



## Research article

## Adolescent-parent communication on sexual and reproductive health issues and associated factors among secondary school students in Woreta town, Northwest Ethiopia: An institutional based cross sectional study

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## ABSTRACT

**Background:** World Health Organization states adolescents as persons whose age is between 10–19 years. In Ethiopia, sexual and reproductive health problems of adolescents are high. Parent-adolescent communication regarding sexual and reproductive health issues is important to reduce adolescent risky sexual behaviors.

**Objective:** The goal of the study was to assess adolescent communication on sexual and reproductive health issues with parents and associated factors among secondary school students in Woreta town.

**Method:** Institutional based cross sectional study was conducted among 360 students from March 25–29/2019. Simple random sampling technique was applied to select study participants. Data was collected by self-administered questionnaire. Data was entered into Epiinfo7 and analyzed using SPSS version 23. Descriptive statistics, bivariable and multivariable logistic regression analysis were applied. Odds ratios, 95% confidence intervals and P values were calculated.

Variables having P-value < 0.05 in the multivariable logistic regression analysis were considered as determinant factors for adolescent-parent communication on sexual and reproductive health issues.

**Result:** A total of 360 school adolescents were involved in the study making 100% response rate. One hundred ten (30.6%) of the students had communication with parents on at least 60% of topics of sexual and reproductive health issues. Being Grade 9 (AOR = 2.3; 95% CI: 1.1–4.4) and grade 10 students (AOR = 2.2; 95% CI: 1.1–4.5), students who were knowledgeable on SRH issues (AOR = 3.6; 95% CI: 1.9–6.5) and students who accepted the benefit of communicating SRH issues with parents (AOR = 5.2, 95% CI: 1.9–13.7) were more likely to communicate on SRH issues.

**Conclusion:** and Recommendation: Adolescent-parent communication on SRH issues was found to be low. The sexual and reproductive health knowledge of adolescents could be enhanced through participating them in different health clubs in school and outside school.

## 1. Introduction

World Health Organization states adolescents as individuals whose age is between 10–19 years [1]. Adolescence is an important stage of human development. The rapid biological and psychosocial changes that take place in adolescents affect their lives. Sexuality and reproductive health is one of the most crucial parts of life. Sexual health is about the development of life and personal relations [2]. Adolescents are prone to most of the same illnesses as other age groups within the population. However, they are less likely to appreciate symptoms and more likely to underestimate their importance [1].

Some of the problems encountered by adolescents across the globe include early pregnancy and parenthood, difficulties in accessing contraception and safe abortion. Healthcare providers often act as a barrier to care by failing to provide young people with supportive, nonjudgmental and youth-appropriate services [3]. Adolescents need information about sexual life from a variety of sources including parents, siblings, peers, magazines, books and the mass media [4].

Sexually transmitted diseases are the greatest burden to adolescent well-being. In spite of the growing needs, there is no adequate health counseling from parents [5]. Adolescent-parent communication is a vital way of improving sexual and reproductive health outcomes for adolescents [6]. Parents have the power to guide children's development in

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sexual health issues, encouraging them to practice reasonable sexual behavior and develop good personal decision making skills [7]. Parents can help their children in decreasing sexual risk taking behaviors by discussing with or teaching them about sexuality [8].

Sexual and reproductive health problems due to unprotected sex account a significant proportion of adolescent morbidities and mortality [9]. Adolescents are highly affected by HIV and other sexually transmitted infections more importantly in developing countries [10]. One third of women worldwide give birth before the age of 20 each year and are at increased risk of morbidity and mortality due to obstetric complications [11].

Sixteen million girls aged 15–19 give birth each year, 95% of these births occur in low and medium income countries (LMICs). In Ethiopia, sexual and reproductive health problems of adolescents are high [12, 13].

Parent-adolescent communication about sexual and reproductive health issues is more likely to reduce adolescent risk-taking sexual behaviors. Moreover, when adolescents feel lonely, they may involve in activities that put their health risky [14].

In Ethiopia, sexual and reproductive health problems of adolescents are increasing from time to time. Most parents do not feel happy to discuss about sexual issues with their children and they assumed that it leads to early sexual involvement and sexual related diseases [15]. Despite increased needs from adolescents about sexual and reproductive health issues, health service provision and counseling is insufficient for adolescents. Hence, this study aim to assess adolescent-parent communication on sexual and reproductive health issues and associated factors among secondary school students in Woreta town.

## 2. Methods

### 2.1. Study area and period

The study was conducted in Woreta secondary school from March 25–29/2019. Woreta town is located 55 km from capital city of Amhara Regional state, Bahir Dar and 625 km Northwest of Addis Ababa, the capital city of Ethiopia. It is the administrative center of Fogera woreda; the town is located in the South Gondar Zone of the Amhara Regional State, Ethiopia.

According to the 2015 population projection estimate of Ethiopia, there were 36,487 population in Woreta town and around half of them were females. Among the total population, 3912 (14.1 %) of them were young population aged between 10-24 years and 3390 (12.3 %) of the population were in age range of 15–19. There were two primary schools, one senior secondary school, one public health center and seven private clinics in the town.

In the academic year of 2018/2019, there were a total of 3705 of students from grade 9–12 [16]. From this, about (46.6%) of students were females. There were a total of 66 sections (grade 9[18 section], grade 10[15section], grade 11[15 section] and grade 12[18 section]) in the school.

### 2.2. Study design and population

A quantitative research involving an institutional based cross-sectional study was conducted among all students aged between 10 to 19 years old who were attending their education in woreta secondary school at the time of data collection period.

Students who were absent during data collection were excluded.

### 2.3. Sample size calculation and sampling procedure

The single population proportion formula was used to calculate the sample size considering the following assumptions: Proportion of adolescent-parent communication on reproductive health issues 36.9% [2]. 95% confidence level, 5% margin of error.

$$[n = \left( Z_{\frac{\alpha}{2}} \right)^2 x P (1-p)/d^2], n = (1.96)^2 x (0.369) (0.631)/(0.05)^2 = 358, \text{ by using population correction formula, the final sample size was: } nf = \frac{ni}{1+\frac{ni}{N}} = \frac{358}{1+\frac{358}{3705}} + 10\% \text{ non-response rate. } nf = 360.$$

Woreta town intentionally was selected as a study site by considering the health status of female students in the town and lack of previous researches related to adolescent parent communication on sexual and reproductive health issues.

Simple random sampling technique was used to select the sample from each grade levels. The sample size was proportionally allocated to each grade to ensure representation. The sampling frame was prepared from the already existing students' registration book in the school record office. Total number of sample size was obtained by considering the sum of study participants in each grade level divided by total number of sections in each grade level. There was one secondary school in the town. There were a total of 66 sections (grade 9[18 section], grade 10[15section], grade 11[15 section] and grade 12[18 section]) in the school. Thus, approximately 5 students from each section of grade 9 and grade 10 and approximately 6 students from each section of grade 11 and grade 12 was randomly selected from the prepared sampling frame by lottery method.

### 2.4. Data collection tools and quality control

We collected data using a self-administered, structured questionnaire that was developed through a review of the literature and then adapted for the Ethiopian context. The first phase of instrument development involved a meeting with experts from Bahir Dar University Midwifery Department to review draft questionnaire items. In the meeting, experts gave input on each item's relevance and face validity in the Ethiopian working environment. Items were added, deleted, and modified according to the experts input.

The questionnaire was translated into Amharic and then back-translated to English by professional translators to check for any inconsistencies. Before data collection, 5 % of the sample size was pretested at Aember town to check the reliability using Cronbach's Alpha yielding value of 0.87 showing it is reliable and validity of the survey tool to standardize the questionnaire and accordingly appropriate modifications was made before the implementation of actual data collection.

Three data collectors, who had completed grade twelve with one secondary school teacher supervisor, were recruited. Data collectors and the supervisor were trained for one day by the principal investigator on the study instrument, consent form and data collection procedure. Every day after data collection, questionnaires were reviewed and checked for completeness by the supervisor and principal investigator and the necessary feedback was offered to data collectors in the next morning and before ending up all sessions, incomplete questions were completed using precoded for controlling errors during data analysis.

### 2.5. Data processing and analysis

The entire questionnaire were checked, coded and entered into EPI Info version 7 and exported to SPSS version 23 software. For analysis, descriptive statistical procedures were utilized. Descriptive statistics like percentage, mean and standard deviation were used for the presentation of demographic data and magnitude of adolescent parent communication on sexual and reproductive health issues. Tables and graphs were also used for data presentation.

Binary logistic regression was used to identify factors associated with adolescent parent communication on sexual and reproductive health issues of female students. Variables with P-value less than or equal to 0.2 were selected in to multiple logistic regression models for controlling the possible effect of confounders and finally variables which had independent association with adolescent parent communication on sexual and reproductive health issues were identified on the basis of AOR, with 95% CI and p-value less than 0.05.

## 2.6. Ethical consideration

Ethical clearance was obtained from the institutional review board of Bahir Dar University.

Formal letter of cooperation was written for Woreta educational office and secondary school head office and permission was obtained. Written consent was obtained from each study participants. For those study participants who were under the age of consent, written assent was obtained from their parents. Confidentiality of information and privacy was maintained.

## 3. Results

### 3.1. Socio demographic characteristics of the participants

A total of 360 school adolescents were enrolled in the study with 100% response rate. One hundred ninety six (54.4%) of the respondents were females. The mean age of the respondents was  $17.45 \pm 1.21$  SD. All of the respondents were Amhara by ethnicity and 328 (91.1%) were Orthodox Christian followers. Two hundred fifty one (69.7%) of the respondents were live with their both parents. Ninety seven (26.9%) of the respondents were grade twelve students. About 238 (66.1%) of the respondents were urban residents (Table 1).

### 3.2. Knowledge of respondents on selected sexual and reproductive health issues

Two hundred thirty five (65.3%) of the respondents were knowledgeable about sexual and reproductive health issues. Two hundred sixty eight (74.4%) of the respondents knew about STIs. HIV/AIDS was the most commonly known STI 194 (53.9%).

Two hundred sixty two (72.8%) knew when first menstrual period started and the reported mean age of menarche was  $13.96 \pm 1.75$  SD. Around 110 (30.6%) and 152 (42.2%) of males and females respectively knew when first menstrual period started.

Two hundred sixty seven (74.2%) of the respondents knew contraception methods for youth. Among contraception options for youth, depo Provera 185 (51.4%) was the most commonly known contraceptive method.

### 3.3. Source of information on sexual and reproductive health issues

Two hundred thirty five (65.3%) of the respondents had ever heard about reproductive health issues. Regarding their primary source of information, school accounts 129 (54.89%) followed by Mass media 49 (20.85%).

### 3.4. Adolescent-parent communications on sexual and reproductive health issues

The study showed that two hundred ninety three of the respondents (81.4%) accept the importance of discussing on SRH issues with parents. One hundred ten (30.6%) of the respondents had discussion with their parents on at least 60% of topics of SRH issues.

Two hundred two (56.1%) of the students had discussion with their parents on STI/HIV/AIDS. Among those students, 65 (18.1%) had discussion with their brothers/sisters (Table 2).

Regarding overall discussion of SRH issues, respondents discussed mostly with their mother 169 (46.9%) followed by brothers/sisters 150 (41.7%). Teacher, father and friends constitute 98 (27.2%), 86 (23.9%) and 47 (13.1%) respectively. Regarding the overall preferred group for discussion about SRH issues, 179 (49.7%) of the participants prefer their mother followed by brothers/sisters which accounts 140 (38.9%).

### 3.5. Adolescents' reasons for not discussing with their parent on SRH

A total of 250 (69.4%) adolescents were reported that they didn't discuss with their parents on at least 60% of topics of SRH issues. Two hundred sixty nine (74.7%) of respondents did not discuss with parents

**Table 1.** Socio-demographic characteristics of secondary school students in Woreta Town (N = 360), June, 2019.

Variable	Frequency	Percent
<b>Sex</b>		
Male	164	45.6%
Female	196	54.4%
<b>Age</b>		
14–16	85	23.6%
17–19	275	76.4%
<b>Grades</b>		
Grade 9	95	26.4%
Grade 10	80	22.2%
Grade 11	88	24.4%
Grade 12	97	26.9%
<b>Residence</b>		
Urban	238	66.1%
Rural	122	33.9%
<b>Religion</b>		
Orthodox Christian	328	91.1%
Protestant	4	1.1%
Muslim	28	7.8%
<b>Living arrangement</b>		
With both parents	251	69.7%
With mother only	38	10.6%
With father only	15	4.2%
With friends	22	6.1%
Living alone	13	3.6%
With relatives	21	5.8%

**Table 2.** Secondary school students and with whom they had discussion in different topics of SRH in the last 6 months in Woreta town, June, 2019.

Topics of discussion	Discussed	With whom they had discussed				
	Yes	Father*	Mother*	Brother/Sister*	Friend*	Teacher*
Pubertal stage	168(46.7)	26(7.2)	52(14.4)	50(13.9)	4 (1.1)	36 (10.0)
Premarital sex	117 (32.5)	16 (4.4)	39 (10.8)	40 (11.1)	4 (1.1)	18 (5.0)
Contraceptive	156 (43.3)	11 (3.1)	81 (22.5)	30 (8.3)	4 (1.1)	30 (8.3)
STI/HIV/AIDS	202 (56.1)	29 (8.1)	58 (16.1)	65 (18.1)	3 (0.8)	47 (13.1)
Unwanted pregnancy	177 (49.2)	25 (6.9)	75 (20.8)	46 (12.8)	0	31 (8.6)
Condom	91 (25.3)	11 (3.1)	23 (6.4)	28 (7.8)	4 (1.1)	25 (6.9)

\* Multiple responses were possible.

on condom issues. The reason was shameful 126 (35.0%) to discuss on SRH issues followed by fear of parents 68 (18.9%) (Table 3).

### 3.6. Factors associated with adolescent-parent communications

In the bivariable analysis; sex, age, grade, religion, living arrangement, perceived importance to discuss SRH issues, adolescents' ever getting SRH information and being knowledgeable on SRH issues were found to be  $P$ -value < 0.2, so these were qualified for multivariable analysis. On multi variable analysis being grade 9 and grade 10 students, being knowledgeable on SRH issues, adolescents' perceived importance to discuss SRH issues with parents were factors that affect adolescent-parent communication on SRH issues at  $p < 0.05$ . Grade 9 and grade 10 students were 2.3 and 2.2 times more likely to communicate on SRH issues as compared to grade 12 students (AOR = 2.3; 95% CI: 1.1–4.4 and 2.2; 95% CI: 1.1–4.5) respectively.

Those students who were knowledgeable on SRH issues were 3.6 times more likely to communicate on SRH issues with their parents as compared with those who were not knowledgeable on SRH issues (AOR = 3.6; 95% CI: 1.9–6.5).

Students who accepted the importance of communicating sexual and reproductive health issues with their parents were 5.2 times more likely to communicate on SRH issues than those who had not accepted the importance (AOR = 5.2 95% CI: 1.9–13.7) (Table 4).

## 4. Discussion

Our study showed that 30.6% (95%CI 25.8%–35.3%) of respondents had discussed SRH issues with their parents in the last 6 months on at least 60% of SRH issues.

This finding is in line with a study conducted in Myanmar (28.6%) [8], Benishangul Gumuz Region, Ethiopia(29%) [17], Harar, Ethiopia (28.8%) [7] and Awabel, Ethiopia (25.3%) [18]. The possible reason may be similarity of study design and minimum time period gap. Our study is lower than study conducted in Vietnam (36.7%) [19] and Ghana (72.8%) [20]. This may be due to demographic and cultural difference and the difference in accessing SRH information to address adolescents' SRH desires. Our result is also lower than a study conducted done in Dire

Dawa, Ethiopia (37%) [21], Yirgalem, Ethiopia (59.1%) [14] and Debre Markos town, Ethiopia (36.9%) [2].

The possible explanation for the discrepancy may be, in our study more than one-third of the respondents were rural residents in which their parents have limited information and knowledge on SRH issues. There are different reasons why parents do not discuss reproductive health issues with their children. Lack of awareness regarding RH issues and difficulty to initiate discussion due to fear and shyness are some of them [7]. Taboo, cultural structures, gender domains and parental knowledge are the other factors which affect parent- adolescent communication in Ethiopia [22]. Being grade 9 and grade 10 students, being knowledgeable on SRH issues and adolescents' perceived importance to discuss on SRH issues with parents were factors significantly associated with communication on SRH issues.

Being grade 9 and grade 10 students were 2.3 times and 2.2 times more likely to communicate on SRH issues as compared to grade 12 students respectively. This finding was in line with study conducted in Alamata [23] and Mekelle town, Ethiopia [24]. This might be due to the reason that as educational level of adolescents increase, they start underestimating the idea of their parents as they believe that they are more knowledgeable than their parents and may not get inspired to communicate about sexual and reproductive health. The other reason may be, grade 9 and 10 students could get better attention by their parents than grade 12 students.

The odds of having knowledge on SRH issues were 3.6 times more likely to communicate on SRH issues with their parents as compared with their counter parts. This finding was consistent with a study done in Myanmar [8], Eastern Ethiopia [25] and Debre Markose, Ethiopia [12]. The possible explanation may be students who had knowledge on SRH issue were eager to communicate with their parents on SRH issues.

In our study, adolescents who accepted the significance of communicating sexual and reproductive health issues with their parents were 5.2 times more likely to communicate on SRH issues than those who had not accepted the importance. This result was consistent with study done in Wolaita Zone, Ethiopia [26], Woldia town, Ethiopia [27] and Debre Markose town, Ethiopia [2]. This may be due to students' perception difference on the importance of discussion on SRH issues with their parents.

**Table 3.** Major reasons of respondents for not discussing SRH issues in the last 6 months with their parents, in Woreta town Secondary school, June 2019.

SRH issues	Not Discussed	Respondents' reasons for not discussing sexual and reproductive health issues with their parents				
		*Shame	*Culturally unacceptable	*Parents lack of knowledge	*Parents lack of communication skill	*Fear of parents
Pubertal stage	192 (53.3)	94 (26.1)	41 (11.4)	37 (10.3)	34 (9.4)	40 (11.1)
Premarital sex	243 (67.5)	109 (30.5)	58 (16.1)	41 (11.4)	40 (11.1)	67 (18.6)
Contraceptive	204 (56.7)	81 (22.5)	47 (13.1)	50 (13.9)	38 (10.6)	53 (14.7)
STI/HIV/AIDS	158 (43.9)	55 (15.3)	33 (9.2)	41 (11.4)	48 (13.3)	24 (6.7)
Unwanted pregnancy	183 (50.8)	75 (20.8)	50 (13.9)	39 (10.8)	41 (11.4)	53 (11.7)
Condom	269 (74.7)	126 (35.0)	65 (18.1)	59 (16.4)	48 (13.3)	68 (18.9)

\* Multiple responses were possible.

**Table 4.** Bivariable and multivariable analysis of factors associated with Adolescent-parent communication on SRH issues in the last 6 months among secondary school students in Woreta town (N = 360), June 2019.

Variables	Communication on SRH issues with parents		COR (95% CI)	AOR (95% CI)	P-value
	Yes	No			
<b>Sex</b>					
Male	61 (16.9)	103 (28.6)	1.8 (1.1–2.8)	1.5 (0.9–2.4)	0.135
Female	49 (13.6)	147 (40.8)	1	1	
<b>Age</b>					
14–16	32 (8.9)	53 (14.7)	1.5 (0.9–2.5)	1.2 (0.6–2.2)	0.596
17–19	78 (21.7)	197 (54.7)	1	1	
<b>Grades</b>					
Grade 9	38 (10.6)	57 (15.8)	2.4 (1.3–4.5)	2.3 (1.1–4.4)	0.019*
Grade 10	33 (9.2)	47 (13.1)	2.5 (1.3–4.9)	2.2 (1.1–4.5)	0.026*
Grade 11	18 (5.0)	70 (19.4)	0.9 (0.5–1.2)	0.99 (0.5–2.1)	0.989
Grade 12	21 (5.8)	76 (21.1)	1	1	
<b>Religion</b>					
Orthodox Christian	103 (28.6)	225 (62.5)	2.1 (0.8–5.7)	1.8 (0.6–5.1)	0.296
Protestant	2 (0.6)	2 (0.6)	4.6 (0.5–40.9)	1.4 (0.1–13.1)	0.779
Muslim	5 (1.4)	23 (6.4)	1	1	
<b>Living arrangement</b>					
With both parents	86 (23.9)	165 (45.8)	2.2 (0.7–6.8)	2.5 (0.8–8.3)	0.130
With mother only	7 (1.9)	31 (8.6)	0.96 (0.2–3.8)	0.9 (0.2–3.6)	0.832
With father only	4 (1.1)	11 (3.1)	1.5 (0.3–7.5)	1.6 (0.3–8.4)	0.584
With friends	4 (1.1)	18 (5.0)	0.9 (0.2–4.4)	1.02 (0.2–5.2)	0.983
Living alone	5 (1.4)	8 (2.2)	2.7 (0.6–12.6)	3.2 (0.6–17.5)	0.177
With relatives <sup>a</sup>	4 (1.1)	17 (4.7)	1		
<b>Level of knowledge</b>					
Knowledgeable	93 (25.8)	142 (39.4)	4.2 (2.3–7.4)	3.6 (1.9–6.5)	0.000*
Not knowledgeable	17 (4.7)	108 (30.0)	1	1	
<b>Ever had SRH information</b>					
Yes	90 (25.0)	145 (40.3)	3.3 (1.9–5.6)	1.1 (0.5–2.5)	0.763
No	20 (5.6)	105 (29.2)	1	1	
<b>Perceived importance to discuss SRH issues</b>					
Yes	105 (29.2)	188 (52.2)	6.9 (2.7–17.8)	5.2 (1.9–13.7)	0.001*
No	5 (1.4)	62 (17.2)	1		

\*Significant at p-value < 0.05, relatives<sup>a</sup> = uncle, aunt, grandmother and grandfather.

#### 4.1. Limitation of the study

The limitations of this study were based on self-reported information, which is subjected to reporting errors and recall biases. Small sample size may decrease the external validity of the study.

Since the design is quantitative, it doesn't address cultural issues of the study participants.

#### 5. Conclusion

In this study adolescent-parent communications on sexual and reproductive health issues was found to be low. Study participants who were being grade 9 and grade 10 students, being knowledgeable on SRH issues and adolescents' perceived importance to discuss SRH issues with parents were more likely to communicate SRH issues with their parents.

#### Declarations

##### Author contribution statement

Kihinetu Wudineh: Conceived and designed the experiments; Wrote the paper.

Fentahun Chekole: Performed the experiments; Wrote the paper.

Azimeraw Tesfu: Analyzed and interpreted the data; Wrote the paper.

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##### Data availability statement

Data included in article/supplementary material/referenced in article.

##### Declaration of interests statement

The authors declare no conflict of interest.

##### Additional information

No additional information is available for this paper.

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