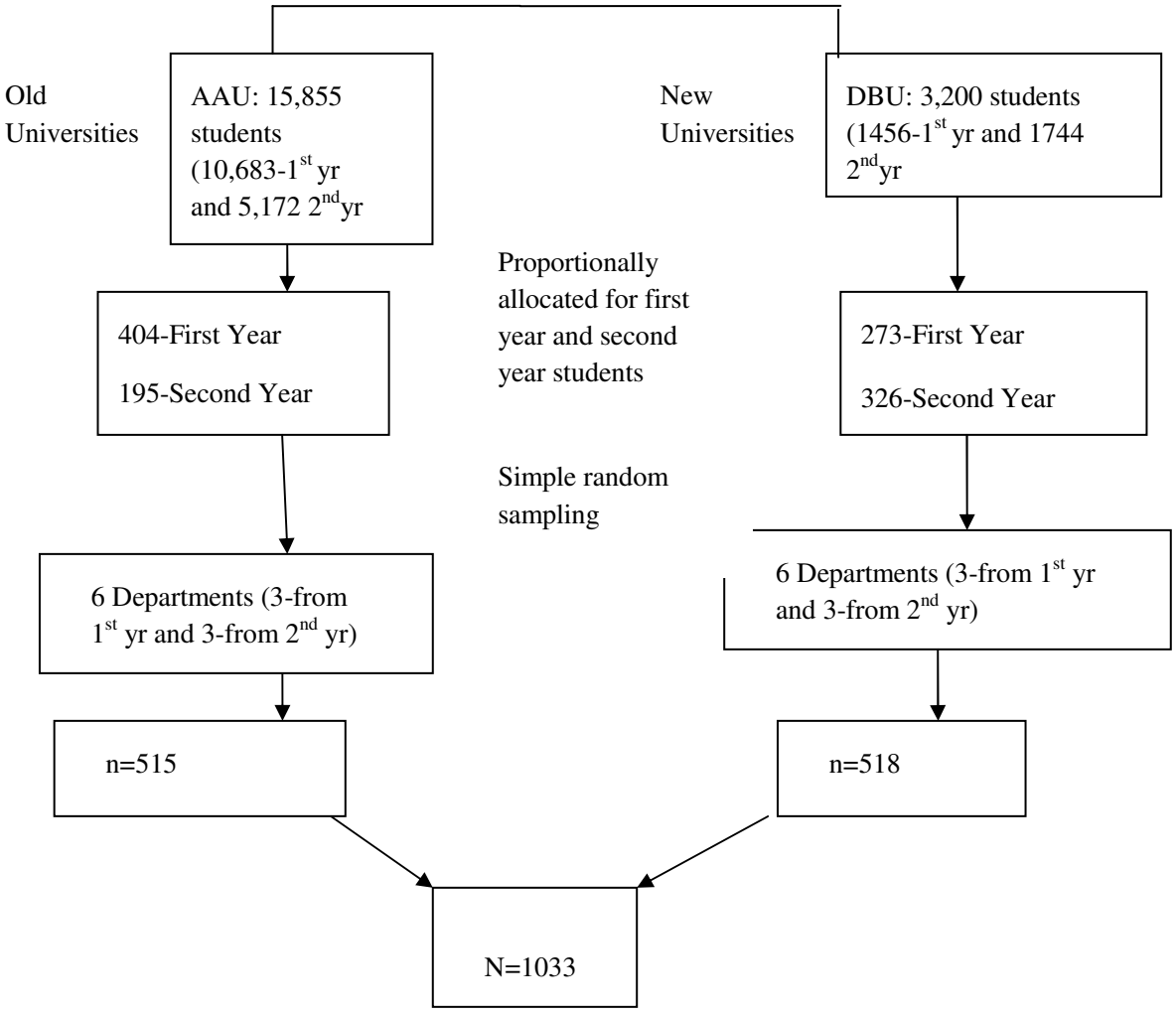

Fig 2. SCHEMATIC PRESENTATION OF SAMPLING PROCEDURE.

4.7 DATA COLLECTION PROCEDURE

The questionnaire was pre-tested in AAU at the main campus among 60 students. Students included in the pre-test were not included in the final study. The finding of the pre-test was used to revise arrangement of the questionnaire, and clarified some questions.

Following the pre-test, the lists of students in each department were taken from the offices of the registrar. After the departments were selected, contact was made with heads of the respective departments. By making some class schedules free, students in the respective department were seated one seat apart from each other. The self-administered questionnaire was administered by the students in the presence of the principal investigator, four supervisors in each university and a students' coordinator in each departement. The completed questionnaires were collected on spot. The qualitative components of the study were exclusively conducted by the principal investigator with the assistance of a note-taker. All FGDs and IDIs were convened within the university premises that safeguard privacy. All interviews in the qualitative study were tape-recorded.

4.8 DATA ANALYSIS AND DATA QUALITY MANAGEMENT

The quantitative data were entered using Epi-Info ver 6. It was cleaned and analyzed using Statistical Package for Social Sciences (SPSS) v. 13. Descriptive and analytic analysis were done with: frequencies tables, figures, chi-square tests, crude and adjusted OR (odds ratio).

Students' perception of parental monitoring was assessed by a 5 item scale questions with response of never,rarely,sometimes,most of the time and always. The scale was adapted from center for HIV investigation, prevention and treatement service of US(CHIPTS).The score for each question was added for each students and median was calculated. All students that scored above median were labeled as having more perception of parental monitoring and those that scored below the cut-off point were labeled as having less parental monitoring. This categorization in to dichotomous variable was done for the purpose of ease in multivariate and bivariate analysis.

Students perception of family connectedness was assessed by a 21 item scale with response of very like,moderately like,moderately unlike and very unlike which I adapted from CHIPTS of the US.The score for each question was added for each students and median was calculated. All students that scored above median were labeled as having more perception of parental connectedness and those that scored below the cut-off as having less parental connectedness.

Perception of susceptibly was assessed by using a five item scale questions. All questions were negative questions. For each question the answer was recoded as 1, if the student disagreed or midly disagreed and it was recoded as 0, if the student agreed or midly agreed for each questions. And the recoded value was added. A student who got 5 our of five was considered as perceived himself/herself susceptible to HIV and a student who scored less than 5 was considered as perceived himself/herself not susceptible of HIV.

Psychosocial ill health of the students was assessed in respect to sad feelings and/or parasuicide and/or sucidal attempt. The following criteria was used to identify students who had sad feelings.Sad or hopeless almost every day for two weeks or more in a row months that he/she stopped doing some usual activities and/or any three of the following: Felt that life was not worth living **or** feeling of lonely, depressed being worrisome **or** can't sleep or don't sleep well **or** mentally incoherent, moody and stressful **or** being bored with life and worried around him/her **or** befuddled, having a headache with no obvious cause was considered as having sad feelings.

The tape recorded qualitative data were transcribed and translated into English. Then the transcripts were summarized manually by grouping into similar thematic areas. The main issues that arose from the qualitative study fall into the following thematic domains: magnitude of risky sexual behavior, reasons for being involved in risky sexual behavior, magnitude of psychosocial ill health, reasons for having psychosocial ill health, magnitude of substance use and factors associated with it.

4.9 ETHICAL CONSIDERATIONS

Ethical clearance was obtained from the ethical review committee of the School of Public Health (SPH) and institutional review board (IRB) at Medical Faculty of Addis Ababa University. A letter of support from the School of Public Health was given to the univ ersity, where the study was conducted. Informed

verbal consent was obtained from all study participants for the qualitative part. A consent form and information sheet that was translated into Amharic was attached to the self–administered questionnaire. And the students were instructed to read the consent and sign up.

4.10 DISSEMINATION OF THE STUDY RESULT

The results of this study will be distributed to School of Public Health AAU, EPHA, to Debrebirhan University, to AAU main campus and other interested organizations. Moreover, it will be sent for publication on a peer reviewed journal.

4.11 OPERATIONAL DEFINITIONS

Young People: The ages of 15-29 as defined by the Ethiopian National Youth Policy.

Family connectedness/bonding: the degree of closeness experienced by the students with their parents.

Parental monitoring: students perceptions that their parents know where they are and who they are with outside of the home.

Psychosocial health: involves both psychological and social aspects of one's life, and relating the social conditions to mental and emotional health.

Psychosocial factors: In this study psychosocial factor means any factor which can affect the psychosocial health of an individual and/or contribute for being involved in risky sexual behavior.

Psychosocial ill health: any of the following while the student is in the university :

a) Sad feelings: Feeling of sad, loneliness, depression, being bored with life and worried, ever felt so sad or hopeless almost every day for two weeks or more.
b) Suicidal attempt/ideations.

Risky sexual behavior: any of the following risks while the student is in the university.

- Inconsistent condom use during sexual intercourse,
- More than one sexual partner,
- Sexual contact with commercial sex workers

AIDS related knowledge: the students were asked to complete questions pertaining to transmission and prevention of HIV infection. They were considered as knowledgeable, if they correctly identified the three main ways of prevention: abstinence, being faithful to one uninfected partner and condom use and reject at least three misconceptions about HIV transmission.

Substance Use: either drank alcohol, chewed khat or used Hashish.

4.12 STUDY VARIABLES

4.12.1 INDEPENDENT VARIABLES INCLUDES

Demographic Variables(Age, Sex, Religious affiliation, Duration of stay in campus, Location of the university)

Psychosocial variables (Substance use, Knowledge of HIV/AIDS, Perceived family connectedness, Perceived parental monitoring, Students perception of susceptibility to HIV, Students perception of their peers sexual exposure, Exposure to pornography films and Academic support from their peers).

4.12.2 OUTCOME VARIABLES

Risky Sexual Behavior

- Consistency in condom use
- Sexual contact with commercial sex worker
- Number of Sexual Partner

Psychosocial ill health

- Feeling of sadness and/or hopelessness
- Suicide attempt

5. RESULTS OF THE QUANTITATIVE STUDY

5.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS

A total of 1091 students were included in the study: 549 students from AAU and 542 from DBU. Fifty eight (5.3%) of the questionnaires were excluded from the analysis because of incompleteness. Total students included in the analysis were: 515 from AAU and 518 from DBU.The majority of respondents, 362 (70.3%) in AAU and 301(58.1%) in DBU were males. In AAU, students who used to live in rural areas before they joined the university were,267(71.3%) and in DBU, students who used to live in rural areas were,240(46.3%).Four hundred and twelve (80.0%) and 502(96.9%) of the respondents in AAU and DBU stayed in the premises of the university campus during the study period respectively. The median age of the respondents was 20 years in both universities.In both universities, their religious affiliation was dominated by Orthodox Christian, 368 (71.5%) students in AAU and 391(75.5%) students in DBU. Most of the respondents ,>90% were unmarried. Socio-demographic characteristics profiles of respondents are illustrated in Table 1.

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Table 1. **Socio-Demographic Characteristics of Students at Addis Ababa (n1=515) and Debrebirhan University(n2=518),2009.**

	Universities	
Characterstics	**AAU (n,%)**	**DBU (n,%)**
Sex		
Male	362 (70.3)	301 (58.1)
Female	153 (29.7)	217 (41.9)
Current Residence		
In-Campus	412 (80.0)	502 (96.9)
Out of Campus	103 (20.0)	16 (3.1)
Age Category		
15-19	176 (34.2)	141 (27.8)
20-24	328 (63.7)	366 (70.6)
25-29	11 (2.1)	7 (1.6)
Relegion		
Orthodox	368 (71.5)	391 (75.5)
Muslim	55 (10.7)	36 (6.9)
Protestant	78 (15.1)	84 (16.2)
Others	14 (2.7)	7 (1.4)
Ethnicity		
Amhara	216 (42.0)	323 (62.4)
Oromo	118 (23.0)	106 (20.5)
Tigrie	105 (20.4)	42 (8.1)
Others	76 (14.6)	47 (9.1)
Marrital Status		
Never Married	503 (97.7)	487 (94.2)
Married	11 (2.1)	23 (4.4)
Widowed/Divorced	1 (0.2)	7 (1.4)
Current Year of Study		
Year I	359 (69.7)	246 (47.5)
Year II	156 (30.3)	272 (52.5)

5.2 RISKY SEXUAL BEHAVIOR

5.2.1 CONDOM USE

Of the total students who had sexual intercourse, only 47(68.1%) of AAU and 21(16.4 %) of DBU had used condom in their last sexual intercourse. As compared to DBU students, the likely hood of AAU students to use condom in their last sexual intercourse was higher :COR(95%CI)= 0.09(0.04,0.19).In addition, more students of AAU,40(60.6%) used condom consistently than DBU students,21(23.0%): COR(95%CI)= 0.19(0.09,0.41). (Table 2). The most commonly cited reason by DBU students for not using condom was unavailability of condom 48(64.0%) while it was fear of reduction in sexual excitement for AAU students.

5.2.2 NUMBER OF SEXUAL PARTNERS

Of the 163 students who reported having sexual partners,21(21.9%)of DBU and 25(37.3%) of AAU had only one sexual partner; 75(78.2%) of DBU and 42(62.7%)of AAU had more than one sexual partner. As compared to AAU students, more students of DBU had more than one sexual partners:COR(95%CI) =2.13(1.06, 4.24).(Table 2).

Table 2: **Risky Sexual Behaviors Among Addis Ababa Universty and Debrebirhan University Students, 2009.**

		DBU (n,%)	AAU(n,%)	COR(95%CI)
Had sexual intercourse while in the university	Yes	128(24.7)	69(13.3)	2.12(1.53,2.97)***
	No	390(75.3)	446(66.7)	1.00
Condom used in last sexual intercourse	Yes	21(16.4)	47(68.1)	0.09(0.04,0.19)***
	No	107(83.6)	22(31.9)	1.00
Consistent condom use	Yes	21(23.0)	40(60.6)	0.19(0.09,0.41)**
	No	71(77.0)	26(39.4)	1.00
Number of sexual partner	>1	75(78.2)	42(62.7)	2.13(1.06,4.24)*
	1	21(21.8)	25(37.3)	1.00
Ever had sexual intercourse under the influence of alcohol	Yes	34(26.5)	30(43.4)	0.47(0.24,0.91)*
	No	94(73.5)	39(56.6)	1.00
Ever had sexual intercourse with CSW	Yes	33(25.7)	24(34.7)	0.65(0.33,1.29)
	No	95(74.3)	45(65.3)	1.00
Had sexual intercourse for the first time after coming to the university	Yes	46(35.9)	37(53.6)	0.49(0.26,0.92)*
	No	82(64.1)	32(46.4)	1.00
Had sexual intercourse with CSW for the first time after coming to the university	Yes	14(41.0)	11(44.0)	0.83(0.25,2.70)
	No	20(59.0)	13(56.0)	1.00
Engaged in sexual intercourse to gain economical benefit	Yes	11(25.0)	14(70.0)	0.14(0.04,0.53)**
	No	33(75.0)	6(30.0)	1.00

***=p-value<0.001,**=p-value<0.01,*=p-value<0.05

5.2.3 TYPES OF SEXUAL PARTNERS

Of the 197 students who had sexual intercourse, 33(25.7%) of DBU students and 24 (34.7%) of AAU students had sex with CSW. Of these, 11(44.0%) and 14(41.0%) of AAU and DBU students did it for the first time after coming to the university. But, the difference is not statistically significant. (Table 2).

Twenty five female students (2.4%), made sex to get economical benefit. Of these,14(56.6%) were AAU tudents and the rest 11(43.4%) were DBU students .As compared to DBU students,more students of AAU made sex to get economical benefit:COR(95%CI)= 0.14(0.04,0.53).Only 12 (48.0%) students used condom in their last sexual intercourse. Moreover 11(44.0%) of them did it for the first time after coming to the university for education.(Table 2)

Students' level of risk for HIV in each university were assessed by categorizing them as:at risk(students who used condom inconsistently), at high risk(students who used condom inconsistently and had multiple sexual partner and at very high risk (students who used condom inconsistently and had multiole sexual partner and had sexual contact with commercial sex workers.) See fig 3.

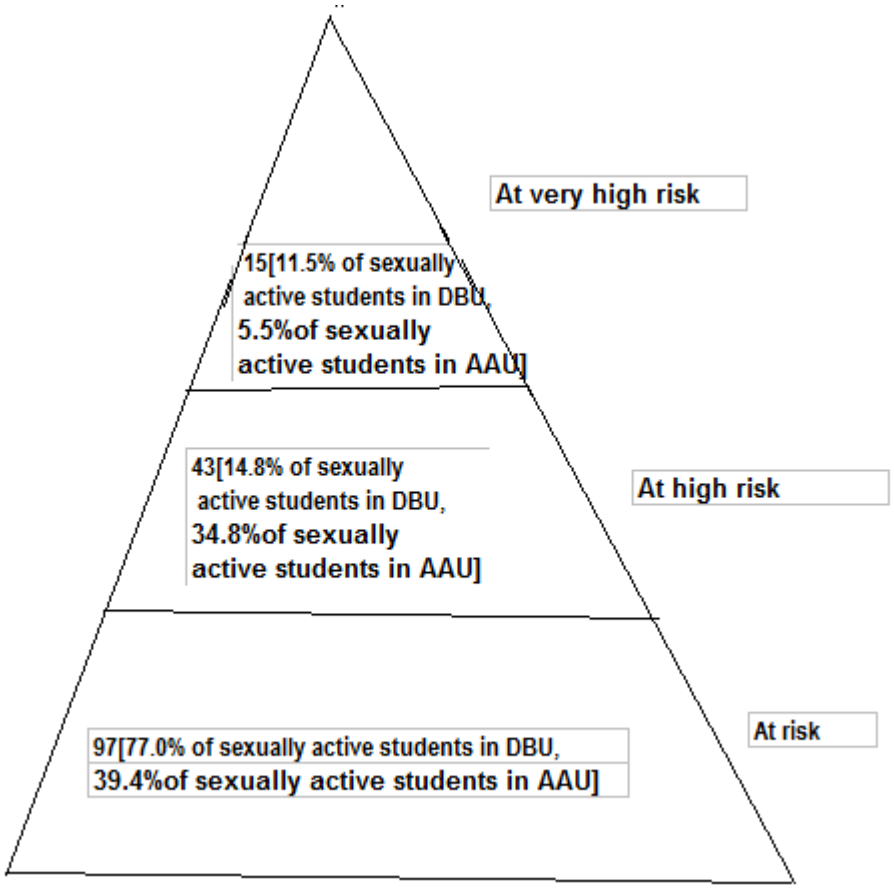

Fig.3 Levels of Risky Sexual Behaviors of Debrebirhan and Addis Ababa University Students,2009.

The percentages of students at risk of HIV is higher,71(55.5%) for DBU students than AAU students,26(37.7%).Even though the number is smaller, the percentage of students who were under high risk and under very high risk is higher in Addis Ababa University Students.

5.2.4 DIFFERENTIALS OF RISKY SEXUAL BEHAVIOR

A student who didn't use condom in their last sexual intercourse and/or had more than one sexual partner and/or had sex with CSW was taken as risky sexual behavior. But, for the sake of simplification inconsistent condom use was taken to determine the differential of risky sexual behaviors.

5.2.5 CONDOM USE BY GENDER and YEAR OF STUDY

In this study it was found that, from total students who had sexual intercourse,64(55.7%) of males and 33(76.7%) of females used condom inconsistently.More female students used condom inconsistently than male students:COR(95%CI)=3.66(1.46,9.19).But, in multivariate logistic regression analysis the effect of gender on consistent condom use was lost.

From total students who had sexual intercourse,33(55.0%) of first year and 64(65.3%) of second year students used condom inconsistently.The difference was not statistically significant.(Table 3).

Table3: **Factors Associated with Consistency of Condom Use Among Students of Addis Ababa and Debrebirhan University,2009.(n=158)**

		Consistent Condom Use			
Variables		**Yes(n,%)**	**No(n,%)**	**COR(95%CI)**	**AOR(95%CI)**
Sex	Male	51(44.3)	64(55.7)	3.66(1.46,9.19)*	2.80(1.12,6.95)*
	Female	10(23.3)	33(76.7)	1.00	1.00
University	DBU	21 (22.8)	71 (77.2)	1.00	1.00
	AAU	40 (60.6)	26(39.4)	5.53(2.42,12.67)***	7.08(3.00,16.71)***
Academic year	First	27(45.0)	33(55.0)	1.53(0.64,3.69)	1.43(0.54,3.14)
	Second	34(34.7)	64(65.3)	1.00	1.00
Substance use	Yes	30 (29.4)	72(70.6)	1.00	1.00
	No	27(48.2)	29(51.8)	2.23 (1.14,4.39)*	2.39(1.02,5.57)*
Perceived susceptibility to HIV	More	24(39.3)	37(60.7)	1.05(0.55,2.03)	1.10(0.49,2.49)
	Less	37(38.1)	60(61.9)	1.00	1.00
Knowledge about HIV	Knowledgeable	36(36.0)	64(64.0)	0.74(0.38,1.44)	0.66(0.31,1.43)
	Not knowledgeable	25(43.1)	33(56.9)	1.00	1.00
Confidence in sexyal negotiation	Had	43(45.7)	51(54.3)	2.15(1.09,4.25)*	2.15(0.95,4.82)
	Hadn't	18(28.1)	46(71.9)	1.00	1.00

***=p-value<0.001,*=p-value<0.05

5.2.6 RISKY SEXUAL BEHAVIOUR versus ERCEPTION OF SUSCEPTIBILITY

Students were asked to fill a five item scale questions to assess their perception of susceptibility for HIV: only 143 (27.8%) of respondents from AAU and 106(20.5%) students from DBU felt that they were susceptible to HIV. There was statistically significant difference between the two university students on perception of susceptibility ($x2=7.5, P<0.001$) .There was no statistically significant association found between perception of susceptibility and consistency of condom use.(Table 3).

5.2.7 RISKY SEXUAL BEHAVIOR versus SUBSTANCE USE

Of the total students who were using substances at the time of the study, 72(70.6%) weren't using condom consistently and from those who didn't use substances, 29(51.8%) of them were using condom consistently which is statistically significant with:AOR(95%CI)=2.39(1.02,5.57).(Table 3).

In DBU, from total students who chewed khat,38 (68.0%), from total students who drank alcohol,42(85.7%) and from students who used drugs,7(77.8%) didn't use condom consistently. The combination of these substances increase the practice of inconsistency of condom use: 4(100.0%) of students who used all substances, 5(71.4%) of students who used alcohol and drugs, 4(100.0%) of students who used chat and drugs,15(88.2%) of students who used chat and alcohol were using condom inconsistently .In AAU, from total students who chewed chat,28(87.5%), from total students who drank alcohol,31(81.6%) and from students who used drugs,5(83.3%) didn't use condom consistently. The combination of these substances has also an effect on the inconsistency of condom use: 4(80.0%) of students who used all substances,5(83.3%) of students who used alcohol and drugs,4(80.0%) of students who used chat and drugs,22(84.6%) of students who used chat and alcohol were used condom inconsistently in their last sexual intercourse..

5.2.8 RISKY SEXUAL BEHAVIOR versus KNOWLEDGE ABOUT HIV/AIDS

The students were asked about the common methods of preventing HIV/AIDS : abstinence, being faithful to sexual partner, and using condom consistently and statements that would measure misconceptions about HIV prevention and transmission were listed out to them. The statements includes: eating raw meat prepared by an HIV infected person can transmit HIV, mosquito bite from HIV infected person can transmit HIV, and sharing meal with HIV infected person can transmit HIV. If a student identified the three most common ways of prevention and reject at least three misconceptions he/she was considered as knowledgeable about the transmission of HIV/AIDS. Among the students that responded , 687 (66.5%) had knowledge. Of these 354(51.5%) were DBU students and the rest 333(48.5%) were AAU students . There was no statistically significant difference between AAU and DBU students on their knowledge about HIV. There was no statistically significant association between risky sexual behavior and knowledge about HIV.(Table 3).

5.2.9 RISKY SEXUAL BEHAVIOR versus SAD FEELINGS

In binary logistic regression it was found that more students who had multiple sexual parner had sad feelings,82(70.1%) than who hadn't multiple seual partners,516(56.3%)[COR=1.82;95%CI=1.20, 2.75] In addition, more students who made sex with the influence of alcohol had sad feelings ,32(74.4%) than who didn't make sex with the influence of alcohol,566(57.2%)[OR=2.18;95%CI=1.08,4.36].Inconsistency of condom use was not statistically associated with sad feelings .(Table 4).

Table 4: **Relationship of Risky Sexual Behavior and Psychosocial Ill Health of Students in Addis Ababa and Debrebirhan Universities,2009.(n=1033)**

		Sad feelings		
Variables		**Yes (n,%)**	**No(n,%)**	**COR(95%CI)**
Had multiple sexual partner	Yes	82(70.1)	35(29.9)	1.82(1.20,2.75)**
	No	516(56.3)	400(43.7)	1.00
Had sexual contact with commercial sex workers	Yes	23(74.2)	8(25.8)	2.13(0.94,4.81)
	No	575(57.4)	427(42.6)	1.00
Consistent condom use	Yes	38(62.2)	23(37.8)	1.00
	No	74(76.3)	23(23.7)	1.95(0.92,4.15)

***=p-value<0.001,**=p-value<0.01

5.2.10 RISKY SEXUAL BEHAVIOR versus LOCATION OF THE UNIVERSITY

Of the total students who didn't use condom consistently,71(76.2%) were DBU students and the rest 26(39.4%) were AAU students.Being DBUstudent independently predicted the inconsistency of condom use:AOR(95%CI)=7.08(3.00,16.71).See Table 3.

5.3 Psychosocial ill Health

Psychosocial health status of students was assessed by asking them whether they ever felt sadness, hopelessness ,depression and suicidal ideation and attempt Students who reported feeling of sadness and hopelessness almost every day for two weeks or more in rows that they stopped doing some usual activities and/or three of other sad feelings(see Table 5) were taken as having psychosocial ill health problems.

Three hundred one (58.2%) of DBU students felt not worthy of living. As compared to AAU students, more students of DBU had such problem [OR=1.68;1.31, 2.15]. One hundred thirty two(25.5%) students of DBU felt sadness or hopelessness almost every day for two weeks or more in a row that they stopped doing some usual activities while they were in the university. As compared to AAU students, more students of DBU had this problem[OR=1.88 95% CI=1.38,2.57].In general, more students of DBU had psychosocial ill health problems (64.9%) than AAU students(50.9%) which is statistically significant with P-value of <0.001. (Table 5).

The most commonly cited reasons for having psychosocial problem for AAU student was lack of support from their family(44.1%) while it was lack of satisfaction with the university's academic environment for DBU students(78.5%).

Table 5:Reports of Sad Feelings among Debrebirhan & Addis Ababa University Students,2009.(n=1031)

Variables		University		
		DBU(n,%)	AAU(n,%)	COR(95%CI)
Felling of not worthy of living.	Yes	301(58.2)	233(45.3)	1.68(1.31,2.15)***
	No	216(41.7)	281(54.6)	1.00
Felling lonely and depression.	Yes	366(70.7)	289(56.2)	1.88(1.45,2.43)***
	No	151(29.2)	225(43.7)	1.00
Being worrisome, can't sleep or don't sleep well.	Yes	318(61.5)	263(51.2)	1.50(1.19,1.95)***
	No	199(38.5)	251(48.8)	1.00
Being moody and stressful.	Yes	344(66.5)	286(55.6)	1.58(1.23,2.04)***
	No	173(33.4)	228(44.3)	1.00
Being bored with life around you.	Yes	296(57.2)	247(48.1)	1.44(1.13,1.85)**
	No	221(42.7)	267(51.9)	1.00
Befuddled, having a headache with no obvious cause.	Yes	285(55.1)	237(46.1)	1.43(1.12,1.85)**
	No	232(44.8)	277(53.9)	1.00
Felt sad or hopeless almost every day for two weeks or	Yes	132(25.5)	79(15.4)	1.88(1.38,2.57)***
	No	385(74.4)	435(84.6)	1.00

***=p-value<0.001,**=p-value<0.01

5.3.1 SAD FEELINGS versus SOCIO- DEMOGRAPHIC CHARACTERISTICS

Demographic characteristics which may predict sad feelings ill health were assessed in bivariate and multivariate logistic regression. Out of the total students who had sad feelings,359(54.1%) were males and the rest 239(64.6%) were females.More female students had ssad feelings than male students :A OR(95%CI)= 0.60(0.45,0.80]. Of the total students who had sad feelings, 301(59.4%) of them came from urban areas and the rest 297(56.5%) came from rural areas. In DBU,158 (65.8%) of students who had sad feelings were from urban areas and the rest 178(64.0%) were from rural areas. Previous residence and sad feelings was ot statistically associated. In addition in both universities there was no statistically significant difference between year of study and sad feelings.(Table 6).

5.3.2 SAD FEELINGS versus PERCEIVED FAMILY CONNECTEDNESS

The association of sad feelings with students' perception of family connectedness was assessed by logistic regression analyses. Out of the total 1033 students, 559(54.1%) of them reported more family connectedness. Of these,270(53.1%) had more family connectedness and the rest 238(46.9%) less family connectedness which

is statistically significant with AOR(95%CI)=0.68(0.52,0.89).(Table 6.)

5.3.3 SAD FEELINGS versus PERCEIVED PARENTAL MONITORING

The association of sad feelings with students' perception of parental monitoring was assessed by logistic regression analyses. Out of the total 1033 students, 559(54.2%) of them reported that they perceived more parental monitoring. Of these 317(56.7%) had perceived more parental monitoring and the rest 280(59.3%) had less perception of parental monitoring. In this study, perception of parental monitoring and sad feelings were not statistically associated. (Table 6.)

5.3.4 SAD FEELINGS versus SUBSTANCE USE

The association of sad feelings with substance use was assessed by logistic regression analyses. Out of the total 1033 students, 355(34.4%) of them used substances: either drank alcohol, chewed khat or used hashish the university. Of these 228(64.2%) had sad feelings and the rest 127(35.8%) didn't have sad feelings.More students who used substances had sad feelings than those who didn't have sad feelings:AOR(95%CI)=1.57(1.18,2.11).(Table 6.)

Table 6: **Factors Associated with Sad Feelings among Students of Addis Ababa University and Debrebirhan University, 2009.(n=1033)**

		Sad Feelings			
Variables		**Yes(n,%)**	**No(n,%)**	**COR(95%CI)**	**AOR(95%CI)**
Sex	Male	359(54.1)	304(45.9)	0.65(0.49,0.85)**	0.60(0.45,0.80)**
	Female	239(64.6)	131(35.4)	1.00.00.00.00	1.00
Year of study	First year	336(55.5)	269(44.5)	1.00	1.00
	Second year	262(61.2)	166(38.8)	1.26(0.97,1.64)	1.01(0.77,1.32)
Perceived family connectedness	More	270(53.1)	238(46.9)	0.68(0.53,0.88)**	0.68(0.52,0.89)*
	Less	328(62.5)	197(37.5)	1.00	1.00
Perceived parental monitoring	More	317(56.7)	242(43.3)	0.90(0.70,1.16)	0.97(0.74,1.27)
	Less	280(59.3)	192(40.7)	1.00	1.00
Previous residence	Urban	301(59.4)	206(40.6)	1.13(0.87,1.45)	1.08(0.82,1.40)
	Rural	297(56.5)	229(43.5)	1.00	1.00
Substance use	Yes	228(64.2)	127(35.8)	1.49(1.14,1.96)	1.57(1.18,2.11)**
	No	370(54.6)	308(45.4)	1.00	1.00
Got academic support	Yes	118(71.1)	48(28.9)	1.98(1.36,2.89)***	1.29(0.56,3.00)
	No	480(55.4)	387(44.6)	1.00	1.00
Had sex	Yes	139(70.6)	58(29.4)	1.97(1.39,2.79)***	1.23(0.56,2.71)
	No	459(54.9)	377(45.1)	1.00	1.00
University	AAU	262(50.9)	253(49.1)	0.56(0.43,0.74)***	0.60(0.45,0.80)**
	DBU	336(64.9)	182(35.1)	1.00	1.00

***=p-value<0.001,**=p -value<0.01,*=p-value<0.05

5.4 Suicidal Attempt/Ideation

One hundred sixteen (10.9%) students seriously considered suicide, 68(6.5%)planned suicide, and 49(4.7%) attempted suicide. Either Suicidal attempt , serious consideration or plan to commit suicide were taken as suicidal/Para suicidal attempt . One hundred thirty seven (13.3%) students had one of the above listed suicidal related events. Of these, 79 (15.3%) were students of DBU and the rest 58(11.3%) were AAU students. In this study, it was found that, more students of DBU had planned to commit suicide,44(8.5%) than AAU students,24(4.6%):COR(95%CI)=1.89(1.13,3.10).Similarly ,more students of DBU,69(13.4%) had seriously considered of committing suicide than AAU students, 47(9.1%):COR(95%CI)= 1.5(1.03,2.27) (Table 7)

Table 7 :**Suicidal Ideation/Attempt among Students of Addis Ababa and Debrebirhan University,2009.(n=1031)**

		University		
Variables		**DBU (n,%)**	**AAU (n,%)**	**COR(95%CI)**
Attempted suicide	Yes	26(5.02)	23(4.47)	1.13(0.64,2.00)
	No	491(94.9)	491(95.5)	
Ever planned suicide	Yes	44(8.5)	24(4.6)	1.89(1.13,3.10)*
	No	473(91.5)	490(95.3)	
Every seriously considered suicide	Yes	69(13.4)	47(9.14)	1.5(1.03,2.27)*
	No	448(86.6)	467(90.8)	

5.4.1 SUICIDAL ATTEMPT/IDEATION versus SOCIO DEMOGRAPHIC CHARACTERSSTICS

Out of the total students who ideated or attempted suicide, 81 (12.2%) of them were males and the rest 56(15.1%) were females . The difference is not statistically significant. Of the total students who attempted suicide,72(11.9%) were first year and 65(15.2%) were second year students. There is no statistically significant association between year of study and suicial attempt.(Table 8).

5.4.2 SUICIDAL ATTEMPT/IDEATION versus PERCEIVED FAMILY CONNECTEDNESS

Out of the total students who attempted suicide,95(18.1%) of them had less family connectedness and the rest 42(8.3%) had more family connectedness. More students who had less family connectedness a ttempted suicide than those who had more family connectedness.AOR(95%CI)=0.49(0.32,0.73).(Table 8).

5.4.3 SUICIDAL ATTEMPT/IDEATION versus PERCEIVED PARENTAL MONITORING

Out of the total students who attempted suicide,78 (16.3%) of them perceived less parental monitoring and the rest 59(10.6%)perceived more parental monitoring. Students who perceived more parental monitoring were less attempted suicide than those who had less perception of parental monitoring:COR(95%CI)=0.69(0.46,1.02).(Table 8).

5.4.4 SUICIDAL ATTEMPT/IDEATION versus SUBSTANCE USE

Out of the total students who attempted suicide ,60(16.9%)used one of the substances and the rest 77(11.4%)didn't use it. More students who used substances attempted suicide than those who didn't use substances: COR(95%CI)=1.59(1.08,2.32). (Table 8).

5.4.5 SUICIDAL ATTEMPT versus LOCATION OF UNIVERSITY

Of the total students who attempted suicide,79(15.3%) were DBU students and the rest 58(11.3%) were AAU students.In multivariate logistic regression analysis it was identified that, being in one of the university wasn't statistically associated with suicidal attempt.(Table 8).

Table 8: **Factors Associated with Suicidal/Para Suicidal Attempt in Addis Ababa University and Debrebirhan University Students ,2009.(n=1033)**

Variables		Suicidal/Para Suicidal Attempt			
		Yes (n,%)	No (n,%)	COR(95% CI)	AOR(95% CI)
Sex	Male	81(12.2)	582(78.8)	0.78(0.53,1.15)	0.72(0.47,1.10)
	Female	56(15.1)	314(84.9)	1.00	1.00
Year	First year	72(11.9)	533(88.1)	1.00	1.00
	Second year	65(15.2)	363(84.8)	0.75(0.52,1.10)	0.93(0.62,1.39)
Perceived family connectedness	More	42(8.3)	466(91.7)	0.41(0.27,0.61)***	0.49(0.32,0.73)
	Less	95(18.1)	430(81.9)	1.00	1.00
Perceived parental monitoring	More	59(10.6)	500(89.4)	0.61(0.42,0.89)**	0.69(0.47,1.02)
	Less	78(16.3)	401(83.7)	1.00	1.00
Previous residence	Urban	65(12.8)	442(87.2)	0.93(0.64,1.35)	0.93(0.62,1.38)
	Rural	72(13.7)	454(86.3)	1.00	1.00
Substance use	Yes	60(16.9)	295(83.1)	1.59(1.08,2.32)**	2.14(1.15,4.00)*
	No	77(11.4)	601(88.6)	1.00	1.00
Had sex	Yes	36(18.6)	161(81.4)	1.00	1.00
	No	101(12.1)	735(87.9)	0.61(0.40,0.95)***	0.98(0.61,1.56)*
Sad feelings	Had	119(19.9)	479(80.1)	5.76(3.37,9.95)***	5.01(2.97,8.45)***
	Hadn't	18(4.2)	417(95.8)	1.00	1.00
University	AAU	79(15.3)	439(84.7)	1.42(0.97,2.07)	1.33(0.91,1.93)
	DBU	58(11.3)	457(88.7)	1.00	1.00

***=p-value<0.001,**=p-value<0.01,*=p-value<0.05

5B. RESULT OF THE QUALITATIVE STUDY

Focus group discussion among students and in-depth interview with counselors and nurses in AAU and DBU students were undertaken on predetermined discussion guidelines.

A. RESULT OF THE QUALITATIVE STUDY IN DBU

A.1 Risky Sexual Behavior of students in DBU.

A.1.1 Magnitude of risky sexual behavior

Many of the discussants reported that there were students who made sexual intercourse in open air during night. Some students estimated the number of sexually active students could range from 30-50%.

> *"Masterbation by using different materials like soap, stone and bottles are common. In this year four students came to the clinic with the bottle and soap that had remained in their vagina. When we asked why they did that, they said," if we had sex we will be caught by HIV or we will become pregnant so the only option that we have is to satisfy ourselves by masturbation."* Head of Debrebirhan University clinic.

Despite the presence of large number of students who are under risky sexual behavior condom wasn't available in the university clinic. There were students who went to the clinic to ask for condom but couldn't get it. The nurse who was working in students' clinic reported that she asked the university officials several times for condom but they didn't give due attention for it.

> *" I went two times to the university clinic to have condom but the nurse told me that condom was not available in the campus."* A male second year student said

> *"Family planning service is not available. Before a month I asked the university officials about this issues but they said that family planning issues were the concern of ministry of health it was not related with educational activities and so this service shouldn't be given to students in the university."* The nurse working in students' clinic said.

There were students who had multiple sexual partner and change sexual friends repeatedly. Having multiple sexual partners is seen as modernization by many of the students. Some male students associated the tendency to have multiple sexual partner with the cold weather of Debrebirhan.

> *"One male student usually creates friendship with one girl for not more than 15 days and he will have another after 15 days There is a saying here "Major and Minor friends" Major friend implies the first friend and minor friend implies the next one. The major reason for this might be their relationship with their family. When they were at home most of them haven't had freedom to do or act on their way. But here they are free to do whatever things they want*." A female first year student said.

> *" we need more girl friends to get warm during night" A male second year student said.*

There were students who made sex for money. As some of the students reported there are dealers in the town who try to make connection between the students and rich people in the town. As the nurse who is working in students' clinic reported the number of students who made sex for money is increasing. There were a lot of students who came to the clinic with symptoms of pregnancy and referred to Mery-stops clinic in the town to have abortion.

> *"There is Marie-stops clinic in the town which provide abortion service. In that clinic before the opening of this university abortion service had been given for small number of clients but now the service users are increasing and most of the users are university students."* A nurse working in the students' clinic said.

A.1.2 Reasons for involiving in risky sexual behavior

The absence of Anti-AIDS club which will provide/remind students about HIV/AIDS and do different preventive activities, the absence of recreation site for students to spend their spare time , lack of economical support from their families and lack of parental monitoring were mentioned by many of the students as areason s for being involved in risky sexual behavior.

A.5.2 Psychosocial ill health

A.5.2.1 Magnitude of psychosocial ill health

As most of the students and the counselor working in students clinic said psychosocial ill health were among the health problems of the students. As the students reported the problem was common among first year students.

> *"I think there is one student in each dorm who is psychosocially ill*".A female second year student said.

A.5.2.2 Reasons for psychosocial ill health

There were many reasons cited by the students as a cause for psychosocial ill health among those: underestimating the capacity of the new universities in teaching process and eventually being stressed when exam approaches and teachers' negative attitude towards their students were mentioned. There were also students who associated the psychosocial ill health with evil spirit which they claimed existed in the university premise.

> "*Teachers always tell us that we are poor in our academic performance and we are incomparable with previous students .This makes us hopeless and put us in stress."* A second year male student said.

> "*Many of them shout a lot and fell down and wake up after a while. When they shout they usually said ," I was caught by a devil when I got out from' space' ". I think there is a devil in this university which hide itself in a river near the campus (Beressa River) .Yes sure ,there is a devil in that river which come to attack us*." A female first year student said.

> *"We are hopeless in our academic life. We study hard day to day but we couldn't score good result. A friend of mine went to her home before being fired at the end of the semester."*

A.5.3 Substance use

Most of the discussants said that there were many students who chewed khat and used Hashish. There were

small houses around the university campus which sold khat and drugs in addition the university campus doesn't have fence and it was easy for them to smuggle substances in to the campus. Many of the students mentioned that absence of recreation center was one of the factors that lead students to use different substances in their free time.

B. RESULT OF THE QUALITATIVE STUDY IN AAU

B.1 Risky Sexual Behavior of students in AAU.

B.1.1 Magnitude

Many of the discussants reported that, there were students who were involved in risky sexual behavior. Some students estimated the number of sexually active students could reach as high as 60%.

> " *if you go early in the morning you can find condom every where in sport field; or ask the janitors they will tell you how many condoms that they collect every morning from the sport field."* Said by a male second year student.

Some of the students associated the risky sexual behavior of students with psychosocial ill health. As they reported students who were hopeless and depressed usually spent many of their time with opposite sex and had sex with them. Female students and students who came from rural areas were mentioned as a risk group by many of the students.

Having sex to get money were mentioned as a common phenomenon by many of the discussants there is a saying there, "**open relationship**". This is to mean that having sex with many partners with the knowledge of the opposite partner is allowed. And most of them said , such kind of practices are being practiced to get economical benefit.

> *" There is one female student in our campus, she is very rich and has got a car. She takes picture of beautiful girls and shows that to rich people and tourists. She tries to create link between these people and the students to have sex. To join this group, the registration fee is 2,000 ETB."* A Female second year student reported.

Although there were many students who were under risky sexual behaviors, preventive activities were being undertaken by the students' clinic and the MARCH project.

> *"The clinic and the MARCH project provide condom to the students. In this clinic, we put condom in the OPD, registration room and family planning room. There are students who come to the clinic to ask for it and we give them. The MARCH project, in addition to providing condom they prepare poster that are posted in visible places to educate and remind students about HIV. Education materials also prepared by MARCH project ' comic book LIFE 101' which will help the students to identify the action and circumstances that can lead them to different risky sexual behavior. An NGO called, Engender Health also supply us different supplies including condoms."*

B.5.2 Psychosocial ill health

A.5.2.1 Magnitude of psychosocial ill health

As most of the students and the counselor working in the main campus reported psychosocial ill health were among the health problems of the students.

> "*Sure it is one of the health problems of the students. I can't estimate it in number but there are students who come to me for treatment. These days, due to the high prevalence of psychosocial ill health, we have decided to assign one counselor in each campus."* The counselor working in AAU main campus reported.

B.5.2.2 Reasons for psychosocial ill health

There were many reasons cited by the students as a cause for psychosocial ill health. Among these: being assigned in a department with the interest of the students and teachers' negative attitude towards their students were mentioned. There were also students who reported the absence of orientation to fresh students about university life and the department they were being assigned are the factors for psychosocial ill health.

> *"Especially during first year most of us don't know the way how to study in the university, the grading style and how to deal with all issues in the university; this all put us in stress and we don't study*

well." A male second year student reported.

Lack of family support, economical problems and love affairs were mentioned as a major cause of psychosocial ill health by the counselor working in the main campus.

Action taken

Although it wasn't continued, AAU as trying to provide orientation to the new comers and planned to give study skill training for 10,000 fresh students.

> *"This year we have planned to give orientation and study skill training for 10,000 students but we provided it only for 2,000 students because the budget that was allocated by one NGO(700,000 ETB) was shifted to another service."*

A.5.3 Substance use

Substance use in the university campus is very rampant: khat chewing, drinking alcohol and using hashish are common. Some of the students reported being assigned in a department with out their interest made them to be stressed and feel hopeless and they began to use substances to get relief from their stress.

> *"Almost 75% of students use substances, they take alcohol especially after exam in a "DC" village."* One male student said

6. DISCUSSION

This study was conducted in DBU and AAU to compare students' psychosocial problems and their risky sexual behavior. In this study it was found that more students of DBU had risky sexual behiaviors. In addition, more students of DBU had different psychosocial ill health than AAU students.

The study indicated that, students in DBU were more likely to be sexually active than AAU students which is highr risk behavior as study shows being sexually active at early age would increase the probalbilty of having multiple sexual partner in later times. The increased on the percentages of sexually active students in DBU might be explained by the weather condition as most male students said during FGD, they needed some one during night to get warm and this is also supported in the quantitative study as more male students(66.4%) than female students(33.6%) were sexually active. The percentage of students who were sexually active in AAU were smaller compared with a similar study (3).This might be due to the fact that previous study included all students where as the present study is restricted to only first year and second year students. Consistent with other study (18), students' attitude of their friends sexual exposure were associated with their sexual exposure .

In AAU, the percentages of students who used condom in their last sexual intercourse and used it consistently was higher than DBU students. When it was compared with previous study conducted in AAU, the result was almost similar (3). But, compared with Gondar University students, more students in AAU used condom in their last sexual intercourse. However, the number of students who used condoms in their last sexual intercourse was lower for DBU students when it was compared with Gondar University Students and AAU students (3,14). As it was found in the FGD conducted with the students and the in-depth interview conducted with the clinician, condom was not available in the DBU. There were students who asked for condom in the university clinic but couldn't get it .This might explain the decrement in condom use among DBU students.

At the time of the study, more students in DBU had more than one sexual partner than AAU students. When it was compared with a previous study conducted in AAU, it was found that the percentage is

higher both in AAU and DBU (3). The result is also higher when it was compared with study conducted in youths of US (23).

In DBU, the increased number of students who had more than one sexual partner could be explained by the higher percentages of students who had psychosocial ill health. Similar study showed that as people become hopeless they tend to involve themselves in risky sexual behavior. As they don't strive to protect tomorrow (26).

More students who had perception of susceptibility for HIV used condom consistently than those who didn't have this perception. This result is consistent with the study conducted in USA(18).

In DBU, students who used substances were less likely to use condom consistently. Similar finding was also found in AAU is to be expected because of the nature of this substances in decreasing inhibitions, altering rational decision making, and increasing risk-taking behavior (24). The result which is found in DBU is consistent with other study conducted to assess substance use and risky sexual behavior of in-school and out of-school youth in Ethiopia (24).

The study didn't show relationship between having psychosocial ill health and inconsistent condom use. However, consistent with similar studies conducted in India and US, students who had Psychosocial problems were more likely to have had multiple sexual partners and had sexual contact with the influence of alcohol (17,18,26).

More students of DBU were found to have had psychosocial problems than AAU students. As students said during FGD, One of the contributing factor for high rate of psychosocial ill health in DBU was students' attitude to the new universities: they thought they could pass exams easily and they didn't give due attention to their study and spent most of their time lazily. But, when exam approached most of the students would be stressed and didn't get good result, and eventually they develop different psychosocial ill health and began to use different substances. In contras the inclusion of more female students in the DBU might have contributed to the increment of psychosocial problems in DBU. When it was compared with the study conducted in Dessie High school (19), the rate psychosocial ill health in DBU and AAU is

very high. In addition when it was compared with study conducted in India the rate is again very high (17).

Consistent with the study conducted in Dessie High School (19), more females were found to be affected by psychosocial ill health than male students. This might be explained by girls and boys behaviour to react for different stressful condition in which girls are more prone to outcomes often referred to as internalized or quiet- such as depression. Boys on the other hand are prone to react to difficulties by externalizing/acting out by being aggressive and other similar acts.

Consistent with prior findings (18), it was found in this study that having a better family connectedness was found to be protective of psychosocial ill health in DBU. Some students also mentioned in the focus group discussion that having less perception of family connectedness may contribute to different psychosocial ill health.

Prior studies identified that psychosocial ill health are associated with substance use (18,27). Similar to other studies in this study it was found that substance use increases the risk of having psychosocial ill health in DBU students. But, in AAU substances use and having psychosocial ill health were not associated. This might be explained by the existence of recreation site and counseling service in AAU in which most of the clients who visited the counseling service were not using substances.

In this study it was found that more students of DBU attempted, seriously considered and/or planned suicide. This might be explained by the high rate of psychosocial ill health in DBU : in prior studies, more students who had psychosocial ill health attempted ,planned or seriously considered suicide (28,30). In addition, the absence of strong counseling service and stressful academic environment may have contributed to this increment in the suicidal attempt in DBU. For AAU, the rate of suicidal attempt is almost equal with the rate found in study conducted in Dessie High school whereas it was higher for DBU students. A study conducted among high school students in Addis Ababa reported a lifetime prevalence of suicide attempt of 14.3% in contrast to the 5.0% and 4.5% for DBU and AAU respectively (25). This might be explained by students' satisfaction in joining higher institutions that might have contributed to lower prevalence of suicidal attempt in university students.

Consistent with the study conducted in Dessie High School, more female students in DBU attempted suicide than male students. This might be explained by the existence of more girls who had psychosocial ill health in addition during FGD conducted in Debrebrhan University most of the females were not hopeful in their academic life and there were some students who quitted their education and went to home in fear of being fired at the end of the semester. This hopelessness might have contributed to the prevalent of suicidal attempt on female students than male students. Similar study (30) also showed that hopelessness is serve as a link to depression and suicide.But, in AAU gender and suicidal attempt were not related this may be due to smallness of female students included in this study.

Consistent with other studies, it was found in this study that having better family connectedness was found of be protective against suicidal attempt.

7. STRENGTH AND LIMITATIONS OF THE STUDY

7.1 STRENGTHS

- The study tried to address important public concerns
- The study employed both quantitative and qualitative methods.
- The quantitative study was pre-tested; which both helped for inclusion of new questions and reorganization of the questionnaire.
- Multivariate analysis was used to control the possible confounding effect of covariates.

7.2 LIMITATIONS

- The study identified reported behavior not actual behavior.

- The qualitiative study involved few people especially in the in-depth interview

8. CONCLUSIONS

- The present study indicated that students in AAU and DBU have unacceptability high level of sexual risk behavior, the problem being pronounced among DBU students. Protective factors include having confidence in sexual negotiation (in AAU) and perception of susceptibility in Debrebirhan University.
- Pracitce of risky sexual behaviors were greater in students who had psychosocial ill health.
- The study show that psychosocial problems exist in substantial magnitude in both institutions. However, students at Debrebirhan University were more likely to be disadvantaged. The absence of effective orientation to students about the university life and less family connectedness might have contributed to this problem. Being female, having less family connectedness and use substances predicted psychosocial ill health in the two universities.
- Similarly it was found out that, suicidal and parasuicdal events were higher among Debrebirhan

University students particularly among females than Addis Ababa University students. Having more family connectedness and perception of parental monitoring were found to be protective of suicidal and Para suicidal attempt.

8. RECOMMENDATIONS

Implications for policies:

- The government should give due attention on availing and providing preventive services with special emphasis to newly established universities.
- Ministry of Education should strengthen counseling and guidance services and enforce the executive bodies of the universities to assign adequate number of counselors in each university.
- Due attention to higher institutions should be given regarding HIV/AIDS prevention with emphasis for the newly established universities.

Implications for the services:

- Condom should be available in Debrebirhan University .
- In both universities mechanisms should be arranged to support the needy students economically.
- Although it is economically challenging parents should create good relationship, monitor and support their sibilings in the univerisy.
- Proper orientation to all students to disprove the myths that they carry.

- Students who have better academic achievements could be used to help those who need their support in a spirit of cooperation and fulfilling their social responsibilities.

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ANNEXES

ANNEX-I

SELF- ADMINISTERED QUESTIONNAIRE

GENERAL INFORMATION

S.No.	Questions	Answers
1.1	Sex of the respondent	1.Male 2.Female
1.2	Where is your residence now?	1. In the university 2. Outside the university
1.3	Where are you from?	1.urban 2.rural
1.4	What is your age (in years)?	1. ____
1.5	What is your religion?	1. Protestant 2. Orthodox Christian 3. Muslim 4. Catholic 5. Others (specify)_____

1. Participant's code number: _____ _____ ____

2. Date of interview: __dd/__mm/2000 E.C.

PART 1. SOCIO-DEMOGRAPHIC

1.6	What is your ethnicity?	1. Oromo 2. Amhara 3. Tigrie 4. Gurage 5. Sidama 6. Wolaita 7. Others_____
1.7	What is your current marital status?	1.Never married 2.Married 3.Widowed 4.Separated 5.Divorced
1.8	What is your Faculty and Department?	Faculty_____ Department_____
1.9	What is your current year of education?	1. Year I 2. Year II

PART 2

The following are statements to assess your perceived parental monitoring. Mark (x) in the boxes provided according to your degree of agreement to the statements.

S.NO	QUESTIONS	Never	Rarely	Sometimes	Most of the time	Always
2.1	My parents know where I am in my spare time.		☐	☐	☐	☐
2.2	I am expected to call or write letters my parent(s) to let them know about my latest.		☐	☐	☐	☐
2.3	I tell my parent(s) who I am going to be with in the university campus.		☐	☐	☐	☐
2.4	When I go out at night, my parent(s) know where I am.		☐	☐	☐	☐
2.5	My parent(s) try to know my doing in university		☐	☐	☐	☐

PART 3

The following are statements to assess your perceived Family connectdness. Mark (x) in the boxes provided

according to your degree of agreement to the statements.

S. NO	QUESTIONS	Very like	Moderately like	Moderately unlike	Very unlike
3.1	Spoke to me with a warm and friendly voice.				
3.2	Did not help me as much as I needed.				
3.3	Let me do those things I liked doing.				
3.4	Seemed emotionally cold to me.				
3.5	Appeared to understand my problems & worries				
3.6	Was affectionate to me.				
6.7	Liked me to make my own decisions				
3.8	Did not want me to grow up.				
3.90	Tried to control everything I did				
3.91	Invaded my privacy				
3.92	Enjoyed talking things over with me				
3.93	Frequently smiled at me.				
3.94	Tended to baby me.				
3.95	Did not seem to understand what I needed or wanted				
		Very like	Moderately like	Moderately unlike	Very unlike
3.96	Made me feel I wasn't wanted				
3.97	Could make me feel better when I was upset				
3.98	Did not talk with me very much.				

3.999	Tried to make me dependent on her/him				
3.990	Felt I could not look after myself unless she/he was around				
3.991	Let me go out as often as I wanted.				
3.992	Was overprotective of me				
3.993	Did not praise me		☐ ☐	☐	☐

PART 4

The following are statements to assess your peer norms surrounding sexual behavior .Circle your answer

Q.NO	QUESTIONS	YOUR RESPONSE
4.1	How many of your friends you know have had sex/sexual intercourse?	1. Most of them 2. Some of them 3. None of them
4.2	If a student in your university started having sex-What would happen?	1.His/her friends would respect him/her more 2. His/her friends would respect him/her less 3. It would not affect his/her friends' respect
4.3	At what age do most students think it is OK for someone to have sex/sexual intercourse for the first time?	_____
4.4	How many of your friends you know have good attitude towards condom use	1. Most of them 2. Some of them 3. None of them

PART 5

The following are statements to assess support you may get from your friends .Circle your response.

S.NO	QUESTIONS	YOUR RESPONSE	
5.1	Do you get guidance and feed back from your friends?	1. YES 2. NO →	SKIP TO 5.3
5.2	If your answer is "yes" to question number 5, how frequently you get it?	1. a little of the time 2. Some of the time 3. Most of the time 4. All of the time	
5.3	Did any of your seniors encourage you in your academic pursuit?	1. YES 2. NO	
5.4	If your answer is "yes" to question number 5.3, how frequently you get it?	1. a little of the time 2. Some of the time 3. Most of the time 4. All of the time	

PART 6.

The following are statements to assess your Perception of susceptibility for HIV. Mark (x) in the boxes provided

according to your degree of agreement to the statements.

Q.NO	Questions	Agree (1)	Midly agree (2)	Midly disagree(3)	Disagree(4)
6.1	People like me do not get HIV infections.	☐	☐	☐	☐
6.2	I am too young to get an HIV infection.	☐	☐	☐	☐
6.3	I am very healthy so my body can fight off an HIV infection.	☐	☐	☐	☐
6.4	I am too young to get an HIV infection.	☐	☐ ☐	☐	☐
6.5	I am not worried that I might get an HIV infection.	☐		☐	☐
6.6	People my age do not get HIV infections.	☐	☐	☐	☐

PART 7.

The following are statements to assess your psychosocial health status .Circle your answer.

S.NO	QUESTIONS	YOUR RESPONSE
Have you ever any of the following while you are here in the university		

7.1	Felt that life was not worth living	1. YES 2. NO
7.2	Feeling of lonely, depressed	1. YES 2. NO
7.3	Being worrisome, can't sleep or don't sleep well.	1. YES 2. NO
7.4	Mentally incoherent, moody and stressful	1. YES 2. NO
7.5	Being bored with life and worried around you	1. YES 2. NO
7.6	Befuddled, having a headache with no obvious cause	1. YES 2. NO
7.7	Ever felt so sad or hopeless almost every day for two weeks or more in a row months. That you stopped doing some usual activities in the past 3	1. YES 2. NO
7.8	Ever attempted suicide in the past 3 months	1. YES 2. NO
7.9	Ever planned how would you commit suicide	1. YES 2. NO
7.91	Ever seriously considered suicide	1. YES 2. NO

PART 8

The following are statements to assess your exposure to pornography films and/or rap music .Circle your response.

Q.NO	QUESTIONS	YOUR RESPONSE	
8.1	Have you ever seen pornographic films while you are here ?	1. YES 2. NO →	SKIP TO 8.3
8.2	If your answer is yes to question number 1, For how many hours you heard/viewed rap music or videos during an average	1. a little of the time 2. Some of the time 3. Most of the time 4. All of the	

8.3	Have you ever heard/seen rap music/video while you are here?	1. YES 2. NO →	SKIP TO 9.1
8.4	If your answer is "yes" to question number 3, how frequently you observe it?	1. a little of the time 2. Some of the time 3. Most of the time 4. All of the time	

PART 9:

The following are statements to assess your knowledge of HIV .Circle your response.

Q.NO	QUESTIONS	YOUR RESPONSE
9.1	Have you ever heard of an illness called AIDS?	1. YES 2. NO
9.2	using condoms correctly at all times can protect from HIV	1. YES 2. NO
9.3	Abstaining from sexual intercourse can protect from HIV	1. YES 2. NO
9.4	Having one uninfected faithful partner can protect from HIV	1. YES 2. NO
9.5	Mosquito bite can spread HIV/AIDS	1. YES 2. NO
9.6	Eating uncooked egg laid by a chicken that has swallowed used condom can spread HIV	1. YES 2. NO
9.7	eating raw meat prepared by an HIV infected can spread HIV	1. YES 2. NO
9.8	Drinking hard local liquor or eating hot pepper can protect from HIV	1. YES 2. NO
9.9	Healthy looking people can spread HIV	1. YES 2. NO

PART 11.

The following are statements to assess whether you use substance or not .Circle your answer.

S.NO	QUESTIONS	YOUR RESPONSE	
10.1	Have you ever chewed khat?	1. YES 2. NO →	SKIP TO 10.3
10.2	If yes to question number 10.2, how frequently you chewed it?	1. Daily 2. Once per week 3. Twice per week	
10.3	Have you ever drunk alcohol?	1. YES 2. NO →	SKIP TO 10.5
10.4	If yes to question number 10.3, how frequently you drunk alcohol?	1. Daily 2. Once per week 3. Twice per week	

PART 12

The following are statements to assess your sexual self esteem .Circle your answer.

S. NO	QUESTIONS	YOUR RESPONSE	Skip
11.1	Are you confident enough to assert your sexual need to your sexual partner?	1. YES → 2. NO	Skip to 11.3
11.2	If 'no' to question number 9.1 'why'	1. It is not our culture 2. It shameful 3. It is a sin 4. Others_____	
11.3	Are you confident to say no to sexual demands of your partner?	1. YES → 2. NO	Skip to 12.1
11.4	If 'no' to question number 9.3 'why'	1. Because he/she helps me in different things 2. I considered it as a gift for him	

		3. Because I fear that he/she will go to others 4. Others_____	

PART 12 :

The following are statements to assess your sexual behavior .Circle your response.

S.NO	QUESTIONS	YOUR RESPONSE	
12.1	Have you had sex/sexual intercourse in the past 3 months?	1. YES 2. NO →	Live the rest of the questions under this table
12.2	If your answer is yes to question number 12.1, have you regretted or felt sad after having sex	1. YES 2. NO	
12.3	If yes to question number 12.1, Did you make it for the first time after coming to the university	1. YES 2. NO	
12.4	If your answer is yes to question number 12.1, did you use condom in your last Sexual intercourse?	1. YES 2. NO	
12.5	If your answer is yes to question number 12.4, how frequently you used condom?	1. Always 2. Once 3. Sometimes	
12.6	If your answer is no to question number 12.4, Why?(you can give more than one answer)	1. ---------- 2. ---------- 3. ---------- 4. ----------	
12.7	How many sexual partner have you had here in the university?	1. One 2. Two 3. Three 4. More than three	

12.8	Have you had sex under the influence of alcohol here in the university?	1. YES 2. NO	
12.9	Have you had sex with commercial sex workers after coming to the university?	1. Yes 2. No	
12.10	If yes to question number 12.9,did you make it for the first time?	1. YES 2. NO	
12.11	Have you ever had sexual contact to gain economical benefit?	1. YES 2. NO	
12.12	If yes to question number 12.11 ,did you make it for the first time?	1. Yes 2. No	

Thank you!

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NEXE II

Guiding questions for Focus group discussion with students

1. How do you see the sexual activities of university students?
2. Who do you think students are involved in risky sexual behavior?
3. How do you see the magnitude of psychosocial health problems of students?
4. why are students involved in risky sexual behavior?
5. What do you think of the main reasons of psychosocial health problems?
6. How do you see the magnitude of Substance use and its associated factors?

ANNEX III

Guiding questions for In-depth Interview of clinics' head and counselor.

1. Do you perceive psychosocial health problems as a problem of students?
2. How do you see risk status of students?
3. What effort the university made towards psychosocial health?
4. What effort the university made towards preventive activities of HIV?
5. What challenges do you have and what kind of external support does the university need to alleviate these problems?
6. Is there counseling services for students? Do you think it is sufficient?

ANNEX IV

Information Sheet and Consent Form

Title of Study: Assessment of Psychosocial Health and Risky Sexual Behavior of AAU and DBU Students.

Name of Investigator: Ademe Tsegaye.Contact address: mobile phone number(0911 56 07 62)

Research Advisor: Dr Solomon Shiferaw

My name is Ademe Tsegaye and I am working with the School of Public Health of Addis Ababa University. You have been invited to take part in this study . Before you decide whether to take part, it is important for you to understand why the research is being done. Please take time to read the following information carefully and feel free to ask if there is anything that is not clear or if you would like more information.

This study is conducted as a partial fulfillment of a Masters thesis in Addis Ababa University, School of Public Health. It has got ethical approval from the Ethical Review Committee of the Faculty of Medicine of Addis Ababa University. The study is being conducted on Addis Ababa and Debre birhan university. The aim of the study is to assess and compare Psychosocial Health Problems and Risky Sexual Behavior of AAU and DBU Students. And to forward best ways for providing services that are appropriate to address their psychosocial and sexual health problems. That is why we contacted you for taking part in the study. All information that is collected about you during the study will be kept confidential, and your names will never be mentioned in any analysis and dissemination of findings. Please be informed that participation in this study is purely voluntary. If you wish not to participate or to discontinue the questionnaire at any time, you may.

However, the information you give us is highly valuable to the study. If you choose not to participate in the study, or if you choose to participate but later choose to withdraw, this will not in any way have negative consequences in your college studies or the health care services that you get from the University clinics or any other governmental or non-governmental organization. And this self administered questionnaire will take about 30 minutes.

Thank you very much.

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: _____

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Declaration

I, the undersigned, declare that this is my original work and has not been presented in this or any other university and all sources of materials used for this thesis have been duly acknowledged.

Name ***Ademe Tsegaye***

Signature _____

Date _____

Place **Addis Ababa University**

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

Dr, Solomon Shieferaw(MD,MPH)

School of Public Health

Addis Ababa University

Signature _____

Date _____

Place **Addis Ababa University**

Peer level: perce ived