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# Premarital Sexual Practices, Consequences and Associated Factors among Regular Undergraduate Female Students in Ambo University, Oromia Regional State, Central Ethiopia, 2015

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## Abstract

**Background:** Significant numbers of adolescents are involved in sexual activities at an early age which exposes them to the risk of unintended pregnancy, abortion and STIs. Even though, the reproductive health problem of young people is critical among both sexes, adolescent's girls are more affected because of their biological, economic and social vulnerability. Therefore, this study was designed to assess the prevalence, consequences and associated factors of premarital sex among female students in Ambo University.

**Methods and materials:** An institutional based cross-sectional study was conducted with qualitative inquiry from January to February 2015. Quantitative data were collected from 650 randomly selected female students in Ambo University using a pretested structured questionnaire. The qualitative data were generated through focus group discussions among purposely selected discussants. Odds ratio with 95% confidence interval was estimated using multivariable logistic regression to identify independent predictors of premarital sex while thematic framework analysis was employed for the qualitative data.

**Results:** About 90 (53.9%) of sexually active respondents reported that they started sex after joining the University. Twenty Eight (16.8%) of sexually active respondents have got pregnant prior to the study period and 15(53.6%) reported history of abortion. The proportion of respondents screened for HIV/AIDS were 56.8% and among this 1.6% had positive results. In the multivariate analysis students who didn't discussed sexual related issue with their parents [AOR: 7.16; 95% CI (4.39-11.68)], being alcohol consumer [AOR: 3.70; 95% CI (2.04-6.73)] and attending romantic videos/films [AOR: 9.95 (7.69-49.87)] were independent predictors of premarital sex.

**Conclusion:** Significant number of young females had started sex very early and involved in high risk sexual behavior without condom and family planning methods. These kinds of findings call for family life time education including parent-youth communication education.

**Keywords:** Premarital sex; Prevalence; Consequences; Factors; Female students; Ambo University

## Introduction

Sub Saharan Africa (SSA) is the most affected continent by acquired immune deficiency syndrome (AIDS) with nearly 22.5 million people living with AIDS out of the global 33.3 million 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]. According to Ethiopian demographic and health survey (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. 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.

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 three (34%) females became pregnant at least once before age 20. Even though, the reproductive health problem of young people is critical among both sexes: young girls are more affected because of their biological, economic and social vulnerability [7,9,10]. So, this study was designed to assess the prevalence, consequences and associated factors of premarital sex among female students in Ambo University.

## Materials and Methods

### Study setting

The study was conducted in Ambo University, Ambo town, the capital city of West Shoa zone of Oromia regional state, which is located 125 km from the capital city Addis Ababa. 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 volunteer counseling and testing (VCT) service. In addition there are one governmental hospital, two health centers, thirteen private clinics and one Human immune deficiency virus (HIV) prevention and counseling center in Ambo town.

### Study design and participants

An institutional based cross sectional quantitative study supplemented with qualitative inquiry was conducted among randomly selected regular female undergraduate university students in Ambo University, Ambo town from January to February 2015. The sample size for the quantitative study was determined using a single population proportion formula with the following assumption: Prevalence of pre-marital sex - 23% (24), margin of sampling error tolerated - 5% (0.05), critical value at 95% confidence interval of certainty (1.96), a design effect of 1.5 and 10% for non-response making the final sample size of 702 female students. For the qualitative approach 4 Focus Group Discussion (FGD) which contained 8 individuals in each group were conducted among purposely selected staffs from Ambo hospital, Ambo Health center, Ambo University teachers and Ambo University students.

The study participants were selected through a multi-stage random sampling technique. There were 7 faculties in Ambo University which provides different undergraduate programs. The sample size was proportionally allocated to the faculties based on the number of female students under each faculty. Each female undergraduate student were selected and interviewed by a computer generated simple random sampling technique from the respective faculties.

### Measurements

The quantitative data were collected using a pretested structured and self-administered questionnaire while the qualitative data were collected through focused group discussion among purposely selected health professionals, teachers and female students from the respective faculties. A structured self-administered questionnaire was used to collect data on the socio demographic characteristics, sources of information, HIV/AIDS screening, information about sexually transmitted diseases, sexual history and history of substance use.

Data collectors were given three day training on the questionnaires and interviewing techniques. The questionnaires were initially prepared in English and then have been translated into the local language, Afan Oromo and again it was translated back into English to check its consistency. The questionnaires were pre-tested before the actual data collection. Additional modifications were made to the questionnaire in terms of in terminologies and formatting based on the pretest findings. The supervisors checked each completed questionnaire and principal investigator monitored the overall quality of the data collection. Moderators for the FGD were given two day training on how to chair the discussion and other related issues. They had been moderated with help of a check list prepared by the investigators for this particular study.

In this study pre-marital sex is defined as sexual intercourse with an opposite sex partner before he/she has started a marriage life. Whereas risky sexual behavior is a sexual practice with multiple partners, alcohol intake before sex and inconsistent condom use during having sex while sexually active- those ever has sexual practice.

Quantitative data were cleaned, edited, and entered onto Epidata version 3.2.1 and exported to the statistical packages for social science (SPSS) version 20 statistical software for further analysis. Frequency distribution and cross tabulation were done against the variables of interest. Bivariate analyses were done to assess the association between explanatory variables and outcome variable of the study. All variables with a p-value of <0.3 at the bivariate analysis were included into multivariable logistic regression model in which odds ratio with 95% confidence intervals were estimated to identify independent predictors of exclusive breastfeeding. P-values less or equal to 0.05 were employed to declare the statistical significance. The qualitative data were analyzed through thematic framework analysis after summarizing the data into different thematic areas and the results were triangulated with the quantitative findings.

The study was cleared from the ethical review board of Addis Ababa University school of public Health. Official recognition and support was secured from the relevant organizations and departments. The interviewees have also been informed about the aim of the study. Additionally, written and verbal consent were secured from the study participants. Finally, confidentiality was ascertained by

justifying that no information was disclosed individually without the full willingness of the respondent.

## Results

**Table 1** Socio demographic characteristics of the respondents Ambo University, Oromia region, Ethiopia, February 2015 (n=650).

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

Six hundred fifty were involved in the study giving a response rate of 92.6%. Majority (73.7%) of the respondents were between 20-24 years of age while 135 (20.8%) were less than 20 years of age with a mean age of 20.9 ( $\pm$  2.1 SD) years. Similarly majority of the respondents 422 (64.9%) were from Oromo ethnic group. More than half of the respondents were Muslims 344 (52.8%) by their religion. Vast majority of the

participants were from first and second year constituting 230 (35.4%) and 207 (31.8%) respectively (**Table 1**).

## Sexual history of the respondents

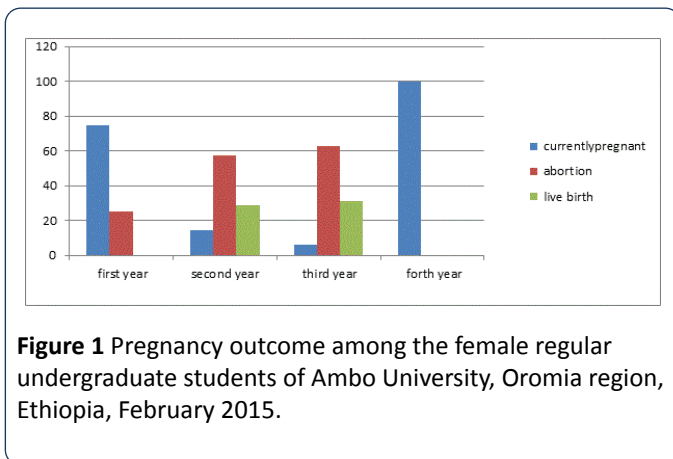
From the total respondents, more than half 360 (55.4%) had a regular sexual partner during a data collection period. One hundred sixty seven (25.7%) of the respondents were sexually active with a mean age at first sexual contact being  $16.9 \pm 2.7$  years. Thirty one (18.6%) of the respondents had 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 15-19 years. Majority 90 (53.9%) of the study participants have their first sexual intercourse after joining the University. From this only twelve (7.2%) of the respondents had used condom during their first sexual contact. 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 virgin this week and wants to be tested for pregnancy and HIV/AIDS".

Majority of the study subjects, 623 (80.9%) had never drink alcohol while 124 (19.1%) sometimes. A 24 years old 3rd year students from nursing department said that "Substance use, especially alcohol consumption and chat chewing radically increases the likelihood of engaging in premarital sex. When you drink you will lose your control over sexual activities and your decision making will be greatly violated".

Three hundred twelve (48%) of the respondents reported not discussing anything important to them with their father and mother. With regard to this "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...".

## Consequences of premarital sex among the respondents

Seventy five (11.5%) of the respondents had history of self-reported symptoms of sexually transmitted diseases (STDs). From the screened 369 (56.8%) respondents for HIV/AIDS, 352 (95.4%) had received a negative screening result while 6 (1.6%) and 11 (3%) had got positive and unknown screening result respectively. A total of 28 (16.8%) respondent were reported history of pregnancy and 15 (53.6%) of the pregnancy was resulted in abortion (**Figure 1**). A 36 years old female head nurse from Ambo town health center said that: "This year still now about 25 female students from Ambo University came to our facility for a pregnancy test and 11 students got a positive result. Two of them referred to Marie stops clinic for abortion because it cannot be managed at our facility." From the total respondents who had history of abortion about five respondents 5 (33.3%) went to traditional healers for abortion.



**Figure 1** Pregnancy outcome among the female regular undergraduate students of Ambo University, Oromia region, Ethiopia, February 2015.

In the multivariate analysis students who didn't discussed sexual related issue with their parents [AOR: 7.16; 95% CI (4.39-11.68)], being alcohol consumer [AOR: 3.70; 95% CI (2.04-6.73)] and attending romantic videos/films [AOR: 9.95 (7.69-49.87)] were independent predictors of premarital sex (Table 2).

## Discussion

This study attempted to determine the prevalence, consequences and associated factors of premarital sex among under graduate female regular students of Abmo University. The prevalence of premarital sex was 25.7% with the mean age at first sexual coitus being 16.9 ± 2.7 years. While self-reported pregnancy is found to be 16.8% and of which majority of the pregnancy 53.6% was resulted in abortion which indicates that the pregnancy was unwanted. In the multivariate analysis students who didn't discuss sexual related issue with their parents, being chat chewer, being heavy alcohol consumer and attending romantic video/film were the independent predictors of premarital sex.

In this study the proportion of sexually active respondents were 25.7% which is higher than the national prevalence 19% [9] but lower than from a study conducted in Nepal (39%), Kenya (59%) and Addis Ababa (33.3%) [8-25]. This difference might be due to difference in life style of students from different background and accessibility to different factors which put them at risk of having sexual intercourses. However it was comparable with a report from Malawi (26%), Bahir Dar (24%) and Jimma University (23.1%), and [6,22,24]. 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 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".

**Table 2** Bivariate and multivariate logistic regression analysis of factors associated with premarital sex among study participants in Ambo University, Oromia region, Ethiopia, February 2015.

Variables	Pre-marital Sex		COR (95% CI)	AOR (95% CI)
	Yes	No		
Age				
<20	28	101	1	1
20-24	121	363	1.20(0.75-1.92)	0.65(0.34-1.22)
≥25	18	17	3.395(1.524-7.56)	2.31(0.74-7.19)
Year of study				
First year	57	173	1	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)*
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)
Attend romantic video/film				
Yes	155	247	14.30 (8.71-23.47)	9.95 (7.69-49.87)*
No	12	236	1	1
N:B * Significantly associated (at P<0.05) COA: Crude Odds Ratio AOR: Adjusted Odds Ratio				

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 HIV/AIDS and these risks vary by age at onset of sexual activity. 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 [26-34]. This is low compared to other local studies with a mean age at first sexual contact being 18.1 years [24]. However is comparable with a base line survey conducted by Family Guidance Association of Ethiopia in Harar town 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. 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 as well due to rapid urbanization.

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 but higher than the national figure (5%) among young people 15-24 years old [7]. Majority of the pregnancy 53.6% was resulted in abortion which indicates that the



pregnancy was unwanted. This was supported by the qualitative finding as well. One participant from the department of maternal and child health 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." 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 difference might be because of the difference in the studied population access for abortion services as well cultural barriers.

Condom use is low compared to local and other countries studies revealing that only 3% of the students used condom consistently while 7.2% used condom during their first sexual contact [6,8,25,26]. However, this finding is comparable 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 [12] which reveals low condom use among young people was low due to fear of buying condom. This indicates that lack of adequate knowledge about reproductive health risks which have grave consequences, including HIV/AIDS, STI, unwanted pregnancy, abortion and its complications.

In the multivariate analysis those students 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)] which is consistent with other study finding [5,14,25]. 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 had not 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 study found that those students who didn't discussed sexuality and reproductive health related issues with their families are more likely to engage in premarital sexual actives [AOR: 7.162 95% CI: (4.39-11.68)]. This finding is consistent with local and other international studies [5,12,14,25,35-39]. This finding is also supported by the qualitative result as a 20 years old first year female student said that "We human beings are naturally very eager to see or practice what we are ought not to do or prohibited to see..." Even though communication on sexuality is very important, a study conducted in Ethiopia [37] found that 70.3% of the sexually active females were had very low communication with parents on sexual related issues. This is because parents think that communication on the subject of sexual issue can encourage children to be sexually active at earlier ages [38]. Being discussing about sexuality and reproductive health issue might increases their knowledge of reproductive health risk reduction.

This study reported that consumption of alcohol was significantly associated with premarital sex [AOR=3.70, 95% CI:

(2.04-6.73)] which is comparable with others studies [35,36]. This finding also supported by the qualitative finding as; A 24 years old 3rd year students from nursing department said that "Substance use, especially alcohol consumption and chat chewing radically increases the likelihood of engaging in premarital sex. When you drink you will lose your control over sexual activities and your decision making will be greatly violated". The use of alcohol or other drugs has been proposed as a contributing factor to sexual risk-taking. Because alcohol and drugs are thought to interfere with judgment and decision-making, it has been suggested that their use in conjunction with sexual activity might increase the probability that risky behavior will occur. People who drink more heavily are more likely to have multiple partners and less likely to use condoms. Despite our efforts to maintain the validity of our data, this study had some limitation such social desirability bias and recall bias. Additionally the scope of our study which only addresses regular university students limits its generalizability to out university female youths and adolescents.

## Conclusion and Recommendation

This study has revealed that significant numbers of University females' students are engaged in premarital sexual intercourse very early, with risky situation (non-regular partner, after taking alcohol and non-use of condom) and suffer from its consequences (unwanted pregnancy, abortion STI, HIV/AIDS). Poor communication with parents on sexual and reproductive health issues, attending romantic videos/films and alcohol consumption were independent predictors of premarital sexual intercourse among female university students. Therefore, health information dissemination on sexuality and reproductive health to break the deep rooted believes and traditions should be strengthening so as to bring behavioral change among the families. As well students should be aware about high risk sexual behavior through school based clubs and other accessible Medias. Further analytical study design should be done to identify incidence and risk of premarital sexual intercourse among out-school youths and adolescent girls.

## Competing Interests

We authors declare that we have no competing interests regarding the publication of the paper.

## Authors' Contribution

Bayisa Abdisa conceived and designed the study, performed analysis and interpretation of data and drafted the first manuscript. Wubareg Seifu and Mesfin Addisie participated in critical review of the subsequent draft of the manuscript. All authors read and approved the final manuscript for publication.

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