Magnitude of sexual debut and associated factors among high school girl students in Amhara region, North Western Ethiopia

Aysesim Terfe1*, Seid Jibril2 and Madan Mohan Laddunuri3

1Department of Gender and Development Studies, University of Gondar, Gondar, Ethiopia
2Department of Sociology, University of Gondar, Gondar, Ethiopia
3India

ABSTRACT

The main purpose of the present study is to evaluate the magnitude and causes of early sexual debut among high school girl students in Gondar and Metema city administrations public schools in Amhara region, northwestern Ethiopia. A cross-sectional study carried out among high school girl students age between 15 to 19 years. A structured questionnaire used for collection of quantitative data from randomly selected 693 girl students. Data entered into SPSS version 16.0 for analysis purpose. Descriptive statistics and binary logistic regression used for quantify early sexual experience and associated factors. Odds ratios (OR) with 95% confidence intervals were also calculated. All statistical tests performed with two-tailed tests significant at p <0.05. Sexual experience among high school girls is 31.9%. Girls from the Gondar city (33.3%) had a greater number have sexual debut than girls from Meteme city (27.8 %). As far as birth place and sexual experience is concerned, urban born girls 1.8(OR=0.553, 95% CI: 0.937-1.011) times more likely have a sexual experience than rural born girls. Alcohol consumed girl students 3.64 (OR= 3.64, 95% CI: 1.596-8.311, P=0.002) times more likely to have a sexual experience than not alcohol consumed girls. Regarding chewing chat, girls who have a habit of chewing chat 2.99 (OR= 2.99, 95% CI: 1.375-6.516, P=0.006) is more likely to have a sexual experience as compared to non chat chewers. Girls who were pressured by Peer groups 2.348 (OR=2.348, 95% CI: 1.035–5.327) times more likely to have a sexual experience than others. The magnitude of sexual debut among late adolescent girl students in the study area is 31.9%. Drinking alcohols, chewing chat and peer pressure is the significant determinants of sexual debut among high school girls of Gondar and Metema towns.

Keywords: Sexual experience, school girls, magnitude, causes

Adolescent has been defined as “whose age between 10 to 19 years[1]. According to world population statistics, there were 1.2 billion adolescents worldwide and representing 18% of the total global population[2]. Most (88%) of the adolescent population constitute from the developing countries[2]. As far as Sub-Saharan Africa concern adolescents population make up highest with
23% among all regions of the world\textsuperscript{[3]}. In the case of Ethiopia adolescents population is 26.1% of the total population\textsuperscript{[4]}. Sexual debut during adolescence makes adolescents vulnerable to sexual and reproductive health problems including early pregnancy, unsafe abortion, sexually transmitted infections (STI) including HIV, and sexual coercion and violence and multiple sexual partners\textsuperscript{[5,6]}. Condom prevalence inconsistent on each sexual intercourse among adolescents\textsuperscript{[7,8]}. In addition, the adolescents don’t get sufficient information and services on reproductive health. If services are available and accessible they don’t use them\textsuperscript{[9]}. Among adolescents, especially Girls are at greater risk at early ages due to both biological and socio-cultural factors. Especially adolescent girls in Ethiopia are more in danger to HIV than boys. The reasons beyond are sexual debut at early age, early marriage, sexual abuse and sexual violence, including rape and abduction among young girls\textsuperscript{[10]}. Many adolescents face different pressures to make use of alcohol, chewing chat or other drugs and to start sexual relationships at earlier ages\textsuperscript{[11]}. The major factors associated with early sexual initiation have been identified as poverty, exposure to mass media, as well as the changes taking place in the traditional family\textsuperscript{[12]}. Watching films found significant predictors of school adolescent premarital sexual activities\textsuperscript{[13]}. Moreover studies done in Ethiopia shows that alcohol, Peer pressure and khat use are the major causes of premarital sexual initiation\textsuperscript{[14,17,21,18, 19,20]}

**Methodology of the Study**

**Study setting and design**

A cross-sectional research design employed to evaluate the magnitude and Causes of early Sexual Experience among High school Girls of Gondar and Metema city administration, Public Schools. This study was conducted in some selected schools from Gondar town namely FasILEDes secondary and preparatory school and Angerebe secondary and preparatory schools and from Metema city administration, Metema secondary and preparatory school. These two Gondar and Metema cities are in North Gondar zone, Amhara region state, which is in northwestern part of Ethiopia. Amhara regional state is one of the regions among 11 regional states in Ethiopia. Metema woreda is located about 900 km from Addis Ababa capital city of Ethiopia and border with Sudan. And Gondar is located 730 kms from Addis Ababa\textsuperscript{[15]}. The main reason to choose Gonder and Metema towns are high-risk zones of HIV/AIDS in the Hamara region. The levels of HIV/AIDS in both towns are among the towns record level high in the region, 15.9% for Metema and 10.3% for Gondar city administrations\textsuperscript{[16]}. Adolescent Students are the future of the nation hence researchers confine their research in two towns. Moreover, there is no clear cut-data available on both cities about magnitude and causes of early sexual debut on adolescent girls. Hence this research will try to fill thesis gaps. Therefore, the main purpose of present study is assessing the magnitude and causes of early sexual debut among high school girls in Gondar and Metema city administrations public schools.

**Population and Sample size**

Total high schools girls who are studying in Fasiledes, Angereb and Metema secondary and preparatory schools from grade 9\textsuperscript{th} to 12\textsuperscript{th} were taken as Population of the study. There were 3000 female students in Fasiledes and Angereb High school and 1100 in Metema High school. Hereafter, the total of the study population were 4100. When total population is less than 10,000 subjects following formula is most appropriate in deterring the size of the sample \[ n = \frac{N}{1+N(e)^2} \] \textsuperscript{[34]}. Where, \( n \) = sample size \( N \) = total population, \( e \) =degree of error. Hence the above formula applied to get sample size. A total of 693 sample size was determined by using this formula.

**Sampling procedure**

Multi stage Semi-purposive random sampling procedure used in acquiring sample from high schools of north Gondar Zone. In first stage, North Gondar Zone selected from eleven zones of Amhara Region which is one of the 11 Regional states in the country. Second stage involved in selection of Gondar and Metema woredas (districts)
purposely selected from 19 woredas (districts) from North Gondar Zone. Three secondary and preparatory schools selected randomly from both woredas (districts) in the third stage. In last stage, a total of 693 girl students were selected by using simple random sampling method from the three schools. Details wise, a total 506 girl students from Gondar wardea and 187 students from Metama wardea were elected by this method.

**Data Collection Instrument**

Closed ended structured questionnaire designed for the present study. It consists of 3 parts, the first part of the questioner consists of the demographic profile of the respondents and second part comprises items that measure the prevalence or magnitude of premarital sexual experience of the girls, whereas the third part dealt with the causes of premarital sexual experience.

**Data quality management and assurance**

The questionnaire prepared in English language based on the review of different literature and some adaptations from other prior researches to suit our objectives of the study and back translated into Amharic language where Amharic language is respondent’s mother tongue. The Amharic version of the item distributed to the respondents and translated again to English for analysis.

Pre-testing was performed before data collection for checking the, internal consistency of the items, weakness and ambiguity of the questionnaires. Ten respondents involved in testing of the questionnaires to prove its validity and reliability. A two day’s intensive training was given to remunerator who collected data from the field of the study. The overall data collection activity was supervised by the researchers.

**Data Analysis Procedure**

Data entered in to SPSS 16.0.1 Window version for the analysis. Data from sampling characteristics and magnitude analysed including descriptive statistics for percentage distribution. Moreover binary logistic regression model used to analyse the associations between dependent variable (pre-marital sexual experience) and independent variables like place of birth, peer pressure, alcohol consumption and chat and their categorical variables. Odds ratios (OR) with 95% confidence intervals were also calculated. All statistical tests performed with two-tailed tests significant at \( p < 0.05 \).

**Data Presentation**

This part deals with presentation of the results. Researcher classified the findings of the study into three sub-sections including sample characteristics, magnitude of sexual intercourse and causes of sexual intercourse among adolescent girl students in the study area.

**Ethical Considerations**

Ethical approval letter has been taken from the ethics review committee of University of Gonder (Rf gc/338/2015). Among ethical consideration measures: First, for the purpose of building trust and avoid suspicion among participants, the data collectors hired among their teachers. Secondly, pilot test conducted to bring amendments over sensitive and ethical related questions. Third, the respondents were orient about the objectives of study, obscurity, confidentiality and were requested to sign a consent form. Finally, serious considerations were taken to protect the respondents’ discretion and emotional states during report writing. The nature and purpose of the study explained to the respondents.

**RESULTS AND DISCUSSION**

**Sample Characteristics**

A sample of 693 girl students selected but 633 cases analyzed since some substantially incomplete questionnaires rejected. Sample characteristics include, the age group, place of birth, Educational level of the respondents (Table 1). The sample consists, the following characteristics, all respondents are found in the age category from 15-19 years old. In particular 19.2% are fifteen, 24.4% are sixteen, 26.8% are seventeen
20.8% are eighteen and the remaining 8.5% are nineteen. Regarding the place of birth of the respondents, majority (59.8%) of the respondent’s birth place was rural areas and remaining 40.1% of the respondent’s birth place was urban areas. The above table depicts the educational level of the respondents as below, 20% of the respondents are grade nine, 27% of the students are grade ten, 30% of the girl students are grade eleven and the reaming 22.9% the students are grade twelve.

### Table 1: Socio-demographic characteristics of the respondents (N=633)

<table>
<thead>
<tr>
<th>Variable</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age group</strong></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>122(19.2)</td>
</tr>
<tr>
<td>16</td>
<td>155(24.4)</td>
</tr>
<tr>
<td>17</td>
<td>170(26.8)</td>
</tr>
<tr>
<td>18</td>
<td>132(20.8)</td>
</tr>
<tr>
<td>19</td>
<td>54(8.5)</td>
</tr>
<tr>
<td><strong>Place of birth</strong></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>379(59.8)</td>
</tr>
<tr>
<td>Urban</td>
<td>254(40.1)</td>
</tr>
<tr>
<td><strong>Educational level</strong></td>
<td></td>
</tr>
<tr>
<td>Grade 9</td>
<td>127 (20.0)</td>
</tr>
<tr>
<td>Grade 10</td>
<td>171 (27.0)</td>
</tr>
<tr>
<td>Grade 11</td>
<td>190 (30.0)</td>
</tr>
<tr>
<td>Grade 12</td>
<td>145 (22.9)</td>
</tr>
</tbody>
</table>

### Table 2: Magnitude of Sexual Experience among high school girl students

<table>
<thead>
<tr>
<th>Having pre-marital sex</th>
<th>Gondar Number (%</th>
<th>Metema Number (%)</th>
<th>Total Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>156 33.3%</td>
<td>46 27.8%</td>
<td>202 31.9%</td>
</tr>
<tr>
<td>No</td>
<td>312 66.6%</td>
<td>119 72.1%</td>
<td>431 68.0%</td>
</tr>
<tr>
<td>Total</td>
<td>468 100%</td>
<td>165 100%</td>
<td>633 100%</td>
</tr>
</tbody>
</table>

Data from filed study

### Table 3: Age and sexual experience of the respondents

| B     | S.E.  | Wald | df | Sig. Ex-p(B) 95.0% C.I. for EXP(B) LowerUpper |
|-------|-------|------|----|-------------|-----------------------------------------------|
| Age   | 58.024| 4    | 0.004 |          |                                               |
| Age19 | 6.797 | 0.634| 36.000 | 1       | 0.029 22.542 6.030 69.245.                     |
| Age18 | 4.792 | 0.394| 26.651 | 1       | 0.049 12.320 4.390 29.277                      |
| Age17 | 2.485 | 0.274| 12.269 | 1       | 0.051 8.000 3.812 17.438                       |
| Age16 | 0.090 | .392 | 0.635 | 1       | 0.725 1.444 .671 4.016                         |

### Determinants of Premarital Sexual Experience among High School Girls

Table 4, furnish as follows, As far as birth place and sexual experience concerned, the association statistically insignificant (p=0.165). Birth place, which contrasts rural with urban has a OR =0.553, which means rural born girls 0.553 times less likely to have sexual experience than urban born girls. The inverse of exp (B) here as 1/0.553 = 1.8. It could be said that rural born girls 1.8 times more likely have sexual experience than urban born girls. Urban born girls 1.8(OR=1.8, 95% CI: 0.937-1.011) times more likely have sexual experience than rural born girls.
Magnitude of sexual debut and associated factors among high school girl students in Amhara region...

With regard to Alcohol consumption highly significant predictor to the model with p value 0.002 corresponding to sexual experience. Alcohol consumed girl students 3.64 (OR= 3.64, 95% CI: 1.596-8.311, P=0.002) times more likely to have sexual experience than not alcohol consumed girls. Now, particularly concerning, variable of chewing chat is most significant factor with p value 0.006 corresponding to sexual experience. Regarding chewing chat, girls who have habit of chewing chat 2.99 (OR= 2.99, 95% CI: 1.375-6.516, P=0.006) is more likely to have sexual experience as compared to non chat chewers. As far as peer pressure is concerned, it is significant predictor with p value 0.041. Girls who were pressured by Peer groups 2.348 (OR=2.348, 95% CI: 1.035–5.327) times more likely to have sexual experience than others.

Relatively a small number of studies have been studied on Adolescent girl’s sexual experiences and causes in Ethiopia. The present study designed to study Magnitude and Causes of Sexual Experience among High school Girls of Gondar and Metema city Public Schools to generate knowledge on serious issue. This section discusses the major findings which lead to the conclusion and implications of the study.

The results from the present study portray the scenario of the magnitudes of premarital sexual experience among high school girls are 31.9%. This is lower than the country average sexual experience of women below the age of 18 which is 39%[22]. And greater than west Gojam preparatory school students in that nearly a quarter of preparatory school students had sexual intercourse[23] and 10 times more than ,Malaysian girl students[24] and lower than study which was conducted in Nekemte[25] and Nepal[26]. The researchers speculate these variances maybe come out from geographical locations, demographic factors and other cultural value differences between the study areas.

When age of the girl student advancing from 14 to 15, 16, 17 18 and 19 years, sexual experience increasing, 1.444, 8.000, 12.320 and 22.542 times consecutively. This results of the present study is consistent with some studies were before done in Dominica, Tanzania and Ethiopia which revealed same thing [7, 17, 27]. Urban born girls 1.8 (OR=0.553, 95% CI: 0.937-1.011) times more likely have sexual experience than rural born girls. This finding is consistent with studies on high school students of north-east Ethiopia[30]. Alcohol consumption is highly statistically significant predictor with p value 0.002 corresponding to sexual experience. Alcohol consumed girl students 3.64 times more likely to have sexual experience than alcohol not consumed girls. Studies from abroad and Ethiopia revealed similar findings and supporting alcohol as contributing factors for early sexual experience among high school girl students[18,31,33]. Drinking alcohol decrease inhibitions and incline to sexual intercourse[19-20]. Similarly chewing chat is statistically significant with early sexual debut. Girls who had habit of chewing khat 2.99 is more likely to have sexual

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Birth place</th>
<th>-0.27</th>
<th>.019</th>
<th>1.923</th>
<th>1</th>
<th>.165</th>
<th>.533</th>
<th>.937</th>
<th>1.011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chewing chat</td>
<td>1.096</td>
<td>.397</td>
<td>7.625</td>
<td>1</td>
<td>.006</td>
<td>2.993</td>
<td>1.375</td>
<td>6.516</td>
<td></td>
</tr>
<tr>
<td>Peer pressure</td>
<td>.854</td>
<td>.418</td>
<td>4.168</td>
<td>1</td>
<td>.041</td>
<td>2.348</td>
<td>1.035</td>
<td>5.327</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-5.256</td>
<td>1.073</td>
<td>23.990</td>
<td>1</td>
<td>.000</td>
<td>.005</td>
<td></td>
<td></td>
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experience compared to non khat chewers (OR= 2.99, 95% CI: 1.375-6.516, P=0.006). This finding was supported by other studies which were conducted on high school girl students in Ethiopia\cite{14,17,18,31,33}. Peer pressure closely associated with early sexual debut. Girls who had Peer pressure 2.348 times more likely to have sexual experience than their counterparts (OR=2.348, 95% CI: 1.035–5.327). However, this finding is about similar with a study conducted in China and Ethiopia\cite{32,21}.

**Conclusion**

Based on the results of the present study arrived to conclude that the magnitude of sexual practice among late adolescent girl students in the study area is 31.9%. In particular school girls in Gondar had grater sexual experience than the same categories in Metame (33.3% and 27.8% in Gondar respectively). Drinking alcohols, chewing chat and peer pressure is the significant determinants of sexual debut among high school girls of Gondar and Metema towns.

**Limitations of the study**

Present study did not pay attention on other possible predicator variables of early sexual experience like media and pornographic pictures and movies due to time and money constrains.

**Acknowledgements**

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