

# Assessment of Early Sexual Initiation and Associated Factors among Ambo University Undergraduate Students, Ambo, Ethiopia

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## Abstract

**Background:** Early sexual initiation increases the risk of HIV infection and other sexually transmitted diseases. The majority of students in higher Institutions are single, young adults who easily fall prey to excitement coupled with the liberal nature of campus life that predisposes them to high risk sexual behaviour. The aimed of study was to determine the prevalence of early sexual initiation and associated factors among Ambo University undergraduate students in Ambo, Ethiopia.

**Result:** The prevalence of early sexual initiation among Ambo University undergraduate regular students were determined, which showed that 67(20.4%) were initiated early sexual practice with 95%CI of (16.2 to 25.2%) with independent predictors of religion (Christian, AOR=14.66, 95%CI (1.77, 121.51) residence (urban) AOR=3.06, 95%CI (1.33, 7.02) and classmate friend AOR=21.83, 95%CI (2.65, 179.84).

**Methods:** A cross-sectional facility based study design was conducted from December to January 2015 at Ambo university undergraduate students. Simple random sampling technique was used to draw 392 sampled students. The study participants were selected by using simple random sampling computer generated technique by their ID number. A pre- tested structured questionnaire was used to collect data. Both bivariate and multivariate logistic regressions were used to identify associated factors and the result was presented using tables.

**Conclusion and recommendation:** The prevalence of early sexual initiation and associated factors among Ambo University undergraduate students were determined which revealed that 20.4% with independent predictors of religion (Christian), residence (urban) and classmate friend. Therefore, these factors would be better to considered during development youths reproductive health programs by police makers in collaboration with others responsible bodies.

**Keywords:** Early sexual initiation; Ambo University undergraduate students

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**Tel:** +251 11 236 2006

**Received:** January 09, 2016; **Accepted:** January 22, 2016; **Published:** January 29, 2016

## Introduction

### Background

Transition to sexual activity is an important event in the life stage of adolescence; however, youth in early adolescence have not yet made the physical, mental, and emotional developments necessary to make sensible decisions surrounding sexual activity [1]. Half of Nearly the global population is less than 25 years old

and 90% of them lives in developing countries. In Sub-Saharan Africa youths constitute 20- 30% of the population [2]. Early sexual debut (sexual intercourse before age 16) among adolescents has been observed as one of the myriad reproductive health problems faced by adolescents [3]. In addition to sexual-related outcomes; early sexual intercourse also is associated with other unhealthy behaviours including alcohol use, delinquency and violence [4]. Early sexual intercourse also affects intergenerational health through an association with unintended pregnancies. Children

who are born to adolescent mothers have a higher risk for a number of negative physical and emotional health outcomes [5]. These associations suggest an opportunity for prevention of important negative health outcomes, including teen pregnancy, sexually transmitted infections (STIs), and problem alcohol use, in adolescents and young adults [5]. Early sexual education for youth is important, however, successful interventions to delay age of sexual intercourse also need to incorporate positive youth development to empower them to make informed decisions about sexual activity [6]. Ethiopia is the second most populous nation in Africa. About 84% of the population lives in rural areas, and approximately one-fifth are aged 15-24 years [7]. Adolescent and youth sexual behaviour is the core of sexuality matters for the fact that it affects adult life negatively. Early onset of sexual intercourse is associated with increase lifetime prevalence of sexual partners, risk of exposure to sexually transmitted infections including HIV/AIDS and unwanted pregnancy [8]. According to 2011 EDHS, 29% of women had first sexual intercourse before age 15 years old and 62% of women before age 18 years old. The median age at first sexual intercourse for women and men is 16.6 and 21.2 years old, respectively. Men tend to initiate sexual activity later in life than women [9].

The study done among university undergraduate students on early sexual initiation and associated factors is very important, because of the fact that university students are many in number, live away from their parents and free from parental control. In addition, some are subjected to wide spread substance use and peer-pressure that aggravate the problem. Unplanned sexual activity and its outcomes elicit more social stigma and disapproval for girls than for boys.

The extent of early sexual initiation among University students are not studied specifically in Ambo University and also may vary by individual, social and demographic characteristics are not well understood. Therefore conducting of this study on assessment of early sexual initiation and associated factors among Ambo University regular students is mandatory.

## Methods and Materials

### Study setting

The study was conducted from April 15 to 24, 2015, in Ambo University main campus which found in Ambo Town, West Shoa Zone and Oromiya Regional State in western part of Ethiopia and 125 Kilo meters west of Addis Ababa. Ambo University is one of the pioneer Universities in Ethiopia offering multidisciplinary fields of study in post graduate, under graduate and continuous education program. It has 4 campuses including the main campus. The regular students who learn in Ambo University are 9904 in which the number of male students is 3187 and the number of female students was 6717. There were 9 faculties and 38 departments under the university in academic year of 2015 GC.

### Study design

A facility based cross-sectional study design with quantitative data collection methods was employed. The study inclusion criteria were having attended for at least 1<sup>st</sup> year, regular students

of the academic year 2015 in main and Awaro campus of Ambo University and availability of Ambo University ID card and willingness to consent for participation in the study.

**Sampling procedure and sample size determination:** Sample size was determined by using the proportion of early sexual initiation among Haramaya University was 39.6% with a confidence level of 95% and marginal error of 5%. By considering 5% non-response rate, the final sample size was 373.

A list of regular undergraduate students of main and Awaro campus were prepared and entered into computer SPSS window 16.0 version from office of registrar then, selected by simple random sampling technique by proportionally allocated to each faculty. Five day (5 day) before data collection started the list of randomly selected students ID number was posted on notice boards and cafeteria for calling students for data collection at great hall and facilitators cross-check students' ID number with sampled ID number.

**Data collection procedures:** Data were collected by self-administered questionnaire by using structured, pre-tested English version questionnaire. The questionnaires were prepared in English. Five well trained diploma nurses were facilitated data collection and one BSC Nurse has supervised during data collection period. Data collection facilitators had cross-checked students' ID number with sampled ID number daily. The filled questionnaires were checked for consistencies and completeness daily by supervisor and principal investigators on the spot. Pre-test of the questionnaire were done on 5% of the sample size on Woliso campus which is nearby to Ambo University main campus, to identify any ambiguity, consistency and acceptability of questionnaire, and then necessary corrections were made before the actual data collection.

**Data processing and analysis:** After data collection, each questionnaire was checked for completeness, edited, cleaned missed values and missed variables and data were analyzed by using SPSS software version 16 to provide frequencies and percentages for categorical variables and means and standard deviations for numerical variables and multivariate logistic regression (stepwise backward likelihood ratio method) was conducted to analyze factors that were associated with early sexual initiation. P-value of less than 0.05 will be considered to add the variables in the equations in the process of stepwise model at 95% C.I (P-value<0.05). The data will be summarized and the adjusted odds ratios (AORs) estimated; and their corresponding 95% confidence intervals (95% CI) are computed. The result was presented using tables.

**Ethical consideration:** Ethical clearance letter is initially obtained from Ambo University research Ethical Committee. Then written consent was secured from student dean office which was provided to registrar office to get permission. Verbal informed consent for participation was obtained from each participant and the collected data were stored in a file, without the name of study participant and password protection of soft data and use of key and lock for hard copy data was employed to guarantee confidentiality.

## Results

### Socio Demographic characteristics of the study participants

The complete response rate was 87.9% (328/373).

Table 1 showed that, out of total 328 respondents the majority of them were male which account 198(60.4%) with the mean age of 22.18 years.

From total study participant about 171(52.1%) were came from/ lived in urban area and also most of the respondents were single which accounts about 272(82.9%) followed by married 51(15.5%) (Table 1).

The majority of the study participants 278(84.8%) were Christian, of which 173(52.7%) follow religion service daily followed by 155(47.3%) once per week and above and with regards to ethnicity almost more than half of 186(56.7%) respondents were Oromo followed by Amhara 99 (30.2%).

From total study participant about 258(78.7%) were natural science, of which 140(42.7%) were attend fourth year. The majority of the study participants 168(51.2%) had pocket money 200-500 Ethiopian birr, of which more than half of 302(92.1%) (Table 1).

### Sexual intercourse characteristics of study participants

The prevalence of early sexual initiation among Ambo University undergraduate regular students were determined, which showed that 67(20.4%) were initiated early sexual practice with 95%CI of (16.2 to 25.2%).

From out of total respondents more than half of which 181(55.2%) were started sexual practice after joined to University, more than half had sexual intercourse at age greater than 18 years 261(79.6%), while only 67(20.4%) had sexual intercourse at age less than 18 years old, with the mean age of started early sexual intercourse were 16 years and most of them were had sex with their boy/girlfriends 154 (47.0%).

The majority of the study participants had their sexual intercourse voluntarily 164(50.0%), of which 79(24.1%) were used condom.

From out of total respondents more than half of which 243 (74.1%) were know pornography and 191(57.8%) were seen pornography.

From total study participant about 115(35.1%) were drank alcohol and 53(16.2%) were chew chat, of which 35(10.7%) were chew chat more than two years.

This study revealed that about 255 (77.7%) study participants were had classmate friend, of which 179 (54.6%) have more than two classmate friends and about 96(29.3%) respondents were communicate about sexual intercourse with their friends and from those who were not communicated about sexual practice the main reason reported were cultural taboo 54% and shyness which account for 27.4% respectively.

This study revealed that all of the study participants were had

**Table1** Sociodemographic characteristics distribution of Ambo University regular students, Ambo Town Oromia, Ethiopia, 2015.

No	Variable category	Frequency(N)	PERCENT (%)	
1	Sex	198	60.4	
	Male	130	39.6	
	Female			
2	Age			
	18-21 yrs >21 yrs	54 274	16.5 83.5	
3	Residence			
	Urban Rural	171 157	52.1 47.9	
4	Marital status			
	Single Married Widow	272 51 5	82.9 15.5 1.5	
	Religion			
5	Christians Muslim	278 50	84.8 15.2	
	Religious service			
6	Daily Once in a week and above	173 155	52.7 47.3	
	Ethnicity			
7	Amara Tigre and Gurage Oromo	99 43 186	30.2 13.1 56.7	
	Faculty			
	8	Natural science social science	258 70	78.7 21.3
Attending year				
9	first year second year third year fourth year fifth year	52 26 102 140 8	15.9 7.9 31.1 42.7 2.4	
	Pocket money			
	10	<200 200-500 >500	35 168 125	10.7 51.2 38.1
		Living condition		
		11	Dormitory no dormitory	302 26
Mother educational status				
12	no formal education primary school secondary school higher education	145 103 30 50	44.2 31.4 9.1 15.2	
	Father educational status			
	13	no formal education primary school secondary school higher education	102 117 31 78	31.1 35.7 9.5 23.8
		Participant parent place of residence		
14		Urban Rural	171 157	52.1 47.9

parental control 328(87.9%), of which 61(18.6%) communicate about sexual intercourse with their parents.

Factors predicting early sexual initiation among Ambo University under graduate students from multivariable analysis:-

Associations found to be statistically significant in the bivariate analysis at a p-value <0.05 were included in the multivariable analysis to determine which factors best explained or predicted the early sexual initiation among Ambo University under graduate regular students by Using the multiple logistic regression analysis (**Table 2**), factors significantly predictive of early sexual initiation among Ambo University under graduate regular students were :Residence of the students came from Urban area were 3 times (1.330,7.017)more likely to had practiced early sexual initiation as compared to students from rural area (**Table 2**).

This study revealed that students belong to Christianity religion was 14.7 times (1.77, 121.51) more likely to had practiced early sexual initiation as compared to students from Muslim (**Table 2**).

Finally, students who had classmates were 21.8 times (2.65, 179.83) more likely to had started early sexual initiation as compared to students who had no class mate friends respectively (**Table 2**).

## Discussion

Early onset of sexual intercourse is associated with increase lifetime prevalence of sexual partners, risk of exposure to sexually transmitted infections including HIV/AIDS and unwanted pregnancy [8].

According to this finding the prevalence of early sexual initiation were 20.4%, this finding was similar with previous study conducted in Ghana 25% [10], lower than other studies conducted in Gonder university 56.1% , north east Ethiopia 51% and Haramaya university 39.6% [11,12]. The difference may be explained by the decrease in early marriage which was the main reason for early sexual initiation in rural youth and additionally by the decrease in cultural practice that increase early sexual practice and medial effect and role of organization that give health education on early sexual initiation in urban youth.

The mean age of early sexual initiation (16 years) in this study previous studies done in the 2005 Ethiopia behavioral surveillance survey result of in-school youths of students have sex before the age of 16 years old, in other hand slightly higher than other study conducted in Ghana 14.8 years [10,13]. The difference may be explained by the decrease in early marriage which was the main reason for early sexual initiation in rural youth.

Religion of respondents was associated with early sexual initiation; those respondents whose religion Christian were 15 times more

likely to start early sexual initiation as compared to Muslim [AOR= 14.66, 95%CI :( 1.77, 121.51)], this finding was not associated on previous studies. The main reason may be explained by the belief of the religion that enhances early marriage to protect their religion rules.

Parent place of respondents was associated with early sexual initiation; those had urban area parent started early sexual initiation three times more likely than those had rural area parents [AOR=3.06, 95%CI :( 1.33, 7.02)], this finding was not associated on previous studies. The main reason may be due to the advancement of technology that enhance watching pornographic video and substance use(chat, alcohol) which may increase the probability of engaged early sexual practice additionally alcohol statistically significant in the bivariate analysis at a p-value < 0.000 were included in the multivariable analysis it was not independent predictors on this study but it was found on other studies conducted in Bihar Dar private college, Gamo Gofa, Kenya and Ghana [10,14-16]. the difference may be due to small sample size and cultural taboo on alcohol use.

Classmate friend of respondents was associated with early sexual initiation; those had classmate friend had started early sexual initiation 22 times more likely than had not Classmate friend [AOR=21.83, 95%CI :( 2.65, 179.84)], this finding was similar with study conducted in Nigeria, Kenya. [17]. This is due to peer pressure. This study revealed that 58.4 were sexually active. Among the sexually active students, 24.1% ever used condom. Contact with commercial sex worker was reported by 1.2% students. This finding was similar with study conduct in Gonder University [11].

On this research by considering the main strength of this research lies in its computer generated random sampling strategy for data collection, and a set of reliability and validation rules were applied and all associated factors were taken after indication of significance in the "goodness of fit" for the models. Even though this study also had a few limitations:- This study was facility-based among University students, so that the results were not generalizable to the general population in the community and cause and effect relation was not assured because of cross-section study deign.

## Conclusion and Recommendation

The prevalence of early sexual initiation and associated factors among Ambo University undergraduate students were

**Table 2** Factors associated at multivariable analysis with early sexual initiation among Ambo University under graduate students in Ambo town.

Variable		Early sexual initiation		Odd ratio and 95%CI	
		<18 years	>18 years	PV	AOR
Residence	Urban	56(17.0%)	114(34.8%)	0.008	3.055(1.330,7.017)*
	rural	11(3.4%)	147(44.8%)		
Religion	Christian	66(20.1%)	212(64.6)	0.013	14.660(1.769,121.51)*
	Muslim	1(0.3%)	49(14.9%)		
Classmate friends	Yes	66(20.1%)	189(57.6%)	0.004	21.833(2.65,179.83)*
	No	1(0.3%)	72(22.0%)		
Age	18-21 years	0(0%)	54(16.5%)	0.997	1533174367.233(----)
	>21 years	67(20.4%)	207(63.1%)		

**Key:** \*\_ Those variables are significant by the multivariable analysis.

determined which revealed that 20.4% with independent predictors of religion (Christian), residence (urban) and classmate friend. This study revealed that 58.4 were sexually active. Among the sexually active students, 24.1% ever used condom. Contact with commercial sex worker was reported by 1.2% students.

As recommendation, it is important that:- Policy makers and health planners would be better to design programs and plans to increase the students' awareness about early sexual initiation by formal/informal education using the evidences by incorporated IEC/BCC materials which considering early sexual initiation delaying and its health impact on the students.

Federal ministry of Education (FMOE) would be better to design the strategy to control the use of substances like alcohol and khat which were found to be responsible for early sexual initiation in this study.

The finding suggests the need for communicating and supporting school students to help them make informed and safer decisions on their social and sexual behaviors.

Ambo University in collaboration with Federal ministry of Education would be better to give great emphasis design persistent and comprehensive health education to decrease early sexual initiation among regular students by religious leaders and Youth friendly centers.

Further both quantitative and qualitative study methods on large scale by including different Universities and long run consequences of for early sexual initiation health impacts were recommended for researchers.

Therefore, these factors would be better to considered during development youths reproductive health programs by police makers in collaboration with others responsible bodies.

## Competing Interests

The author(s) declare that they have no competing interests.

## Authors' Contributions

Mebrahtu G, Guta B, Mekuanint Y; Conceptualized the study, designed the study instrument and conducted the data analysis and wrote the first draft and final draft of the manuscript. Dereje Bayissa Approved the proposal with some revisions, participated in data analysis, revised subsequent drafts of the paper and involve in critical review of the manuscript. All authors read and approved the final manuscript.

## Acknowledgements

First of all we would like to thank almighty God to give us the wisdom and patience to conduct this research proposal. The authors are grateful to Ambo University College of health sciences department of Nursing for providing the opportunity to conduct this research proposal. We would like to thanks the study participants and data collectors' facilitators (Mekdes Habte, Matebe Tesfaye) for their willingness to take part in this study. Finally our sincere appreciation goes to our family relatives and friends for their moral and material support and encouragement throughout our study period.

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