Sexual initiation and associated factors among young women in West Shoa, Ambo Town, Ethiopia: a community-based cross-sectional study

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Abstract

Background: For physiological as well as behavioral reasons, sexual debut increases young individuals’ risk for infection with sexually transmitted infection including HIV. It is fundamental to recognize the factors related to sexual debut in a broader context for designing and implementing effective interventions targeting youth.

Methods: Community-based cross-sectional study was employed from January to May, 2013 among females of Ambo town. A multistage sampling technique was applied. The participants were selected using simple random sampling technique. Face to face interview using structured and pretested questionnaires were used to collect the data from the study participants. Bivariate and multivariate logistic regression analysis was used to determine the predictors of sexual initiation.

Results: Three hundred seventeen (49.9%) of the respondents have ever had sex. The mean age at first sexual initiation was 16.6 (SD ±2.3) years. Being in age group 20-24 [Adjusted Odds Ratio (AOR) & (95% CI) = 2.75 (1.74, 4.34)], Educational level [AOR& (95% CI) = 0.20 (0.08, 0.48)], being in school [AOR& (95% CI) = 0.19 (0.11, 0.33)], having paid job [AOR& (95% CI) = 2.20 (1.19, 4.07)], peer pressure [AOR& (95% CI) = 3.20 (2.08, 4.94)], alcohol consumption [AOR& (95% CI) = 2.17 (1.43, 3.28)], and pornographic materials [AOR& (95% CI) = 2.27 (1.43, 3.61)] had significant association with sexual initiation.

Conclusion: Substantial numbers of females had started sexual activity that might expose them to different reproductive health problems. In general age group, peer pressure, alcohol consumption and watching pornographic materials were found to be predictors for the sexual debut. Therefore, building life skills, establishing youth friendly clubs should be intensified.

Background

According to World Health Organization (WHO), youth is defined as an individual aged 15 to 24 years while adolescents are those aged 10 to 19 years and young people as those between the ages of 10 to 24 years old. Adolescence is a period of opportunity and risk when numerous young people practice critical and life-defining experiments such as their first sexual experience, marriage, pregnancy, and parenthood [1].

Worldwide, the youths aged 15 to 24 estimated for more than 1 billion people and the majority live in developing countries [2]. Youth represent slightly more than 20 % of Africa’s population.

In sub-Saharan Africa, coital activity is not a new phenomenon. In recent, maturity occurs at earlier age, and the time for marriage is increased; due to this fact the practice of sexual activity occur before marriage. Sexual debut increases youths’ risk for infection with numerous reproductive health issues including sexually transmitted infection and HIV [3, 4].

Ethiopia is one of the most fascinating countries in sub-Saharan Africa where there are diverse cultures, traditions, social values and practices that has impact on
the sexual debut. Consequently, they become victims of reproductive health problems [5, 6].

Different literatures have demonstrated that the time of sexual initiation among female youths affected by socio-demographic factors and other factors such as pornographic materials, Khat and alcohol [7, 8]. Due to these effects, a substantial proportion of young people are engaged into sexual practice prematurely.

So far conducted studies demonstrated that the proportion of premarital sexual activity among 15–24 years young people in Oromia region was 31%, which is significantly higher than the national average (19%). However, factors that influence sexual initiation in Oromia youths have not yet been studied in detail [9].

Due to biological and cultural factors, girls are at a much greater risk at early ages than boys. In Ethiopia, young girls are more vulnerable to HIV than boys because of early age at sexual debut, early marriage, sexual abuse and violence such as rape and abduction [10]. Therefore, this study has been intended to determine the proportion of age at first sex and factors associated with sexual initiation among girls in the Ambo town.

Methods
Study design and study setting
Community-based cross-sectional study design was conducted among females in Ambo town from Jan. to May, 2013. Ambo town is the capital of West Shewa Zone, in Oromia regional state. The town located 114 km west of Addis Ababa and it has three kebeles. According to the town municipality, more than 67,514 populations live in the town in 2009 (2001 E.C) including the population of expansion areas; of which males accounts for 34,276 (49.8%) and females 33,238 (49.2%).

Study participants & sample size calculation
The respondents were all female youths in the age group of 15 to 24, who lawfully reside in the town at the time of the survey. The sample size was considered by assuming a 95% level of confidence interval, 0.05 margins of error, and with expected prevalence of sexual initiation among female youths 51% [2]. Finally, by considering a design effect of 1.5 and 10% of non-response rate, the final sample size was 675.

Sampling procedure
Finally, 675 respondents took part in the study. A multi-stage sampling procedure was employed. The town has three kebeles and two kebeles were selected by a lottery method. We then further subdivided these kebeles by Got (i.e village). From each Got/village, households were selected by simple random sampling, based on proportional allocation of the size of households in each Got or village and using the number of household as a sampling frame. The first households were selected from the town using the town’s house number registration by lottery method. In cases of selected household with more than one eligible study subject, only a single respondent was chosen by random method. In cases where no eligible respondent found in the chosen household, the data collectors have gone to the next household until they found an eligible subject.

Data collection & analysis
We adopted the questionnaire from Ethiopian Demographic Health Survey (EDHS) 2011 [6]. The questionnaire was used to elicit data from subjects on socio-demographic variables, sexual history, peer pressure, alcohol use, viewing pornographic materials which were independent variables in this study. The standardized questionnaire was first prepared in English. It was translated to Amharic and back to English again in order to maintain the validity of the instrument. Nine data collectors and one supervisor who were midwifery students from Ambo University, department of Midwifery were recruited. Data collectors and supervisors were trained for 1 day, before the pretest had been undertaken. To ensure the completeness and consistency of the collected data, supervisor and principal investigator had closely followed. Face to face interview using structured and pretested tool was used.

Epi Info Version 3.5.1 software was used to enter data. Then exported and analyzed using SPSS version 16.00. Descriptive statistical analysis with standard deviation was employed. To examine the potential predictors of sexual debut, bivariate and multivariate analysis was used. Variables which demonstrated p value less than 0.2 in the bivariate analysis were incorporated into multiple logistic regressions model for further analysis and p-values less than 0.05 indicated as statistically significance.

Ethical issues
Ethical clearance was obtained from School of Public Health, research ethical review committee of Addis Ababa University (AAU). Formal letter of support was written to Ambo town health office by School of Public Health, AAU. To participate in this study, a written consent was obtained from respondents above 18 years old and from the parents/guardians for those whose age less than 18 years old females; after informing the objectives of the study; the right to participate and not participate or to terminate the interview at any time was fully explained before data collection. Respondents were free to decline participation, and we made it sure that if they decide so far administered data will not be stored. Confidentiality was maintained by not mentioning their name on the questionnaire.
Results

Socio-demographic variables

Three hundred fifty one (55.3%) were found in age group of 15-19 years. The mean age was 16.6 years (SD = 2.3, age range: 10-24). Three hundred ninety seven (62.7%) were Oromo in ethnicity. Orthodox Christian followers (51.9%) were taken the lead in the study area. Regarding marital status of the respondents, 80.0% were singles or unmarried. Two hundred forty seven (38.9%) were preparatory and TEVT and 74.8% were attended in school at the time of the survey (Table 1).

Sexual history

Three hundred seventeen (49.9%) of the surveyed youths have ever had sex. The Mean & median age of sexual initiation in this study were 16.6 years (SD = 2.3) (Range 10–24 years). Three-fifth (60%) of the respondents was initiated sex before age of 18 years. The main reasons for engaging in first time sex were passionate love (30.7%), any substance use (25.7%), feeling maturity (18.7) and followed by desire for marriage (12.6%) (Table 2).

Peer influence

The role of peer pressure on sexual debut was observed in this study. Two hundred thirty one (36.4%) were responded that they had ever been encouraged by their friends to take part in sexual activities. Furthermore, 24.9% of respondents had been encountered pressure from their peers to have sexual intercourse more frequently (Table 3).

### Table 1 Socio-demographic characteristics of the respondents in Ambo, April 2013

| Variables          | Number | Percent (%) |
|--------------------|--------|-------------|
| Age group (years)  |        |             |
| 15–19              | 351    | 55.3        |
| 20–24              | 284    | 44.7        |
| Ethnicity          |        |             |
| Oromo              | 397    | 62.5        |
| Amhara             | 144    | 22.7        |
| Tigré              | 58     | 9.1         |
| Others             | 36     | 5.7         |
| Religion           |        |             |
| Orthodox           | 330    | 51.9        |
| Protestant         | 193    | 30.4        |
| Muslim             | 65     | 10.2        |
| Catholic           | 32     | 5.0         |
| Others             | 15     | 2.4         |
| Marital status     |        |             |
| Married            | 127    | 20.0        |
| Unmarried          | 508    | 80.0        |
| Education          |        |             |
| Primary school 1–8 | 112    | 17.6        |
| Secondary school 9–10 | 222  | 35.0        |
| Preparatory & TEVT | 247    | 38.9        |
| College & Above    | 54     | 8.5         |
| Currently in school|        |             |
| Yes                | 475    | 74.8        |
| No                 | 160    | 25.2        |

### Table 2 Reasons to start sex by respondents in Ambo town; Ethiopia; 2013

| Variables               | Number | Percent (%) |
|-------------------------|--------|-------------|
| Passionate love         | 195    | 30.7        |
| Any substance use       | 163    | 25.7        |
| Feeling maturity        | 124    | 18.7        |
| Desire for marriage     | 80     | 12.6        |
| Peer pressure           | 39     | 5.87        |
| Rape                    | 38     | 5.72        |
| Receiving gift          | 13     | 1.96        |
| Pornographic material   | 12     | 1.9         |

### Table 3 Peer pressure and non-sexual related behaviors regarding sexual debut among female youths in Ambo town; Ethiopia April 2013

| Variables                                    | Frequency | Percent |
|----------------------------------------------|-----------|---------|
| Had sex                                      |           |         |
| Yes                                          | 317       | 49.9    |
| No                                           | 318       | 50.1    |
| Peer pressure                                |           |         |
| Yes                                          | 231       | 36.4    |
| No                                           | 404       | 63.6    |
| Peers influence to have sexual intercourse   |           |         |
| Frequently                                   | 158       | 24.9    |
| Occasionally                                 | 243       | 38.3    |
| Not at all                                   | 234       | 36.8    |
| Used any substance                           |           |         |
| Yes                                          | 193       | 30.4    |
| No                                           | 442       | 69.6    |
| Drunk alcohol                                |           |         |
| Yes                                          | 299       | 47.1    |
| No                                           | 336       | 53.9    |
| Viewed Pornographic material                 |           |         |
| Yes                                          | 234       | 36.8    |
| No                                           | 401       | 64.2    |
Behaviors of non sexual related risks
One hundred ninety three (30.4%) have used substances. The most abused substance was Khat (94.6%). Respondents were also practiced other non sexual risk behaviors such as drinking alcohol 299 (47.1%), viewing pornographic materials 234 (36.2%).

Factors associated with sexual debut
Educational status, peer influence, age, any substance use, being in school, drinking alcohol and viewed pornographic materials had showed statistically significant ($p$-value < 0.05) association with sexual debut in bivariate logistic regression analyses. After controlling for potential confounding factors, logistic regression analysis showed that, those young women who chewed Khat were found to 1.3 times more likely to already have been engaged to sexual intercourse than those who did not consume Khat"). Furthermore, those who drank alcohol and viewing pornographic materials were found to 2.2 times and 2.3 times more likely to initiate sexual activities respectively (Table 4).

Discussion
We have found that 49.9% have ever had sex. The finding is similar to other studies conducted in different countries on sexual behavior among female youths. The mean age at first sexual debut was 16.6 ($\pm$SD = 2.3) years and this is comparable with other previous studies in Ethiopia [2, 11]. However, the mean year of sexual debut in this study is higher than previous studies conducted in Ethiopia, Ethiopian Demographic Health Survey (EDHS) 2016 (16.6 years), in Dessie, north east Ethiopia (16.8 years), in Kolladiba, north west Ethiopia (15 years), in Gojam, north west Ethiopia (13.5 years) and in Butajira, southern Ethiopia (16 years) [2, 12–14]. The difference might be due to the decrease in early marriage [15] and because of the recently endorsed family law [16].

We have found that 231 (36.4%) had ever been encouraged by their friends to practice sexual activities. Furthermore, 24.9% of respondents had been encountered pressure from their peers to have sexual intercourse regularly. Furthermore, logistic regression analysis also revealed that respondents’ external pressure lead to first

| Characteristics                | Sexual Initiation |                | Crude OR (95% CI) | Adjusted OR (95% CI) |
|-------------------------------|-------------------|----------------|-------------------|----------------------|
|                               | Yes               | No             |                   |                      |
| Age group (years)             |                   |                |                   |                      |
| 15–19                         | 104 (33.7)        | 236 (72.4)     | 1.00              | 1.00                 |
| 20–24                         | 205 (66.3)        | 90 (27.6)      | 5.17 (3.68, 7.25) | 2.75 (1.74, 4.34)    |
| Education                     |                   |                |                   |                      |
| Primary school 1–8             | 77 (24.9)         | 105 (32.2)     | 0.15 (0.06, 0.31) | 0.25 (0.10, 0.62)    |
| Secondary school 9–10          | 94 (30.4)         | 128 (39.3)     | 0.14 (0.06, 0.31) | 0.20 (0.08, 0.48)    |
| Preparatory & TEVT             | 93 (30.1)         | 84 (25.8)      | 0.22 (0.10, 0.48) | 0.30 (0.12, 0.73)    |
| College & Above               | 45 (14.6)         | 9 (2.8)        | 1.00              | 1.00                 |
| Currently in school            |                   |                |                   |                      |
| Yes                           | 151 (48.9)        | 284 (87.1)     | 0.14 (0.09, 0.21) | 0.19 (0.11, 0.33)    |
| No                            | 158 (51.1)        | 42 (12.9)      | 1.00              | 1.00                 |
| Peer influence                 |                   |                |                   |                      |
| Yes                           | 163 (52.8)        | 86 (26.4)      | 2.92 (2.09, 4.08) | 3.20 (2.08, 4.94)    |
| No                            | 146 (47.2)        | 240 (73.6)     | 1.00              | 1.00                 |
| Used any substances            |                   |                |                   |                      |
| Yes                           | 98 (31.7)         | 73 (22.4)      | 10.1 (3.94, 25.89) | 1.30 (0.83, 2.06)    |
| No                            | 211 (68.3)        | 253 (77.6)     | 1.00              | 1.00                 |
| Drank alcohol                  |                   |                |                   |                      |
| Yes                           | 180 (58.3)        | 109 (33.4)     | 8.26 (5.25, 13.0) | 2.17 (1.43, 3.28)    |
| No                            | 129 (41.7)        | 217 (66.6)     | 1.00              | 1.00                 |
| Viewed pornographic materials |                   |                |                   |                      |
| Yes                           | 144 (46.6)        | 73 (22.4)      | 3.46 (2.43, 4.92) | 2.27 (1.43, 3.61)    |
| No                            | 165 (53.4)        | 253 (77.6)     | 1.00              | 1.00                 |

Significance: $p < 0.05$, 1.00: Reference category
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Availability of data and materials
The datasets generated and/or analysed during the current study are available in the Addis Ababa University repository, WEB LINK TO DATASETS: http://etd.aau.edu.et/bitstream/123456789/6222/1/Digafe%20new.pdf.

Authors' contributions
DIT was a principal investigator, was involved in proposal writing, designing the methodology, questionnaire, recruitment and training of data collectors and supervisors, analysis, write-up and in all stages of the project implementation including in development of the manuscript. AS involved in proposal development, designing the methodology, questionnaire design, and involved in final approval of the paper. SF and MTS involved in development of the manuscript. All authors read and approved the final manuscript.

Ethics approval and consent to participate
The School of Public Health, Addis Ababa University (AAU), research ethical review committee was approved the Ethical clearance. An official letter of support was obtained from Addis Ababa University. Then, a written consent obtained from respondents above 18 years old and from the parents/guardians for those whose age less than 18 years old females and the information were kept confidential.

Competing interests
The authors declare that they have no competing interests.

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