ADDIS ABABA UNIVERSIRTY

COLLEGE OF HEATH SCIENCES

SCHOOL OF PUBLIC HEALTH

ASSESSMENT OF PRE-MARITAL SEXUAL PRACTICE AND ITS CONCEQUENCES AMONG FEMALE STUDENTS IN AMBO UNIVERSITY

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SCHOOL OF GRADUATE STUDIES

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By

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Table of contents

Page

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Acronyms

AAU	Addis Ababa University
AIDS	Acquired Immunodeficiency Syndrome
CDC	Center for Disease Control
DHS	Demographic and health survey
EPHA	Ethiopian Public Health Association
FGA	Family Guidance Association
FGDs	Focus Group Discussions
FMOH	Federal Ministry of Health
HAPCO	HIV/AIDS Prevention and Control Organization
HIV	Human Immunodeficiency Virus
IRB	Institutional Review Board
MDG	Millennium Development Goal
MOLSA	Ministry of Labor and Social Affairs
NGO	Non Governmental Organization
PMSP	Premarital Sexual Practice
REC	Research Ethics Committee
SPSS	Statistical Packages for Social Sciences
SRS	Simple Random sampling
SSA	Sub Saharan Africa
STI	Sexually Transmitted Infection
UN	United Nation
VCT	Voluntary Counseling and Testing
WHO	World Health Organization
YRBS	Youth Risky Behavior Surveillance

Lists of tables

Page

Lists of figures

page

Abstract

Background: The vulnerability of young people especially young females for many reproductive health problems made it important to assess the magnitude of premarital sexual practice and its consequences among young females.

Objectives: To assess the magnitude of premarital sexual practice and its consequences among female students in Ambo University February 2012.

Methods: A cross sectional study design was conducted among a randomly selected sample of Ambo University female students from January to February 2012 by using a self-administered questionnaire. Bivariate and a multiple logistic regression were employed to determine independent predictors of premarital sex and its consequences among female students. The quantitative data was supported by the qualitative data that were obtained from four Focus Group Discussions.

Results A total of 650 female students were involved in the study yielding 167 (25.7%) of sexually active respondents with a mean age at first sexual debut to be 16.9±2.7 years. About 90(53.9%) of sexually active respondents reported they started sex after joining the University. Finding from both quantitative and qualitative study suggests that pre-marital sex is associated with discussing sex and related issues with family, substance use and peer influence.

Those who discuss sex and related issues with their families less likely to practice premarital sex compared to those who did not. (AOR: 7.16; 95% CI 4.39-11.68). Similarly those who chew chat and consume alcohol were more likely to practice premarital sex. (AOR: *11.18; 95% CI 4.38-28.48) and (AOR: 3.70; 95% CI 2.04-6.73), respectively.*

Thirty one (18.6%), of the study subjects claimed they started sex before the age of 15 years. Twenty eight (16.8%) of sexually active respondents have got pregnant at least once prior to the study period out of which 15(53.6%) reported of history abortion, while 75(11.5%) of the respondents reported to have sign and symptoms of sexually transmitted diseases. From the total of 167 sexually active respondents only 5(3%) reported history of using condom consistently.

Conclusion Significant number of young females had started sex very early and involved in high risk sexual behavior including non use of condom which leads to unwanted pregnancy and being infected with sexually transmitted diseases. Many factors affect the sexual behavior of young females including lack of information and cultural factors where sex and related issues are not openly discussed with families in addition to peer pressure and substance use.

These kinds of findings call for family life time education including including parent-youth communication education, both while they are in school as School-based Sex and HIV/AIDS education program and while they are out of school as youth center based education.

1. INTRODUCTION

1.1 Background

Sub Saharan Africa is the most affected continent by HIV/AIDS with nearly 22.5 million people living with HIV/AIDS out of the global 33.3million people. HIV/AIDS represents the 3rd leading killer of young people worldwide. In Africa it is the number one killer of young adults between the age of 15 and 29 years (1, 2) . More than 12 million young people are living with HIV/AIDS today in the Sub Saharan Africa.

According to EDHS 2011, 1.5% of Ethiopian adults age 15-49 are infected with HIV and the number of women age 15-19 years who tested positive for HIV is much higher than the number of males in the same age group which is due to early sexual initiation among young females and having multiple sexual partner (1).

Pre-marital sex is any sexual activity with an opposite sex partner or with same sex partner before he/she has started a marriage life(3). The term is usually used to refer the intercourse before a marriage. Adults who presumably marry eventually also fall under this definition. Data from ministry of labor and social affairs (MOLSA) showed that 22.9% of males and 19.7% of females in the 15-19 years age group, and 53.4% of males and 19.7% of females in the 18- 19 years age group had had sexual intercourse before marriage(2, 4)

Sexual activities among young people have been increasing worldwide. Several studies in Sub-Saharan Africa have also documented high and increasing pre-marital sexual activities among young peoples. However, viewing young people particularly young females as a specific group with their own need is relatively a recent practice in the developing counties. Creating a supportive environment and showing interest in the welfare of young people appear to promote positive sexual and reproductive health outcomes(5)

1.2 Statement of the problem

University life is characterized, for many students, by more independence and opportunities for social mixing than before. The situation is aggravated by the overall poor socioeconomic, environment, harmful traditional practices, low contraceptive use and Voluntary counseling and testing utilization (4, 6).

A study in Malaysia reported that young people sexual intercourse was significantly associated with socio-demographic factors like environmental factors (living away from parents) and substance use (alcohol use, cigarette smoking, drug use) (7, 8).

Forced premarital sex will lead to mental depression and dilemma. Another danger is possible exchange of diseases; as premarital partners may not be aware of diseases that spread through intercourses. Getting pregnant through premarital sex is another disastrous consequence of premarital sex. More than 700,000 teenagers become pregnant each year. One in 3 (34%) females became pregnant at least once before age 20. The point prevalence estimate in 2007 showed that, the number of people living with HIV/AIDS was 977,394 and of these 578,018 (59%) were females (2, 9).

1.3 Rationale of the study

Even though many risky behavior which predisposes young people for premarital sexual practice was identified so far: information on the consequences of premarital sexual activities among university female students are limited as to my knowledge. The reproductive health problems of young people in Ethiopia are multifaceted and interrelated. Even though, the reproductive health problem of young people is critical among both sexes: young girls are more affected because of their biological, economical and social vulnerability (7, 10). So, this study is designed to investigate both the prevalence and consequences of premarital sex among female students in Ambo University.

2. LITRITURE REVIEW

For many individuals, young age is a period of time marked by exploration, self-discovery, and risk taking. For most, these activities will eventually lead to positive outcomes with nothing more costly than a few exciting memories and tales of accident. For some individuals, however, the cost of experimentation and risk taking behavior will lead to problem like drug and alcohol use, sexual victimization, peer victimization, serious health injury, unwanted pregnancy, additional mental health problems, or death(7). These outcomes may result in significant costs to the individual in the form of mental and physical injury, reduced academic progress, and a reduction in the quality of life (11, 12). In addition, family and friends of the individual may experience a loss of productivity in the workplace, conflict with significant others, and financial stress in helping to support adolescents who have been involved in these problematic activities (4).

College life is characterized, for many students, by more independence than before offering male and female students the opportunity to interact with each other. Moreover, have begun to reside independently, that is, in dormitories and private accommodations away from their families; others who continue to reside with their families may be less supervised by parents than when they were in high school. Moreover, college or university life is characterized by celebrations of different kinds: ‗ribbon day', ‗friendship day', ‗chocolate day', ‗traditional day', ‗rose day' and so on by the final year students with the participation of all students in the campus—that provide opportunities for mixing between the sexes and to form a new friendship. (12, 13) (Annex I)

Young people are more mature physically than mentally or emotionally, so that they will easily engage in risky behaviors like early and unsafe sexual activities, having multiple sexual partners, use of alcohol and drugs, violence and dropping out of school which places their health at risk. In addition young people are socially inexperienced and dependent on others which hinder their decision making by themselves and they are influenced by peers in ways that increase their

engagement in risky behaviors which may resulted in being infected by STIs including HIV/AIDS (4, 8).

Young people have limited access to reproductive health services that focus on their special needs. Inadequate knowledge about young people sexual behavior, cultural influences, and the limited capacity of implementers hinder the provision of reproductive health education and services to young people. It is therefore essential to have data on the extent of young people sexual activity and contraceptive use, pregnancy rates, and other reproductive health issues in order to have a clear understanding of the situation(7).

Young girls are particularly vulnerable to HIV because of the strong peer pressure and the development of their sexual and social identities which often leads to experimentation.
The prevalence of sexually transmitted diseases (STDs) like HIV/AIDS is relatively high among young people in Ethiopia.
The two major risk factors for the spread of STDs among youths in Ethiopia are the practice of having multiple sexual partners and the limited use of condoms (7, 10).
A study conducted in high schools in Addis Ababa indicated that 54 percent of sexually active youth have experienced sex with more than one partner; 43 percent of sexually active students reported knowing about condoms at the time of their first sexual experience, but only 18 percent said they had ever used condoms (7, 14).

As they are initiating sexual behavior, counseling for safe practice is vital (11, 12). Voluntary counseling and testing (VCT) is an important tool for preventing HIV infection and it allows young people to evaluate their behavior and practice about sexually transmitted diseases(11, 13). Study done in Gondar among high school students showed, majority of the students had adequate knowledge about HIV/AIDS and VCT, while their perception of HIV risk and practice of protected sex is low. Over 82% of respondents approved screening for HIV as a prerequisite for marriage and 97.2% agreed to have a VCT service.

According to the Ethiopian demographic and health survey 2005 report, VCT utilization rate is higher among unmarried females (13, 15).

Sexually transmitted Infections (STIs) rank among the five most important causes of healthy productive life loss in developing countries. The World Health Organization (WHO) estimates that the global incidence of new cases of selected curable STIs - Gonorrhea, Syphilis, Chlamydia and Trichomoniasis was 340 million in 1999(16, 17). The largest number of new infections occurred in South and Southeast Asia. According to a report published by UNAIDS/WHO working group on global HIV/AIDS and STI surveillance in December 2006 there were 70,559 reported cases of STIs in Malaysia. Evidence strongly suggested that presence of one STI facilitated transmission of HIV by a factor of 2-5 times (16, 18).
Sub-Saharan Africa remains the most seriously affected region, with nearly 12 million young people (age group 15-24) are living with HIV/AIDS; and more than 7,000 become infected with HIV every day. In Africa alone, an estimated 1.7 million young people are infected annually(5, 11)

Ethiopia is one of the Countries most affected by the HIV/AIDS. The point prevalence estimate in 2007 showed that, the number of people living with HIV/AIDS was 977,394 and of these 578,018 (59%) were females (19, 20). According to the 2006 report of AIDS in Ethiopia, people between 15-24years had the highest prevalence of HIV, 5.6% (21, 22)

Different studies conducted in Ethiopia and other countries revealed the prevalence of premarital sex. Study conducted in five urban schools (in Baher Dar, Dessie, Hawassa, Jimma, and Dire Dawa) showed that about 33.3 % of school youth had had sexual intercourse before marriage and about two third of were unprotected (21, 23).

Study conducted among Jimma University students showed that; 35.3% of male and 23.1% female students had had sexual intercourse before marriage which is higher than the national prevalence of premarital sex which is 19% with mean age at first coitus being 18.1years.

Furthermore, 88.5% of them had not had regular sexual partners and only 7.6% use condom consistently (5, 24).

Study done in west shoa zone of Oromia region among high School adolescents indicated that about 16.5% of sexually active male adolescents visited female commercial sex workers of which only 27.6% reported consistent condom use and 44.8% never used condom during sex with female commercial sex workers(25).

Another study done in Bahir Dar showed 53% of male and 24% of female out of school youths were sexually active with mean age at first sexual contact being 16.9± 2.3 years of age(21, 25).

Several studies in sub- Saharan Africa have also documented high and increasing pre- marital sexual activities among young people. As sited by Daba on his MPH thesis, Addis Ababa University 2006: Data from the DHS of the Africa region showed that, in 7 out of 9 countries surveyed, more than half of unmarried woman in their reproductive years (15-49) have had sexual intercourse at least once before marriage (25).

Another report showed that 18 percent of male university students in Gujarat were sexually experienced. According to the study conducted in two university settings in Delhi about 39 percent of male students and 20 percent of young females had engaged in pre-marital sex (4).

Study in Nepal showed that college students engaged in a variety of behaviors that put them at risk for serious health problems (7). University/College students are at risk of sexually transmitted infections, including HIV, due to their propensity to take risks, often with multiple partners, accompanied by an inconsistent use of condoms. Study conducted in college students in Nepal showed that about two in five male college students (39%) had premarital sexual experiences. Among these, more than half reported that they had multiple sexual partners. Specifically, it is assumed that students who have sex at an earlier age, who consume alcohol frequently, who have sex with irregular partners, and who have lower exposure to mass media use condom less at first sexual intercourse(8, 26).

A survey performed in Shanghai indicated that 18.8% of male students and 16.8% of female students had engaged in premarital sex (27).
Another study in Beijing showed that about 15% of male and 13% of female university students had experienced premarital sex. As a result, they have become primary victims of the HIV/AIDS and STIs that has spread throughout the Country (7, 28).
According to the HIV sentinel surveillance of mothers seeking antenatal care, HIV/AIDS prevalence is 11 percent among women age 15-19 and 15 percent among those age 20-24 (27).

Young people are vulnerable because they lack knowledge and skills to avoid risky behavior, cultural influences and lack of access to acceptable, affordable and appropriate reproductive health information and services (28-31).
Another important problem faced by young female are the risk of unwanted of pregnancy. More than 700,000 teenagers become pregnant each year. One in 3 (34%) females became pregnant at least once before age 20. Several studies in Ethiopia have documented 60% of pregnancies are unintended or unwanted pregnancy among young females (32). A household study of adolescents in Addis Ababa found that the median age at first pregnancy was 16 years with two in three women becoming mothers before the age of 20(7, 32). Of the 957 female respondents, 50 percent had been pregnant in the past and 74 percent of these pregnancies resulted in abortions.
In a survey of adolescents conducted in Awassa, Adama, and Addis Ababa, 64 percent of the respondents knew of a girl whose schooling was interrupted due to an unwanted pregnancy (7).

The consequences of alcohol and drug use are especially serious for teens. Substance abuse affects a person‘s ability to make judgments about sexual behavior, thus increasing the risk for sexually transmitted infections, sexual assault, and pregnancy. About two-fifth of teens drank or use drugs while having sex (32-35)

3. OBJECTIVES

3.1 General objectives

- To assess the magnitude of pre-marital sexual practices and its consequences among female students in Ambo University. .

3.2 Specific objectives

- To determine the magnitude of pre-marital sexual practice
- To describe the consequences of pre-marital sexual practice
- To assess factors associated with pre-marital sex

4. METHODOLOGY

4.1 Study area and period

The study was conducted in Ambo University from January to February 2012. Ambo University is found in Ambo town, the capital city of West shoa zone of Oromia regional state, located at a distance of 125km west of Addis Ababa.

Ambo University was established as independent institution in 2007 offering diploma and degree program to mid-level Professionals who could help in technology transfer for farmers and officially established its graduate study programs in October, 2006. Currently Ambo University consists of eight faculties and thirty one departments including health faculty having four departments. A total of **7,599** undergraduate students are there in Ambo University of which **1,941** of them are females.

Ambo University has one student clinic providing medical and VCT service. There are five health professionals in the student clinic (two senior BSc nurses, two diploma Nurses and one lab technician)

In addition there are one governmental hospital, two health center, thirteen private clinics and one HIV Prevention and counseling center in Ambo town.

4.2 Study design

A cross sectional quantitative study design complemented with qualitative study was used.

4.3 Source Population

Female Students in Ambo University attending their regular undergraduate programs.

4.4 Study population

The study population are all female students in the selected faculties and departments in Ambo University attending their under graduate program.

4.3.1 Inclusion Criteria-- Undergraduate regular students

4.3.2 Exclusion criteria--- Blind students were excluded.

- Extension students

4.5 Sample Size

The sample size was calculate using a single population proportion formula with the following assumption: the expected prevalence of premarital sexual practice among university females was 23% (24) with desired precision of 4% at 95% confidence level and design effect of 1.5.

Then: $n_o = \frac{(Z^*\alpha/2)^2 P(1-p)}{d^2}$

$n_o = \frac{(1.96)^2 .0.231(1-0.231)}{(0.04)^2} = 426.5$

By considering 10% non response rate 427(0.1) = 43

$n_o = 427+43 = 470$

Then, 1.5×470=**705**

4.6. Sampling Procedures

A multi stage sampling was used to select the required sample size. Sample size was proportionally allotted for the selected faculties depending up on the number of undergraduate female students in the randomly selected faculties and departments. A total of five faculties were considered for sampling. Four faculties were randomly selected by lottery method and health science faculty was purposely included increasing the total number of selected faculties and departments for the study to 5 and 20 respectively. Then, depending up on the number of female students in the selected department proportion was calculated

for each department and the sample size was determined. Finally departments were classified into year of studies and further proportions were calculated for all year of studies in the selected departments.

A simple random sampling was used to select the study subjects from each year of study of the selected departments. (Annex III)

4.7 Data collection Tools

4.7.1 Data collection procedures

Data from the study subjects was collected by using structured and self administered questionnaire which was adapted from the behavioral surveillance and translated to Amharic language. The questionnaire in Amharic language was retranslated to the English language by experts in both languages. Questionnaire in English language was used for data collection. Sociodemographic characteristics like Age, religion, Ethnicity, year of study etc. and reproductive health history such as contraceptive use, communication of sexual issues with their parents etc. were included in the questionnaire.

Data collection was facilitated by 8 facilitators, six people having diploma and the rest two had BSc. qualification. In addition two supervisors having BSc. Qualification was recruited for the data collection. Training was given for all facilitators and supervisors for two days regarding the data collection instrument, Ethical consideration and objectives of the study by the principal investigator.

Qualitative data collection was also facilitated by two individuals having BSc. qualification. FGDs were conducted among staffs from Ambo hospital, Ambo Health center, Ambo University teachers and Ambo University students in four groups consisting eight members each and total of 32 discussants participated.

Focal persons consisting eight female students and eight female health professionals with eight male teachers and eight male health professionals participated in the FGDs.

The entire quantitative and qualitative data collection process was conducted under the close monitoring of the principal investigator.

4.7.2 Operational Definition

Consistent condom use-using condom always while having sex

Regular partner- having one constant sexual partner

Premarital sex- Sexual intercourse before marriage

Unexpected pregnancy- pregnancy occurred unintentionally, unplanned pregnancy.

Risky sexual behavior- sexual practice with multiple partners, alcohol intake before sex and inconsistent condom use while having sex

Sexual Intercourse - refers only to penetrative vaginal sex.
Sexually active- those ever having sexual practice

4.7.3 Study Variables

I Dependent variable

- Pre-marital sex

II Independent variables

- Socio demographic (Age, Ethnicity, Religion, Family income)

-Year of study

- Communication with parents & peers about sexual activities

- Voluntary counseling and testing utilization

4.8 Data processing and Analysis

The quantitative data was checked for completeness and consistency. Data was entered in to computer by using Epi Dat. and analyzed by using SPSS (statistical packages for Social Sciences) version 16.0 after template formation and data clearance. First descriptive analysis was carried out to explore the socio-demographic characteristics of the respondents. Bivariate analysis was used to examine the relationship between the outcome variables and selected independent variables. Odds ratio was used to determine the association between the outcome and selected independent variables. Finally a multiple logistic regression was employed to determine the independent predictors of premarital sex.

The qualitative data was analyzed with content analysis to supplement the quantitative data where by data was transcribed into a textual form from audio records obtained from FGDs and organized into easily retrievable sections. Then, data was coded by paragraph which further categorised and interpreted.

4.9 Data Quality Control

Measure was taken step by step to assure the quality of data. The questionnaire was pre-tested among 5% of the sample to see the consistency and completeness of the questionnaire and necessary modification was made as needed. Strict and intensive training was given for all supervisors and data collectors. A brief orientation was given for the study subjects regarding the study in general: the objectives of the study, the impact of incomplete data on my study and confidentiality of their responses were discussed with the study subjects which is vital for data quality. Finally data was entered and cleaned by the principal investigator.

Information from FGDs was recorded by audio tape recorder which was transcribed into textual form. In addition, information was also recorded manually by the moderators and principal investigator in addition to audio record and finally analyzed by using content analysis.

4.10 Ethical Consideration

First Ethical clearance was obtained from Addis Ababa University College of health sciences school of public health Ethics committee and study protocol was approved. Then, a written letter was obtained from Addis Ababa University College of health Sciences School of public health. The Academic and research vice president (ARVP) office of Ambo University was communicated through formal letter from Addis Ababa university school of public health.
Information about the study was given for the participants, including purpose and procedures, potential risk and benefits so that encourage provision of accurate and honest responses. Study subjects were told participation is their volunteer and there was no interpretation of a single response (fully confidential).

An informed consent was obtained from the study subjects and they were told that they have a full right to refuse to response either partly or completely. But, they were told that their genuine responses are vital importance for my study.

4.11 Dissemination of results

The study was submitted to Addis Ababa University, College of health sciences school of public health. Study findings will also be submitted to relevant bodies such as Federal Ministry of Health, Federal Ministry of Education, Regional Health Bureau, Ambo University, Zonal and District Health Offices.

5. RESULTS

I. Quantitative findings

Six hundred fifty of the total 705 were involved in the study giving a response rate of 92.2%. Thirteen (1.8%) of the respondents refused to participate while 42(6%) of the questionnaires were disregarded because of incompleteness. .

5.1 Socio-demographic characteristics of the respondents

Four hundred seventy nine (73.7%) of the study subjects were within the age of 20-24 years. The mean age of the respondent was 20.9±2.1with a minimum age reported being 18 years.

Two hundred thirty (35.4%), 207 (31.8%), 187(28.8%) and 26(4%) of the respondents were first, second, third and fourth year students respectively who participated in the study. Vast majority of the participants were from first and second year: constituting 230(35.4%) and 207(31.8%) respectively with small number of participants from the fourth year 26(4%).

Regarding their religion majority 344(52.9%), were Orthodox followed by Protestant 206(31.7%).

The predominant ethnic group was Oromo 422(64.9%) and Amhara 173(26.6%).

Regarding the economic status of their family majority 530(81.5%) came from a family with medium economy.

Three hundred seventy nine (58.3%) of the respondents had a pocket money while 271(41.7%) did not.

Table: Socio demographic characteristics of the respondents Ambo University, Oromia region, Ethiopia, February 2012. (n=650)

Variables	Frequency	Percent
Age(n=650)		
<20	135	20.8
20-24	479	73.7
>=25	36	5.5
Year of study(n=650)		
First year	230	35.4
Second year	207	31.8
Third year	187	28.8
Forth year	26	4
Religion (n=650)		
Protestant	206	31.7
Orthodox	344	52.8
Muslim	66	10.2
Wakefata	20	3.1
Other	14	2.2
Ethnicity(n=650)		
Oromo	422	64.9
Amhara	173	26.6
Tigre	11	1.7
Wolayita	14	2.2
Others	30	4.6
Perceived Family Economy		
Poor	66	10.2
Medium	530	81.5
Rich	54	8.3
Pocket money		
Yes	379	58.3
No	271	41.7

Table 2 History of substance use by the study subjects, Ambo University, Oromia region, Ethiopia, February 2012

Variables	Frequency	Percent
Chew chat(n=650)		
Yes	49	7.5
No	601	92.5
Cigarette smoke(n=650)		
Never smoke	623	95.8
Sometimes	27	4.2
Drink alcohol(n=650)		
Never drunk	526	80.9
Some times	124	19.1

Majority of the study subjects, 623 (95.8%) had never smoked cigarette while 21(3.2%) and 6(0.9%) used rarely and sometimes respectively.

The vast majority of the respondents 601(92.5) did never chew chat. Only 49(7.5%) of the respondents had history of chat chewing.

5.2 Sexual history of the study subjects

From the total respondents more than half 360(55.4%) had a regular sexual partner during a data collection period.

One hundred sixty seven (25.7%) of the respondents were sexually active with a mean age at first sexual contact being 16.9±2.7 years. Thirty one (18.6%) of the respondents had started sex before the age of 15 years while majority of the study subjects 100(59.9%) had started sex within the age interval of 15-19years.

The vast majority 65(34.8%) and 57(24.8%) of the sexually active study subjects belongs to third and first year, respectively (Fig. 2).

Majority 90(53.9%) have their first sexual intercourse after joining the University where as 77(46.1%) the respondents started sex elsewhere (at high school or colleges).

Three hundred twelve (48%) of the respondents reported discussing anything important to them with their father and mother but, only less than half 230(35.4%) often discuss sex related issues with their father.

Similarly 326(50.2%) of the respondents often discuss sex related issues with their mother while 183(28.2%) never discussed sex related issues with their mother.

From the total respondents who were sexually active 28(16.8%) had history of pregnancy prior to the study period out of which 15(53.6%) reported history of abortion.

Five (3%) of the total sexually active respondents had used condom consistently and 12(7.2%) of the respondents had used condom during their first sexual contact.

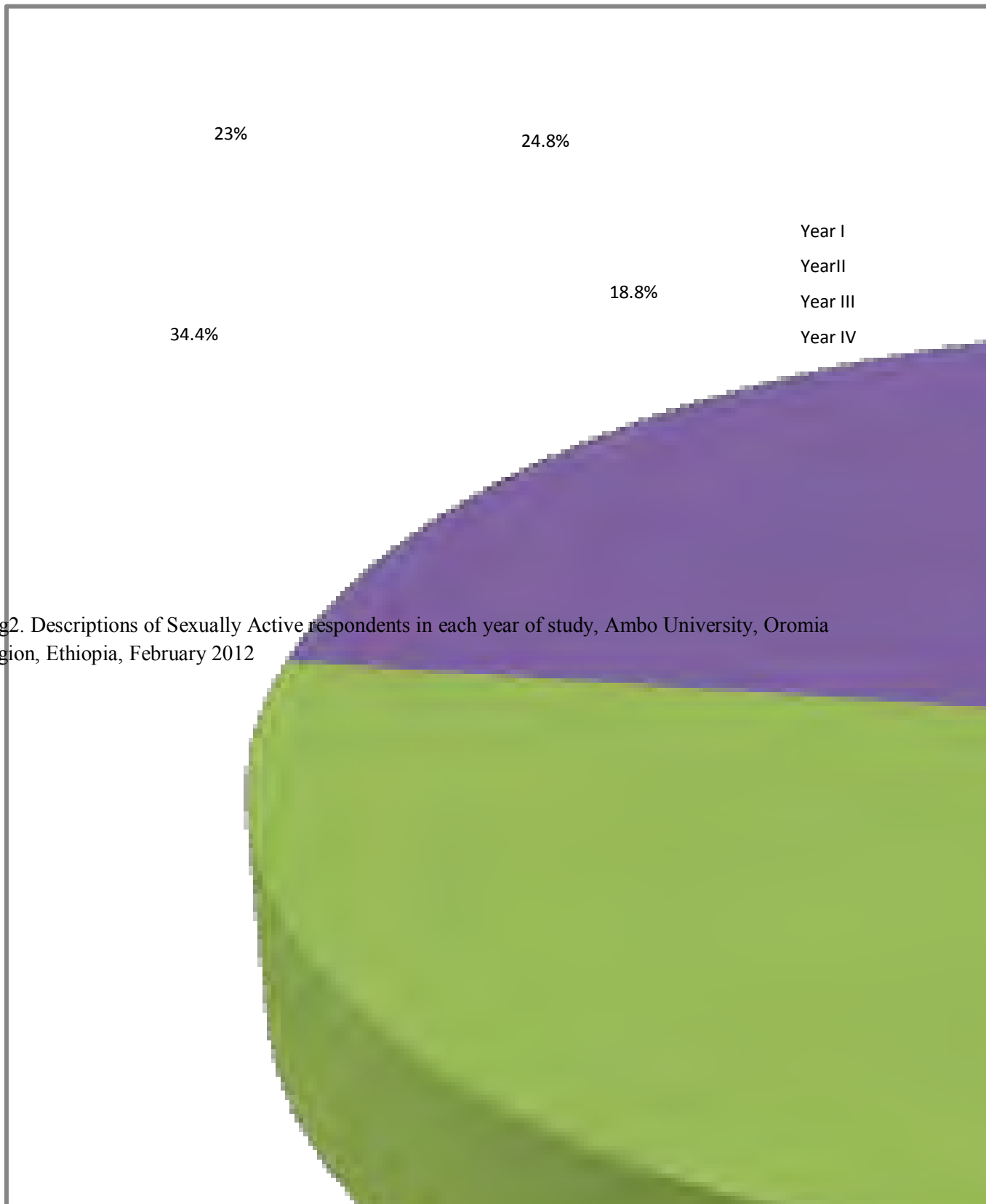

Fig2. Descriptions of Sexually Active respondents in each year of study, Ambo University, Oromia region, Ethiopia, February 2012

Table 3 Sexual history of the respondents Ambo University, Oromia region, Ethiopia, February 2012 (n=650)

Variables	Frequency	Percent
Have sexual partner		
Yes	360	55.4
No	290	44.6
Ever had sex		
Yes	167	25.7
No	483	74.3
Age (n=167)		
<15	31	18.6
15-19	100	59.9
20-24	36	21.5
When did you start sex(n=167)		
High school	64	38.3
University	90	53.9
Other	13	7.8
Always use condom		
Yes	5	3
No	162	97
Attend romantic video/film		
Yes	346	53.2
No	304	46.8

Table 4 Sources of information about sexually transmitted diseases among the study subjects Ambo University, Oromia region, Ethiopia February 2012. (Multiple answers are possible)

Variables	**Frequency**	**Percent**
School	300	46.2
TV/radio	203	31.2
Parents	76	11.7
Boy friends	66	10.2
Religious leaders	66	10.2
News paper	56	8.6
Others	3	0.6

Five hundred eighteen (79.7%) of the respondents reported they had information about sexually transmitted diseases.

The vast majority 300(46.2%) of the respondents had information about sexually transmitted diseases from school.

Table 5 HIV screening and information about sexually transmitted diseases among the respondents Ambo University, Oromia region, Ethiopia, February 2012

Variables	Frequency	Percent
Symptoms of STIs		
Yes	75	11.5
No	575	88.5
Information about STIs		
Yes	518	79.7
No	132	20.3
Screening for HIV		
Yes	369	56.8
No	281	43.2
Screening result		
Negative	352	95.4
Positive	6	1.6
Unknown	11	3

A total of 369(56.8%) respondents were screened for HIV, 352(95.4%) had received a negative screening result while 6(1.6%) and 11(3%) had got positive and unknown screening result respectively.

Vast majority 575(88.5%) of the respondents had no history of symptoms of sexually transmitted diseases while 75(11.5%) of the respondents had history of self reported symptoms of sexually transmitted diseases. From the total of 75(11.5%) respondents who developed symptoms of

sexually transmitted diseases 28(38.9%) went to private institutions for treatment while 6(8%) of the respondent went to traditional healers for treatment. The main reasons for preferring this institutions are confidentiality 26 (92.9%) and 2(33.3%) respectively. The predominant symptom of sexually transmitted diseases reported was abnormal genital discharge 46(61.3%) followed by pain during urination 27(36%).

From the total of 75(11.5%) respondents who had experienced symptoms of sexually transmitted diseases 11(14.7%) of them had also lesions 8(72.7%) and swelling 3(27.3%) in addition to the above symptoms around the genitals

Table 6 Reasons for not using condom at all or consistently among the study subjects Ambo University, Oromia region, Ethiopia February 2012

Variables	Frequency	Percent
Not available	78	46.7
Too expensive	5	3
Ashamed to buy	89	53.3
My partner objection	26	15.7
Use other method	25	14.9
Religious prohibition	10	5.9
Other reasons	11	6.5

Other=trusting their boy friend and low satisfaction

Table 7 Association of selected Sociodemographic variables with pre-marital sex among the respondents, Ambo University, Oromia region, Ethiopia, February 2012

Variables	Pre-marital sex		COR (95% CI)	AOR (95% CI)
	Yes	No		
Age	28	101	1	1
<20	121	363	1.20(0.75-1.92)	0.65(0.34-1.22)
20-24	18	17	3.395(1.524-7.56)	2.31(0.74-7.19)
>=25				
Year of study				
First year	57	173	1	
Second year	39	168	0.71(0.45-1.12)	0.67(0.37-1.21)
Third year	65	122	1.62(1.06-2.47)	1.03(0.56-1.89)
Forth year	6	20	0.91(0.35-2.38)	0.85(0.24-2.97)
Discussion with parents				
Yes	88	429	1	1
No	79	54	7.13(4.71-10.80)	7.162(4.39-11.68)*
Chew chat				
Yes	41	8	19.32(8.83-42.26	11.18(4.39-28.48)*
No	126	475	1	1
Drink alcohol				
Never drunk	94	432	1	1
Rarely	57	45	5.82(3.71-9.13)	3.70(2.04-6.73)*
Some times	16	6	11.49(4.34-30.39)	5.26(1.51-18.33)
Pocket money				
Yes	87	292	1	1
No	80	191	1.406(0.987-2.003)	1.584(0.991-2.530)

NB * implies statistical significance

Premarital sexual practice was associated with discussing sex and sex related issues with family and use of substances like chat and alcohol consumption

Those who discuss sex and sex related issues with their fathers were less likely to practice premarital sex than those who not. (AOR: 7.16; 95% CI 4.39-11.68). Similarly chewing chat and alcohol consumptions are strongly associated with practicing premarital sex (AOR: 11.18; 95%CI 4.39-28.48) and (AOR: 3.70; 95% CI 2.04-6.73) respectively"

Table 8 Association of selected sexual history variables with pre-marital sex among the respondents Ambo University, Oromia region, Ethiopia, February 2012.

Variables	**Pre-marital sex**		**COR(95% CI)**	**AOR(95% CI)**
Have partner	**Yes**	**No**		
Yes	119	241	2.49(1.70-3.64)	4.57(2.12-9.84)*
No	48	242	1	1
Symptoms of STIs				
Yes	61	14	9.28(10.39-35.76)	16.34(5.56-47.99)*
No	106	469	1	1
Attend romantic video/film				
Yes	155	247	14.30(8.71-23.47)	9.95(7.69-49.87)*
No	12	236	1	1
Information about STIs				
Yes	143	375	1.716(1.059-2.780)	0.839(0.103-1.47)
No	24	108	1	1
Screening for HIV				
Yes	84	285	1	
No	83	198	1.422(0.99-2.02)	5.24(0.01-17.26)
Screening result				
Negative	81	278	1	1
Positive	3	50	3.76(0.74-18.99)	5.24(0.55-49.71)

NB * implies statistical significance

Premarital sexual practice is associated with having a sexual partner, those who had sexual partners were high likely to practice premarital sex than those who haven't *(AOR: 4.57; 95% CI 2.121-9.841)*. Similarly those respondents who had symptoms of sexually transmitted diseases were more likely to engage in premarital sex compared to those who had no symptoms of sexually transmitted diseases *(AOR:16.34;95% CI 5.56-47.99)*.

Forty-eight (28.7%) of the respondents had history of sexual intercourse with non regular partner.

From the total of 167(25.7%) sexually active respondents almost all 155(92.8%) of the respondents had history of attending romantic films and other entertainment program. Those who haven't history of attending romantic films and other entertainment program were less likely to practice premarital sex than those who were attending those programs {AOR: 9.95; 95% CI 7.69-49.87) (Table 8)

5.3 Consequences of premarital sex among the respondents

A total of 28(16.8%) respondent were reported history of pregnancy and 15(53.6%) of the pregnancy was resulted in abortion. From the total respondents who had history of abortion about five respondents 5(33.3%) went to traditional healers for abortion.

Similarly a total of 75(11.5%) respondents reported history of sign and symptoms of sexually transmitted diseases and majority are those who were sexually active 61(81.3%).

Majority of the respondents screened for HIV 285(77.2%) were those who didn't engaged in premarital sex.

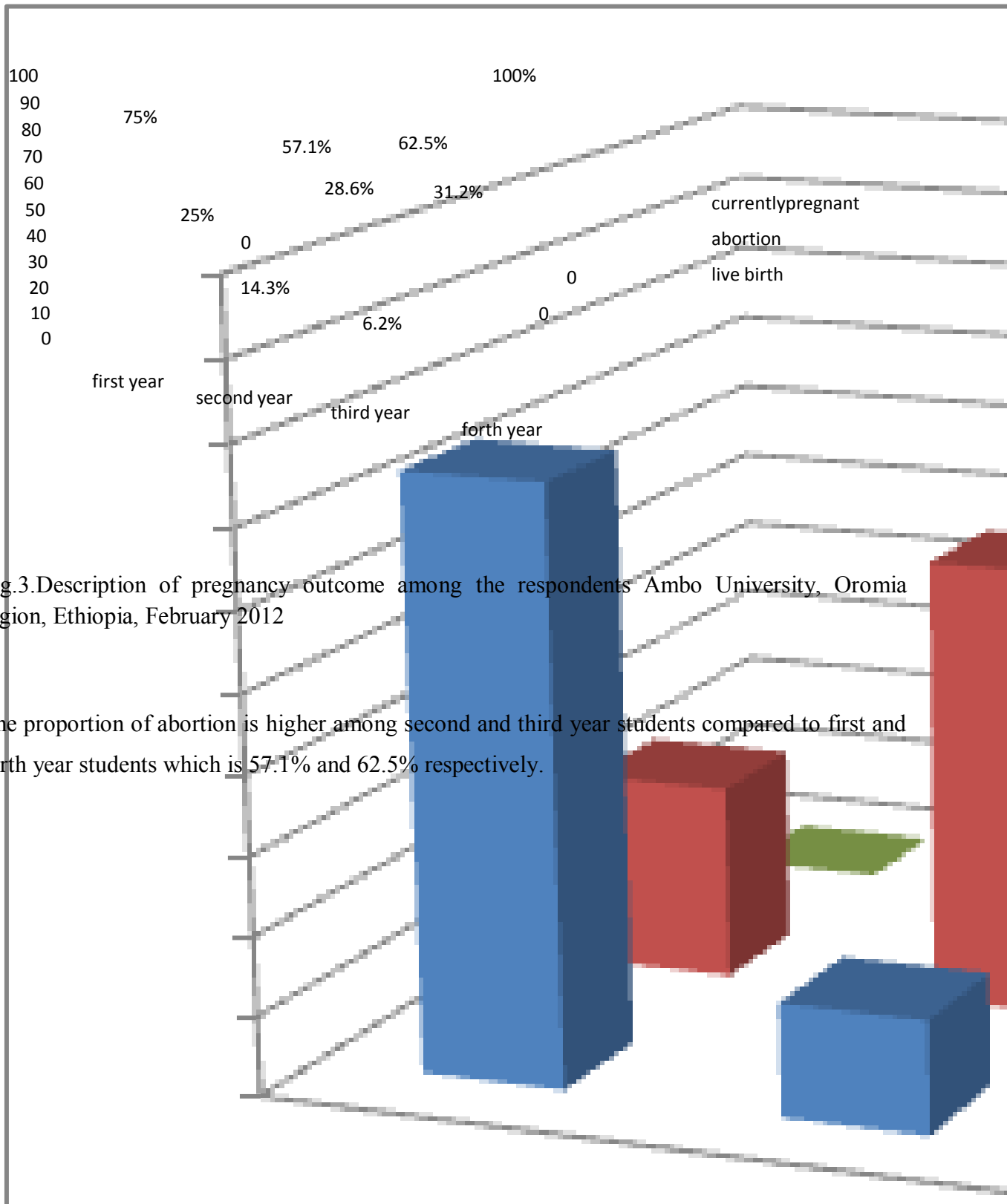

Fig.3.Description of pregnancy outcome among the respondents Ambo University, Oromia region, Ethiopia, February 2012

The proportion of abortion is higher among second and third year students compared to first and forth year students which is 57.1% and 62.5% respectively.

II Qualitative findings

A total of 32 participants were involved in the discussion from three institutions. A total of eight students and eight teachers from Ambo University were involved in the FGDs. Similarly 8 participants from Ambo hospital and Ambo health center had also included in the discussion yielding a total of 16 health professionals who had participated in the discussion.
The mean age of the discussion participants was 26.7±3.2 years.

A Total of four FGDs was conduct having 8 participants each to supplement the quantitative survey in the study area.

The first two FGDs were conducted at the health institution while the rest were at the University among teachers and students.

Table 9 Summary of Qualitative Data Analysis (Content analysis)

Theme	**Civilization**	**Practice of premarital sex**	**Why premarital sex practiced**	**Consequences**
Categories.	Civilization	Prevalence	Factors related with premarital sex	Consequences
Codes	No shame Media Fashion	More than expected Teenagers High school students	Peer influence Romantic films Lack of many Restrictive Being away Alcohol	Unsafe Diseases Education Street life Unsterilized

Practices of pre-marital sex

Almost all discussants were said premarital sex was very prevalent being practiced by almost all female students in the University irrespective of the Societies culture.

A discussant from the department of voluntary and counseling service of Ambo health center said

—…Last week a first year female student came to my office and started to cry… I asked her what happened to you? She is again crying …. She said it is my second week since I joined Ambo University but I was made dis vergin this week and wants to be tested for pregnancy and HIV"

Despite of our culture premarital sex is becoming common even among elementary students.

—…One day a grade seven female student came to our facility. As soon as I seen her I started to search for her mother or father with whom she came but, nothing is around her and I asked her; with whom you are or whom you are waiting for? She said no one, I am alone. So what shall I help you baby? She said a fourth year Ambo University student disvirg me. She came to be tested for pregnancy."

Why pre-marital sex practiced?

The participants agreed that discussing about sex and sex related issues with family radically decreases its practice, being informed about the consequence of premarital sex. They further explained very restrictive and monarchial families are not good.

"A 20 years old first year female student said "We human beings are naturally very eager to see or practice what we are ought not to do or prohibited to see……"

Only one respondent said I don‘t think discussing the sexual issues with family decreases the practice of premarital sex. *“Many years back it is taboo to rise about sex around your family when the practice is almost null but now people are discussing about sex with their family and the practice is so high… it is controversial”*

Peer pressure and fell in love were also raised as a reason for the first sexual initiation.

Majority of the discussants said peers are more influential both to practice and not to practice premarital sex and substance use.

–One of the participants said I may practice something not good for me instead of missing my lovely friend assuming that my friend doesn't encourage me to practice something which halts me.”

They further explained economy also plays a substantial role for University female students to be engaged in premarital sex. The discussant said majority of the students don‘t have their own income and waiting for their families hand monthly. It is known that money is power full and has a potential to change the decision and there are females who practice premarital sex in order to get money.

The discussants said *“Substance use, especially alcohol consumption and chat chewing radically increases the likely hood of engaging in premarital sex. When you drink you will lose your control over sexual activities and your decision making will be greatly violated”*

Almost all participants said dressing style of the female are one of the most triggering factors for the initiation of premarital sex.

–One university teacher said your external dressing style is an indirect expression of your internal interest. Look people wear a black cloth when ever his/her relatives dead expressing his/her internal sadness the same is true for others.

Consequences of pre-marital sex

Here it is not only the problem of sexually transmitted diseases but also the problem of unwanted pregnancy is becoming a great problem because of unprotected sexual practice.

Majority do not use condom or other contraceptives where as those who are using also misusing. For example the discussants explained as, many University students came to health facility complaining condom sleep over.

The risk of unwanted pregnancy is another disastrous consequence of premarital sex

They further explained that the practice was usually unprotected and many girls get pregnancy and sexually transmitted diseases which leads them to be a burden and dependent on their family.

One participant from the department of maternal and child health said of Ambo health center said:

–This year still now about 25 female students from Ambo University came to our facility for a pregnancy test and 11 students get a positive result. Two of them referred to Marie stops clinic for abortion because it cannot be managed at our facility."

A midwife professional from ambo hospital said one day I have been in ambo hospital for duty*:*

"The recent fashion was disposing the baby after giving birth anywhere. One girl gave birth in our hospital. Immediately after her discharge she threw her baby behind the hospital compound. The baby was eaten by rat partly and seen by the hospital guards. When we went there the baby was covered by the hospital blankets which assure delivery in our hospital. Finally the baby was died after few minutes....."

They further emphasized about the consequences of premarital sex. Almost all discussants agreed as premarital sex is risky and unnecessary. In addition to unwanted pregnancy and

sexually transmitted diseases, psychological consequence of premarital sex is also significant. *–Female had two big morals 1). A moral to be an educated person. 2). A moral to join happy marriage life. Once you started premarital sex both of your moral will be died and you left alone."*

–One University girl said I know an 18 years old high school student who already lost her virginity: she said "I truly regret that my first time was with a guy that I didn't care that much about him. I don't think that this guy is in love with me and I know deep down that I am not in love with him either. This makes me feel cheap and I realize now that this is a very big step in a Girl's life. After you have done it things are not the same. It changes everything.""

6. DISCUSSION

The period of young age generates considerable anxiety among adults as well as among young people themselves because of the challenges and risks that young people face as they experience sexual maturation and start interacting with the opposite sex. It is a period when, for the first time in their lives, young people have to make decisions on whether to be in a romantic relationship, what sort of person to be in a relationship with, whether to start having sex (if they are sexually active) whether and how to protect themselves against pregnancy, HIV and STIs. Adults providing care to a young people in various capacities ranging from parents, guardians, teachers, health providers, religious leaders, relatives, and program managers also grapple with similar challenges as they consider how to best assist them make voluntary, informed and responsible decisions. Adults have to consider the most appropriate age to provide adolescents with information about sexual health, the most effective means of doing so, and how to deal with the challenges associated with young peoples‘ initiation of sexual behavior.

In this study the proportion of sexually active respondents were 25.7% with the mean age at first sexual coitus being 16.9±2.7yrs. The percentage of premarital sexual activity seems to have increased in Ethiopia over the years. This can be due to rapid modernization and social changes in the country. However, the result of this study was lower compared to those of other countries 39% Nepal and 59% Kenya (8, 9). Similarly the findings of this study is lower compared to studies conducted in Addis Ababa and Dire Dawa among the school adolescents revealing the proportion of premarital sexual practice to be 33.3% in both settings (25).This might be because of the environmental factor and difference in cultural influences as this study was conducted among University female students..

Conversely this finding is higher compared to some other earlier local studies. For example study conducted among Jimma University revealed that 23.1% of female students had had experienced premarital sexual practice (24). Another study conducted in Bahir Dar also suggested the proportion of female students ever engaged in premarital sexual practice was 24% which is relatively consistent with the current finding. Another prior study conducted in Nekemte

town among the school adolescents also suggested the prevalence of premarital sex to be 21.3% which is lower than the current findings.

Finding from the FGDs also suggests that premarital sex is becoming common being practiced by almost all university students even by elementary students despite of our culture. One nurse from ambo health center said:

"One day a grade seven female student came to our facility. As soon as I saw her I started to search for her mother or somebody else with her…… she is alone and came to our facility for pregnancy test after having sex with one university student……"

About 1.8% of the respondents refused to participate in the study which might be because of the time of data collection period which is almost close to the final exam time so that students were get busy and tensioned.

The mean age at first sexual contact was 16.9±2.7 years, which is consistent with findings from EDHS 2011 revealing the median age at first sexual contact being 16.6 years. Age at first sexual intercourse is important in health terms, as it places young people in to a risk of unintended pregnancy and sexually transmitted diseases, including AIDS and these risks vary by age at onset of sexual activity. Younger ages at first intercourse were associated with higher odds of sexually-transmitted infection in comparison with older ages (14). This is low compared to other local studies with a mean age at first sexual contact being 18.1 years (24). Conversely significant proportion of the respondents 31(18.6%) had started sex before the age of 15 years. This might be because of early menarche which may be associated with improved in life style of the community recently even in the rural settings of the country and urbanization. Findings from the qualitative study also suggested similar findings with the above paragraph. A base line survey conducted by Family Guidance Association of Ethiopia in Harar revealed that 12.1% of females

got married for the first time before the age of 15 years and 36.4% of them got married at the age of 16-18 years(25) which has also a close agreement with this study findings.

Studies of female youths suggested that 2%-11% of Asian women have had sexual intercourse by the age of 18 years; 12%-44% of Latin American women by the age of 16 years; and 45%-52% of sub-Saharan African women by the age of 19 years. In developed countries, most young women have had sex prior to the age of 20 years – 67% in France, 79% in Great Britain, and 71% in the USA (14).

The proportion of sexually active young female in this study is high compared to the national prevalence of premarital sexual practice which is 19% (9).

Study in Malawi also suggested that the prevalence of premarital sex to be 26% which is consistent with this finding (6).

Similar to other recent local studies the source of information about sexually transmitted diseases is TV/Radio (31.2%) compared the previous studies conducted in Ethiopia revealing the common source of information about sexually transmitted diseases is community meeting (14). This might be because of increased urbanization and exposure to mass media. This finding is consistent with findings of the studies conducted in two Sub Saharan countries: Ghana and Burkina Faso but not with the studies done in another two sub Saharan countries: Malawi and Uganda which reported friends are a key source of information about sexually transmitted diseases for the young females(15)

The proportion of respondents chewing chat is found to be 7.9% which is low compared to other previous local studies conducted in Jimma University. This might be contributed by the fact that the difference in the study area which is in Jimma where there is high supply of chat (24).

Similarly Condom use is low compared to local and other countries studies revealing only 3% of the students used condom consistently while 7.2% used condom during their first sexual contact (6, 8, 25, 26). But, this finding is consistent with other prior local study revealing the proportion

of condom use among young women to be 2% (7). The main reason for not using condom at all or consistently is ashamed to buy 53.3% followed by unavailability 46.7%. This finding also has a close agreement with study conducted in Burkina Faso which reveals low condom use among young people. Many factors contribute for the non use of condom among them. In Burkina Faso if you use condom it implies you don‘t have a trust for your partner or you don‘t love your partner (33, 34). This is consistent with the current study findings including having unplanned sex is another contributing factor.

Finding from both qualitative and quantitative survey clearly suggests that discussing sex and related issues with family is very important to decrease the magnitude of premarital sexual practice. In addition substance use and watching romantic films were identified as the factors related with premarital sex. One hundred fifty five (44.8%) of the respondents who had history of attending romantic films had started sexual intercourse compared to only 12(3.9%) of those who hadn‘t history of attending romantic films but, had started sexual intercourse. This implies 92.8% of the sexually active respondents had history of attending romantic films.

This finding is consistent with local and other countries studies (5, 14, 25). Study conducted in Ghana and other Sub-Saharan African countries have shown that parent-child communication about sex-related matters is relatively uncommon, and is fraught with discomfort, especially communication with fathers. Eleven - thirteen evidence from Ghana on the relationship between family communication about sex and the sexual behavior of young people is decidedly weak. One study of 1998 nationally-representative survey data from Ghana of 12-24 year olds found that communication with family members about avoiding sex was negatively associated with ever having had sex for males and have no effect for females(20). Studies conducted in South Gondar among high school adolescents revealed that the prevalence of self reported STDs was 39.2% (25). In this study the proportion of self reported symptoms of STIs among the respondents were 11.5%, which is lower than the above results. But, the actual number may be higher as people may not so open in disclosing such issues because of related stigmas.

Finding from this study suggested that the proportion of sexually transmitted diseases among the study subject is associated with being sexually active or not. This finding is consistent with other prior studies conducted in Ethiopia and other countries (6, 15, 25).

In this study the proportion of self reported pregnancy is found to be 16.8% which is low compared to some other prior local studies. Majority of the pregnancy 53.6% was resulted in abortion which indicates that the pregnancy was unwanted. This is low compared to some prior local study conducted among high school adolescents revealing 30.5% of pregnancy of which 66.3% was resulted in abortion (25). This decrement in abortion might be because of the difference in the target population. Pregnancy is more or less unwanted if it was happened before the age of 15 years. On the other hand the current finding is high compared to the prevalence of abortion from the federal ministry of health report which is 5% among young people 15-24 years old (7). In this study the proportion of abortion is differ among year of studies being higher among second and third year students which is 51.1% and 62.7% respectively. This difference is because of the fact that first year students are still new for the environment and fourth years are more or less matured enough as they are graduating class and can manage themselves.
Findings from the qualitative study also suggested the magnitude of unwanted pregnancy were high. One participant from the Ambo hospital said —…*The recent fashion was disposing the baby after giving birth anywhere one University student did this in our hospital…how mother throw her baby…"*

Not only unwanted pregnancy but, also the risk of sexually transmitted diseases including HIV/AIDS is another problem of the young females. Voluntary counseling and testing (VCT) although encouraged has attracted few people, even though ongoing research suggests that most women and men support VCT (7). In this study the proportion of self reported respondents screened for HIV/AIDS were 56.8% among whom 95.3% had got a negative screening result while 1.6% had positive which is less than the national HIV prevalence among young women which is 11%(14). EDHS 2011 revealed a total of 38% of women age 15-49 ever tested for the HIV and 1.9% received a positive screening result which is higher compared to the current

findings. This might be because of the fact that this result is only self reported so that there may be under reporting the reality and the difference in the target population

The proportion the respondents under gone VCT were seems to be high compared to other prior local studies(7). This might be because of the two years consecutive VCT campaign conducted in Ambo University by Ambo health center in collaboration with other stake holders. This information was received from the FGDs participants from Ambo health center.

7. STRENGTH AND LIMITATIONS

7.1 Strength of the study

- The data collection tools were pre-tested and necessary modification was considered about the questionnaires.
- Another important strength of this study is the survey was supplemented with the qualitative data.
- Applying a random sampling technique to select a representative sample of the source population is one of the major strength of this study.

7.2 Limitation of the study

- Potential limitations of this study must be acknowledged. First, I acknowledge that because the study was classroom-based, we were only able to obtain the perspectives of those who had attended class on the day the survey was fielded; students who were not in the classroom were excluded and it is possible that their experiences were different from those who attended class.
- Second, young people in our sample may have underreported their romantic, physical and sexual experiences—a limitation observed in most studies of this nature.
- A third potential limitation is the cross-sectional nature of our study and the resulting inability to infer causation. Our study findings are suggestive, but cannot be interpreted as evidence of the determinants of sexual relations.
- Inability to collect data from the Ambo town Family Guidance Association(FGA)

8. CONCLUSIONS

This study has revealed that significant number of University females had started sexual intercourse very early, and involved in high-risk sexual practice including sex with non regular partner 48(28.7%) and non use of condom. Moreover, significant number of sexually active young females had history of sexually transmitted diseases and unwanted pregnancy.

It is true that sex and related issues are not openly discussed with the families and the communities. In this study significant proportion of the study subjects didn‘t talk sex and related issues with their families and access to accurate youth reproductive health is prohibited to significant number of the respondents.

Generally the major factors that influence the sexual behavior of young females to be engaged in premarital sexual practice are Substance use, social and cultural factors, peer of influence and lack of support from the families.

9. RECOMMONDATIONS

- The Ministry of Education should initiate family life time education program both as school and community based to increase the knowledge of the young people and families about premarital sex and related consequences.
- The Regional health bureaus have to start providing education for the community about the importance of discussing sex and related issues with their children so as to increase their awareness.
- Ambo University student clinic should strengthen the already existing services especially on VCT services and should establish link with nearby health institution emphasizing on unwanted pregnancy and unsafe abortion STIs including HIV/AIDS and VCT services.
- Public and private institutions should emphasize on the young peoples‘ need for the treatments of sexually transmitted diseases.
- Demonstration of appropriate condom use should also incorporated in the health education program given for young peoples.

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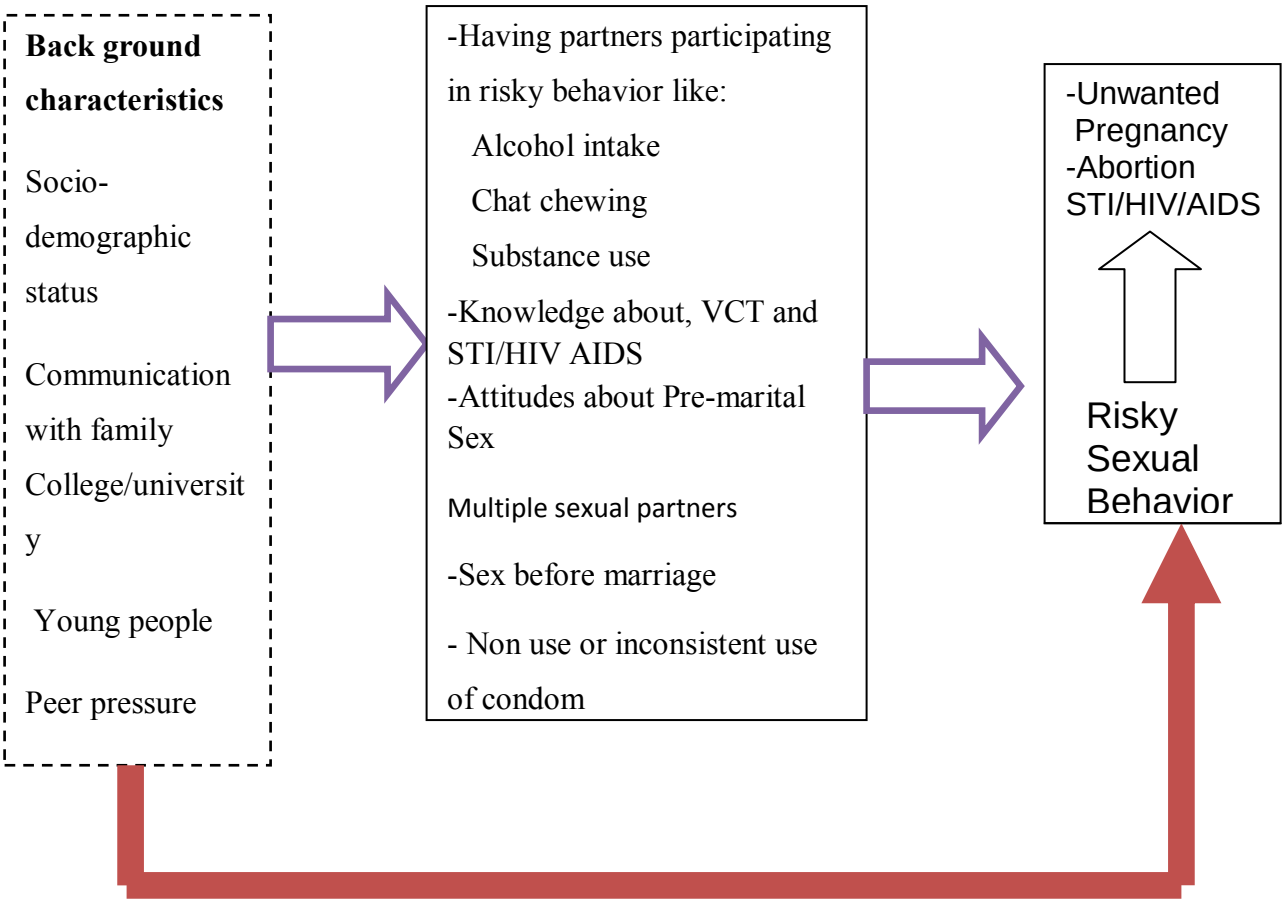
ANNEXES

I Conceptual frame work



II Questionnaire

Addis Ababa University School of Public Health College of Health Science Questionnaire for Assessment of premarital sexual practice

1. Information sheet

Dear student,

How are you? I am----------. I am working in Addis Ababa University College of Health Science research team. This study is proposed to assess pre-marital sexual practices and its consequences among University female students and you are selected to participate in this study just by chance. The following are some general information about the study.

Title of the study: Assessment of premarital sexual practice and its consequences among female students in Ambo University

Background of the study: Premarital sex is any sexual activity with an opposite sex partner or with a same sex partner before he/she has started a married life. The term is usually used to refer the intercourse before the legal age of a marriage. Premarital sex will lead to mental depression and dilemma. Another danger is possible exchange of diseases; as premarital partners may not be aware of diseases that spread through intercourses. Getting pregnant through premarital sex is another disaster.

. .

Objective of the study: To assess the magnitude of premarital sexual practice and its consequences among female students in Ambo University

Benefit of the study: There is no direct short term benefit for participants. However, it may use for policy makers to evaluate the findings and help them in designing possible intervention measures.

Risk of the study: This study has no risk for the participants.

Right of the participants: Your participation is voluntary and you are not obligate to answer any question you do not wish to answer. .

Confidentiality: Your name will not be written in this form and will never be used in connection with any information you tell us. All information given by you will be kept strictly confidential. If you don't want to participate you can leave the format on the table (upside down). But you are requested to remain on your seats until others finish filling the format. However, your honest answers to these questions will help us in better understanding of what people think, say and do about certain behaviors, so; we request your truthful and keen participation. Please take a few minutes to answer to the questions.

Would you willing to participate?

_____ Yes, I want to participate in the study (Please go to the next page).

_____ No, I don't participate in the study (Thank you very much!)

2. Informed consent

I have read this form or it has been read to me in the language I understand all conditions stated above. Therefore, I am willing to participate in this study.

Signature _____

Name of **PI**: Bayisa Abdissa

Address: Tell 09 13 39 56 33

E-mail bayoabdi@gmail.com

Signature _____ REC: AAU, Tell: 251-011553873

Name of witness _____

Signature _____

Result

1. Completed 2. Respondent is not available. 3. Refused 4.Partially completed

Checked by:

Supervisor Name----------signature----------Date---------

Part I Socio Demographic characteristics information

101	What is your age?	_____years	Skip to
102	What is your year of study?	1. Year I 3.Year III 2. Year II 4. Year IV	
103	What is your religion?	1. Protestant 2. Orthodox 3. Muslim 4. Wakefata 5. Other specify	
104	What is your Ethnicity?	1. Oromo 2. Amhara 3. Tigre 4. Wolayita 5. Other specify	Skip to
105	How do you perceive the economic status of your family?	1. Poor (<500 ETBr/mo 2. Medium(500-1500ETBr/mo) 3. Rich(>1500 ETBr/m	
106	Do you have income of your own?	1. Yes 2. No	

107	Do you have pocket money?	1. Yes 2. No	
	Part II History of substance use		
108	Do you chew chat?	1. Yes	
		2. No	**Q111**
109	If yes when did you start chat chewing?	1. In University 2. In high school 3. Other, specify_____	
110	If yes how often do you chew chat?	1. Rarely 2. Some times 3. Always 4. Other ,specify____	
111	Do you smoke cigarettes?	1. Have never smoked 2. Rarely 3. sometimes 4. smoke daily	

112	Do you drink alcoholic beverages, like Teji, Tella, Beer, Arake, & the likes?	1. Have never drunk 2. Drink rarely 3. Drink some times 4. Drink daily	
113		1. Yes 2. No	
114		1. Yes 2. No	

Part III Sexual history

115	Do you have sexual partner(s)?	**1.** Yes 2. No	
116	Have you ever had sexual intercourse?	1. Yes	**Skip to**
		2. No	**Q131**
117	If yes at what age did you first had sexual intercourse?	____years	

118	When did you start sex the first time?	1. In high school 2. In University 3. Other, specify____	
119	Have you ever been pregnant?	**1.** Yes	
		2. No	**Q128**
120	If yes when?	1. In university 2. In high school 3. Other ,specify___	
121	What was the outcome of the pregnancy?	**1.** Currently pregnant **2.** Abortion **3.** Live birth **4.** Live birth &abortion **5.** Other specify	
122	If the outcome is abortion was it induced?	1. Yes 2. No	

123	Where did you go for abortion?	1. TBA(Traditional birth attendants) 2. Public institution 3. Private institution 4. University clinic 5. Other specify	
124	Why do you prefer this Institution?	1. Cheap 2. Free services 3. Proximity 4. Confidentiality 5. Other specify	
125	Have you used condom the first time you had sexual intercourse?	1. Yes 2. No	
126	Did you always use condom?	1. Yes 2. No	

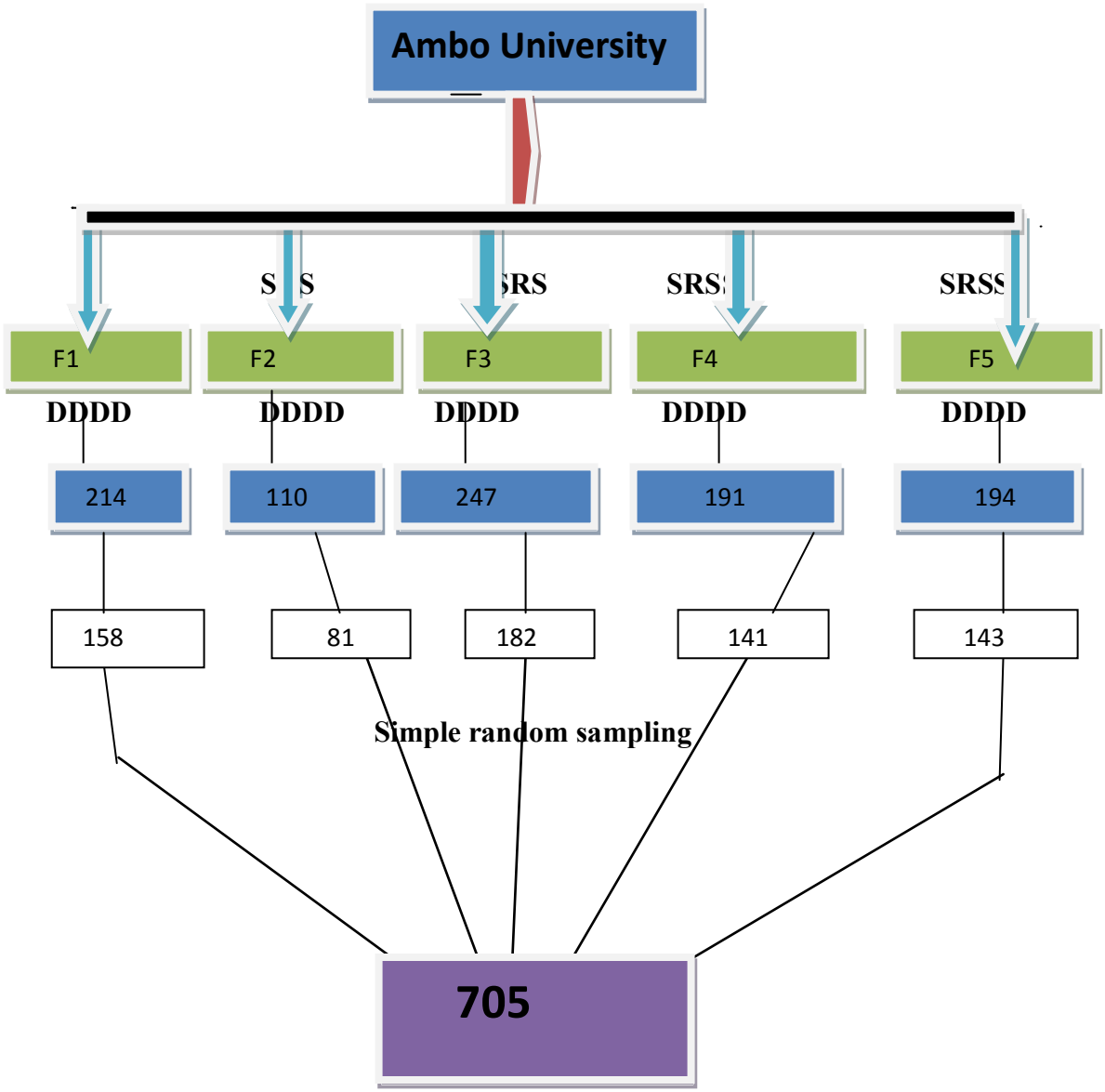
127	If you haven't used condom at all or haven't used it consistently what was the reason(s)?(Multiple answers are possible)	**1.** Not available **2.** Too expensive **3.** Ashamed to buy **4.** My partner objection **5.** Use other contraceptives **6.** My religion prohibits **7.** Other specify	
128	Did you discuss sex related issues with your father	1. Often 2. Occasionally 3. Never 4. Other specify	
129	How often did you discuss sex related issues with your mother?	1. Often 2. Occasionally 3. Never 4. Other specify	
130	Have you had symptom of STIs such as genital ulcer, abnormal genital discharge, & pain during urination?	1. Yes	**Skip to**
		2. No	**Q133**

134	If yes which symptom did you have?	1. Genital ulcer 2. Itching 3. Discharge 4. Pain during urination 5. Other, specify____	
131	If yes, whom did you first discuss the issue with?	1. My parent 2. My boy friend(s)/peers 3. University clinic workers 4. Other health workers 5. Traditional healers 6. Other specify	
132	If yes where did you go for the treatment? (More than one answers are possible)	1. Public health institution 2. Traditional healers 3. I bought some drug from pharmacy 4. Private clinics 5. University clinic 6. Local injectors	**Skip to**

		7. Other specify	
137	Could you tell me why you prefer to seek health care in this place? (More than one answer is possible)	1. Free treatment 2. Low cost treatment 3. Proximity 4. Confidentiality 5. Other specify	
133	Do you attend Video, movies or other entertainment programs?	1. Yes	
		2. No	
134	Did you or your partner use condom?	1. Yes 2. No	
135	If yes how often?	1. Always 3. Rarely 2. Usually 4. Other--	
136	Do you have any source of information about sexually transmitted disease?	1. Yes 2. No	**Skip to**

137	If yes who/which is/are your source of information?	1. My parent 2. My boyfriends/peers 3. Health institution 4. School 5. Religious leaders 6. News paper 7. Radio/TV 8. Other family member	
138	Did you ever go for HIV counseling and testing?	1. Yes 2. No 3. Don‘t know	

III Schematic representation of sampling procedures



D=Department

F= Faculty

Table 10 Faculties and departments of Ambo University selected for the study Feb. 2012.

	Faculties	**Departments**
F1	**Social Sciences & Humanities**	English, Afan Oromo, sociology & social work, Law, Civics and Ethical education
F2	**Natural and computational sciences**	Biology, Chemistry, physics, mathematics, physical education and statistics
F3	**Business and economics**	Management, Accounting, Economics, Marketing and purchasing
F4	**Technology**	Agricultural & bio-process Engineering, Civil Engineering, Computer science and Mechanical Engineering
F5	**Medicine and Public health**	Pharmacy, Health officer, Nursing and midwifery

IV Guide lines and questions for focus group discussion

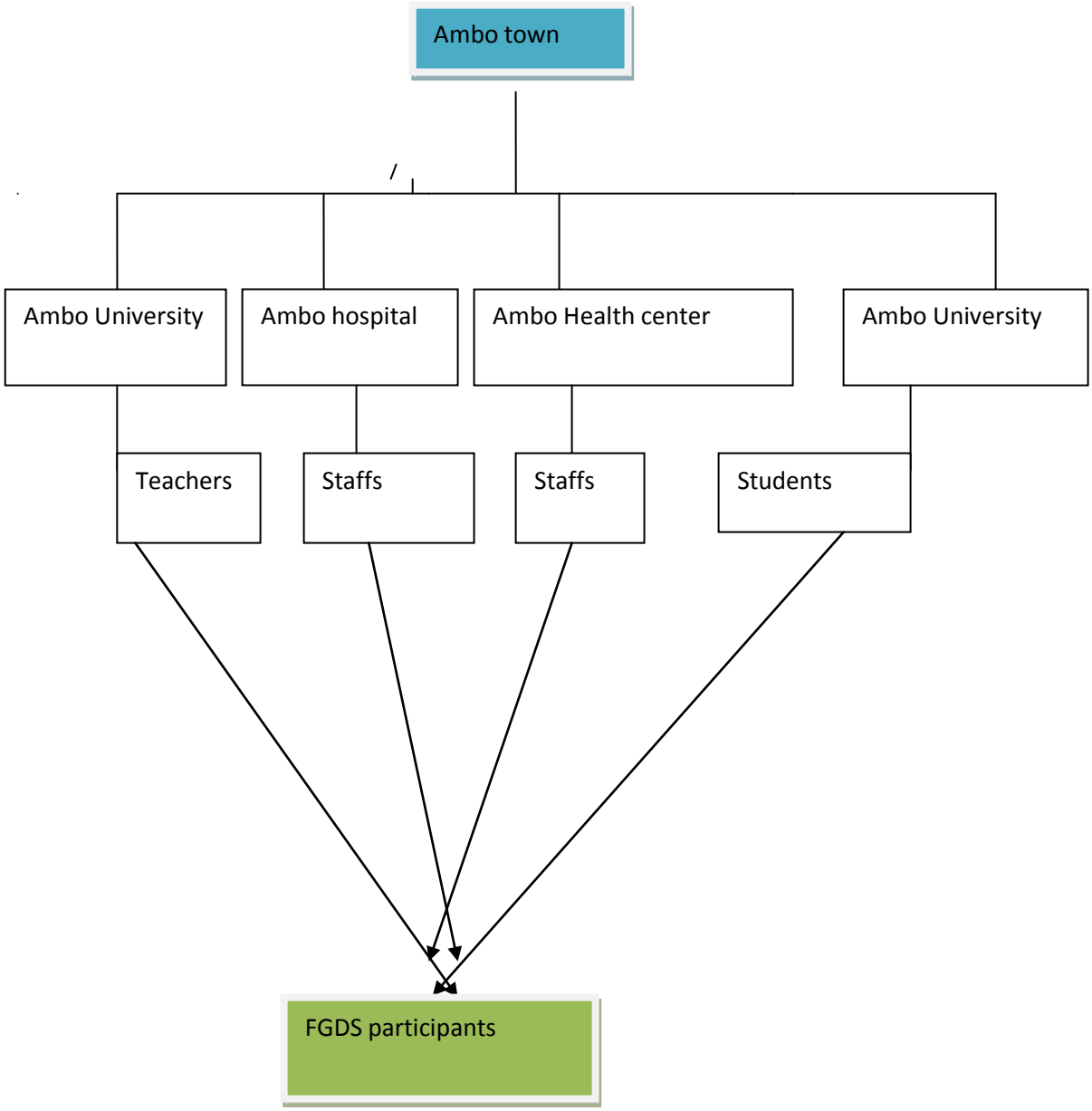
Hello, participant's good morning /afternoon. This discussion is going to be conducted for assessing the magnitude of premarital sex and its consequences among female students in Ambo University. We hope that the discussion we would have with you is very much useful to assess what people think and perceive about premarital sex and its consequences among female students in Ambo University and the whole our country. For this discussion I will raise some questions concerning premarital sex and its consequences then, will discuss the question. Before that I would like to thank for all of you voluntary participation.

Q_1. How do you see sexual behavior of female students in Ambo University?

Q_2. In your opinion, what do you think about the factors that predispose University female students to practice premarital sex?

Q_3. How do you perceive problems that female students might face as a result of premarital sex?

V schematic representation for FGDs



VI FGDs participants profile Feb.2012 Ambo

S. No	***Age***	***Code***	***Sex***	***Occupation***
1	*29*	*A*	*Female*	*Nurse*
2	*27*	*B*	*“*	*Nurse*
3	*25*	*C*	*“*	*Health officer*
4	*24*	*D*	*“*	*Midwife*
5	*40*	*E*	*“*	*Midwife*
6	*35*	*F*	*“*	*Nurse*
7	*23*	*G*	*“*	*Midwife*
8	*26*	*H*	*„*	*Health officer*
1	*28*	*H1*	*Male*	*Medical doctor*
2	*35*	*H2*	*“*	*Health officer*
3	*25*	*H3*	*“*	*Nurse*
4	*29*	*H4*	*“*	*Medical doctor*
5	*28*	*H5*	*“*	*Health officer*
6	*30*	*H6*	*“*	*Midwife*
7	*35*	*H7*	*“*	*Midwife*
8	*27*	*H8*	*“*	*Nurse*

S. No	***Age***	***Code***	***Sex***	***Occupation***
1	*21*	*As*	*Female*	*3rd year Student*
2	*20*	*Bs*	*“*	*2nd year student*
3	*19*	*Cs*	*“*	*1st year student*
4	*22*	*Ds*	*“*	*3rd year student*
5	*19*	*Es*	*“*	*1st year student*
6	*21*	*Fs*	*“*	*2nd year student*
7	*23*	*Gs*	*“*	*4th year student*
8	*24*	*Hs*	*“*	*“*
1	*28*	*At*	*Male*	*Teacher*
2	*27*	*Bt*	*“*	*“*
3	*30*	*Ct*	*“*	*“*
4	*26*	*Dt*	*“*	*“*
5	*26*	*Et*	*“*	*“*
6	*27*	*Ft*	*“*	*“*
7	*29*	*Gt*	*“*	*“*
8	*27*	*Ht*	*“*	*“*