

# Parent-Adolescent Communication about Sexual and Reproductive Health and Its Association with Gender and Pre-Marital Sex Among Secondary and Preparatory School Students in Woldia Town, North East Ethiopia, 2019

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## Research article

**Keywords:** Adolescent, parent, communication, sexual health, reproductive Health, Ethiopia

**Posted Date:** November 15th, 2019

**DOI:** <https://doi.org/10.21203/rs.2.17244/v1>

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## Abstract

**Background :** Adolescent today faced different health threats which are predominantly behavioral. Parent-adolescent communication about sexual matters is one of the means that encourages adolescents to adopt responsible sexual behavior. Many children in Africa is uncomfortable to have a Communication about sexual and reproductive health issues with their parents because the subject is a taboo topic in most homes. So, this study aimed to assess magnitude of communication between adolescents and parents on SRH issues and its association with gender and premarital sexual practice among school adolescents of Woldia Town.

**Methods :** School based cross-sectional study was conducted on 368 unmarried Secondary and preparatory school adolescents (15-19 years) in Woldia Town. Simple random sampling were employed to select study participants. Self-administered questionnaire were used. Data were entered by EPI-Data version 3.0.2 and analyzed by using SPSS version 20.

**Result :** In this study 56.3% of school adolescents had parental communication on sexual and reproductive health issues. The result of this study showed that there was a significant negative association between pre-marital sexual practice and adolescent-parent communication on SRH issues where by adolescents who had history of sexual intercourse were 64% less likely to communicate with parents (AOR: 0.36 95% CI: 0.20, 0.65).

**Conclusion and recommendation :** This study showed that adolescent-parent communication about sexual and reproductive health issues was low in Woldia Town. Therefore, programs focusing on meeting young people sexual and reproductive health needs in the area should focus on changing the social and cultural views of communicating sexual issues in addition to working on changing individual behaviors on contraceptive use.

## Background

Adolescent, peoples of 15–19 years old, today faced different health threats which are predominantly behavioral. Behaviors formed in the second decade of life exposes teens to consequences of unprotected sex, unsafe abortion, sexually transmitted diseases and substance use(1). Adolescents are practicing risky sexual behaviors such as unprotected sex, multiple sexual partners, and sex at early age(2). In Ethiopia nearly 4% of women and 7% of men between the age 15 to 19 had pre-marital sexual practice though the rate of HIV testing among those groups were less than 25%(3) with high prevalence of teenage pregnancies(7.7%)(4). An estimated 2.1 million adolescents were living with Human Immunodeficiency Virus (HIV) in 2016 (5). In 2018, 510,000 young people between the ages of 10 to 24 were newly infected with HIV, of whom 190,000 were adolescents between the ages of 10 and 19(6). Communication on sexuality issues between adolescents and significant adults results in safer sexual practices among in school adolescents(7). Since the issues of premarita as well as closely monitoring towards adolescents daily life practice contribute significantly positive development in young generation (8). According to study findings more children are exposed to sexual images in the media as they are more private which leads them to engage in sexual behaviors at a younger age. Children who receive sex education at home are actually less likely to engage in risky sexual activity. Having open communications with children about sex and other matters is healthy and safer in the long run (9). Study results showed that the prevalence of parent-adolescent communication on sexual and reproductive health (SRH) in Ethiopia is inconsistent which ranges from 25% to 83% (10–15). In addition to this, factors associated with Communication between parent and adolescent on SRH issues varies where by the effect of gender and premarital sexual practice differ across studies conducted in the same groups of populations. According to study finding gender had a positive relationship with communication on SRH (14, 16) while other studies showed no association(10–13). Premarital sexual practice was positively linked with SRH communication between parent and adolescent(10, 11) while other study findings suggested that there was no association (12–14, 16). So, this study aims is to assess the magnitude of communication between adolescents and parents on SRH issues and its association with gender and premarital sexual practice among school adolescents of Woldia Town.

## Methods

**Study Settings and period:** The study was conducted in Woldia Secondary and preparatory school, Woldia town, Amhara region, Ethiopia. Woldia is found 521km from Addis Ababa on the high way from Addis Ababa to Mekelle. The total population of Woldia town was 46,139 with sex distribution of 50.2% females and 13,027 found in the age group of 15–24 (17). In Woldia Town there was one preparatory (Woldia) and two High Schools (Woldia and Millennium). Accordingly there were a total of 3434 High School and 1557 preparatory school students in the town(18). The study was conducted from April 25–30/2019.

**Sampling techniques and procedure:** Simple random sampling procedure was used to select representative sample of students in the selected schools by using the roster of students as sampling frame. From the two high schools having students of grade 9 and 10 Woldia High School was randomly selected by lottery method but the preparatory school was purposively included. Based on the number of students, proportional allocation was allotted to ensure representation for the secondary and Preparatory school. All regular students who were single, not blind or not having known visual impairment were included to the study.

**Study Design and Sample size determination:** School based cross sectional study was conducted. The sample size was determined by using single population proportion formula with confidence interval at 95 %, 5% desired precision, 5% non–response rate and proportion of adolescent who had communication on sexual and reproductive health issues with their parents (35%)(13). A total of 368 (198 secondary and 170 preparatory school) students were required for the study.

**Data collection methods and instruments:** Data was collected through structured self-administered questionnaires with close ended questions. The questionnaire used in this study were derived from previously published articles (10–11, 16). A pre-test questionnaire on 5% of the sample size in Sirinka Secondary and Preparatory school was tried to know the length, content, question wording and language understandability of the question before two weeks of the actual data collection time. The data collected by pre-test were not included for the analysis. The questionnaire were designed in English and translated

to Amharic language for data collection. Data were collected through the use of five fourth year University students who were the data facilitators after having a one day training about the objectives of the study.

## Study Variables

Dependent (outcome variable): Parent- adolescent communication on SRH issues

Exposure variable: Premarital sex and Gender

Covariates: Students age, Religion, Parent educational status, parents occupation, Ethnicity, Family size, family monthly income, residence,, grade level of the student, Family income, having sexual relationship, family size, monthly pocket money received from family.

Data processing and analysis: Data cleaning and entry was performed by using EpiData version 3.0.1 and was analyzed by using SPSS computer software package version 20. Bivariable logistic regression and multivariable logistic regression analysis was done to show the association between dependent and independent variables. Those variables with p value < 0.2 in Bivariable logistic regression was entered in to multivariable logistic regression analysis to control confounding variables and those exposure variables with a p value  $\leq$  0.05 in multivariable logistic regression analysis was considered statistically significant.

Ethical Consideration: To conduct the study permission was obtained from Woldia University College of Health Sciences after ethical review and approval of the contents of the proposal, and a formal letter was written to study sites ensuring the approval of the proposal. After having permission from School Directors, information was collected, after having verbal consent from each study participants. There was no information that identify participants in particular. Participation for the study was fully voluntary and they were informed that they had the right to declare to participate or not in the study, were not forced to answer any question that they did not want to answer.

## Operational definition/ definition of terms

*Parents*: - Biological parents (father, mother), grandparents, elder sister/brothers and any other caretakers without being paid as an employee

*Adolescent*: -are Unmarried peoples who are between 15 to 19 years old.

*Communication*: - refers to the exchange and sharing of knowledge, ideas, and other information concerning SRH issues among adolescents and their parents.

*Communication on SRH*: -Students who discussed at least two SRH issues (Contraceptive, STIs/HIV/AIDS, Unwanted pregnancy, pre-marital sex) with their parents in their life time.

## Results

A total of 368 contacts were made, whereby 9 declined to participate, making the total number of respondents to be 359 (97.6%). Of the 9 who declined to participate, 4 were because of not answering communication questions, 5 were because of unreturned questionnaire and 1 were because of returned questionnaire without any responses. The mean age of participants were 17.08(SD $\pm$ 1.33) years old (median age 17 years) and 82.3% were Orthodox Christianity followers. Among the total sample 54.04% were High School Students (Grade 9 and 10) and 53.2% were female. (See Table 01).

**Adolescent Parent communication on SRH issues:** Majority of the adolescents, 297(82.7%) believed that discussing SRH issues with parents are important, thought, the level of communication with at least two SRH issues in this study was 56.3%. Nearly 61% of males, 67% of those 18 years and above, 74% of grade 12 students and 77% of students having sexual experience were communicated with their parents on SRH issues (See Table 02). About 44%, 52.6%, 44.3% and 45.7% of the study participants discuss about contraceptive, STIs including HIV/AIDS, unwanted pregnancy and pre-marital sex with their parents respectively (See Figure 01).

**Association of Gender and pre-marital sex with adolescent-parent communication on SRH:** The result of multivariable logistic regression analysis in this study showed that pre-marital sexual practice were significantly associated with adolescent-parent communication. Those who had pre-marital sexual experience were 64% less likely to communicate with their parents about SRH issues (AOR 0.36, 95% CI: (0.20, 0.65) than those who had no exposure. Whereas, there were no significant association assessed between gender and adolescent-parent communication on SRH (AOR: 1.06, 95% CI: 0.64, 1.75) (See table 03).

**Table 01:** Sociodemographic characteristics of the study participant by Parent adolescent communication on sexual and reproductive health, Woldia Town, 2019

Variable name	Variable Category	Parent- Adolescent communication on SRH: Frequency (%)	
		Yes	No
Gender	Male	102 (60.7)	66 (39.3)
	Female	100 (52.4)	91 (47.6)
Age	15-17	99 (48.3)	106 (51.7)
	18-19	103 (66.9)	51 (33.1)
Grade level	9 <sup>th</sup>	53 (51.5)	50 (48.5)
	10 <sup>th</sup>	29 (31.9)	62 (68.1)
	11 <sup>th</sup>	72 (72)	28 (28)
	12 <sup>th</sup>	48 (73.8)	17 (26.2)
Residence	Urban	196 (56.2)	153 (43.8)
	Rural	6 (60)	4 (40)
Religion	Orthodox	170 (56.9)	129 (43.1)
	Muslim	31 (55.4)	25 (44.6)
	Protestant	1 (25)	3 (75)
Having boy/girl friend	Yes	91 (59.9)	61 (40.1)
	No	111 (53.6)	96 (46.4)
Student monthly pocket gain form family	<500 ETB	153 (52.8)	137 (47.2)
	≥500 ETB	49 (71)	20 (29)
Educational status of Father	Can't read and write	16 (57.1)	12 (42.9)
	Read and write	64 (48.9)	67 (51.1)
	Completed Primary education	15 (53.6)	13 (46.4)
	Completed Secondary	28 (59.6)	19 (40.4)
	Diploma	14 (70)	6 (30)
	Degree and above	65 (51.9)	40 (38.1)
Educational status of Mother	Can't read and write	23 (46)	27 (54)
	Read and write	63 (54.8)	52 (45.2)
	Primary education	29 (65.9)	15 (34.1)
	Secondary	23 (62.2)	14 (37.8)
	Diploma	16 (64)	9 (36)
	Degree and above	48 (54.5)	40 (45.5)
Occupational Status of Father	Private work	44 (63.8)	25 (36.2)
	Merchant	43 (57.3)	32 (42.7)
	Farmer	32 (39.5)	49 (60.5)
	Government employed	83 (61.9)	51 (38.1)
Occupational Status of Mother	House Wife	99 (53.9)	68 (40.7)
	Private work	25 (53.2)	22 (46.8)
	Merchant	29 (50)	29 (50)
	Farmer	6 (31.6)	13 (68.4)
	Government employed	43 (63.2)	25 (36.8)
Family size per Household (N=358)	<5	77 (55)	63 (45)
	≥5	124 (56.9)	63 (43.1)
Family Monthly Income	<500	1 (100)	0
	500-1000	23 (63.9)	13 (36.1)
	1001-2500	18 (58.1)	13 (41.9)
	>2500	98 (61.2)	62 (38.8)
	Don't know	58 (46.4)	67 (53.6)
Ever had sex	Yes	75 (76.5)	23 (23.5)
	No	127 (48.7)	134 (51.3)
		<b>202 (56.3)</b>	<b>175 (43.7)</b>

ETB: Ethiopian Birr

**Table 02:** Discussion on different Sexual and Reproductive health issues by gender and sexual practice between Adolescent and Parent among Woldia town High and Preparatory school students, 2019

SRH issues Discussed		Gender: Frequency (%)		Ever had sex: Frequency (%)		Total
		Male	Female	Yes	No	
Contraceptive	Yes	79 (47)	79 (41.4)	56 (57.1)	102 (39.1)	158 (44)
	No	89 (53)	112 (58.6)	42 (42.9)	159 (60.9)	201 (56)
STIs including HIV/AIDS	Yes	100 (59.5)	89 (44.6)	66 (67.3)	123 (47.1)	189 (52.6)
	No	68 (40.5)	102 (53.4)	32 (32.7)	138 (52.9)	170 (44.4)
Unwanted pregnancy	Yes	74 (44)	85 (44.5)	60 (61.2)	99 (37.9)	159 (44.3)
	No	94 (56)	106 (55.5)	38 (38.8)	162 (62.1)	200 (55.7)
Premarital sex	Yes	82 (48.8)	82 (42.9)	59 (60.2)	105 (45.7)	164 (45.7)
	No	86 (51.2)	109 (57.1)	39 (39.8)	156 (59.8)	195 (54.3)
Importance of discussion on SRH	Yes	134 (79.8)	163 (85.3)	82 (83.7)	215 (82.4)	297 (82.7)
	No	34 (20.2)	28 (14.7)	16 (16.3)	46 (17.6)	62 (17.3)
<b>Condom Use at first sex</b>	<b>Yes</b>			<b>47 (48)</b>		
	<b>No</b>			<b>51 (52)</b>		

**Table 03:** Bivariable and Multivariable result table showing the relationship between exposure variables and outcome variable among Woldia town High and Preparatory school students, 2019

Variable		Communication on SRH issues with parents	
		COR (95% CI), P-value	AOR (95% CI)
Gender	Male	1	1
	Female	1.41 (0.92, 2.14), 0.11	1.06 (0.64, 1.75)
Ever had sex	Yes	0.29 (0.17, 0.49), <0.001	<b>0.36 (0.20, 0.65)*</b>
	No	1	1
Age	15-17	1	1
	18-19	0.46 (0.30, 0.71), <0.001	0.69 (0.38, 1.25)
Grade	9 <sup>th</sup>	1	1
	10 <sup>th</sup>	2.27 (1.26, 4.07), 0.06	1.84 (0.96, 3.58)
	11 <sup>th</sup>	0.23 (0.23, 0.74), 0.03	<b>0.33 (0.16, 0.68)*</b>
	12 <sup>th</sup>	0.38 (0.19, 0.74), 0.04	0.44 (0.18, 1.04)
Student monthly pocket gain from family	<500 ETB	1	1
	≥500 ETB	0.46 (0.29, 0.81), 0.07	0.80 (0.41, 1.56)
Mother's education	Can't read and write	1	1
	Read and write	0.70 (0.36, 1.37), 0.30	0.54 (0.24, 1.19)
	Primary education	0.44 (0.19, 1.02), 0.05	0.46 (0.18, 1.19)
	Secondary	0.52 (0.23, 1.23), 0.14	0.60 (0.21, 1.67)
	Diploma	0.48 (0.19, 1.29), 0.14	0.56 (0.17, 1.82)
	Degree and above	0.71 (0.35, 1.43), 0.34	0.63 (0.25, 1.56)
Father's occupation	Private work	1	1
	Merchant	1.31 (0.67, 2.56), 0.43	1.14 (0.54, 2.43)
	Farmer	2.69 (1.39, 5.23), 0.03	<b>2.77 (1.26, 6.08)*</b>
	Government employed	1.08 (0.59, 1.98), 0.80	0.70 (0.34, 1.43)
Mother's Occupation	House Wife	1	1
	Private work	1.28 (0.67, 2.46), 0.46	1.17 (0.55, 2.52)
	Merchant	1.46 (0.80, 2.65), 0.22	1.29 (0.65, 2.55)
	Farmer	3.15 (1.14, 8.71), 0.03	1.43 (0.40, 5.13)
	Government employed	0.85 (0.47, 1.51), 0.54	1.29 (0.60, 2.76)

\*-Significant association, **SRH**-Sexual and Reproductive Health

**NB:** only variables with p-value of less than 0.2 at the bivariable analysis are shown in the above table

## Discussion

This study showed that 56.3% of adolescents participated in the study had communicated with their parents. This result is lower than the findings of the studies conducted in Haik Town (82.7%) (14), this might be linked with the definition of Communication on SRH issues in which at least communicating in one SRH issue were sufficient in that study. The result of this study is also higher than studies conducted in Hadiya (35%) (13), Woldia (30.4%) (11), Debremarkos(36.9%) (10), Diredewa (37%)(12), Awabel (28.8)(16), Harar (28.8%) (19) and East Wollega (42.5%) (15). The higher the magnitude on the level of

communication in this study compared with the study in Hadiya and Awabel may be related with the study participants whereby more than 28% of the those study participants were from rural settings ((13, 16) which might decrease the opportunities to sexual and reproductive health information which can further reduces to communicate with their parents. High magnitude of SRH communication between adolescent and parent in this study when it compared with studies conducted in Debremarkos, Dire Dewa, East Wollega, Woldia and Harar ((10–12, 15, 19) may be due to difference in study period, definition of time period to state there was communication between adolescent and parent; and differences of participants grade level included in the study.

The result of this study showed that there was a significant but negative association between pre-marital sexual practice and adolescent-parent communication on SRH: adolescents who had history of sexual intercourse were 64% less likely to communicate with parents (AOR: 0.36 95% CI: 0.20, 0.65), which was inconsistent with studies done in Woldia and Debremarkos (10, 11). The reason may be those who were engaged in premarital sexual practice were those who had no discussion of sexual issues with their close friends (20) which can expose them not to be confident in resisting peer pressures to engage in sex ((20–22) and majority of those who engaged in premarital sex in this study (55%) and in study conducted in Jimma Town (23) were those aged 18 and above which may be linked with as children reached to the late adolescent period they preferred their friends than families to talk different issues freely.

This study identified that there was no relationship between gender and SRH communication between adolescent and parent (AOR: 1.06, 95% CI: 0.64, 1.75). The result was in line with studies done in different parts of Ethiopia ((10–13, 15). The possible explanation may be the introduction of school based sexual and reproductive health education in Ethiopian may filled gender gaps across the different regions on SRH communication; and open mindedness of adolescents to talk on sexual issues in the modern era avoids gender related differences in different aspects of health.

*Limitations:* Since respondents' were asked about discussion on SRH issues in their past time, recall bias may be introduced,. This may under- or over-estimate communication of SRH issues. This study also didn't address participant's knowledge on SRH issues which may affect the outcome variable.

## Conclusion And Recommendations

This study showed that adolescent-parent communication about sexual and reproductive health issues was low in Woldia Town. Parental communication was significantly lower among adolescents who were engaged in premarital sex. Therefore, programs focusing on meeting young people sexual and reproductive health needs in the area should focus on changing the social and cultural views of communicating sexual issues in addition to working on changing individual behaviors on contraceptive use as it was explained by low utilization of condom among those engaged in risky sexual behavior.

## Abbreviations/acronyms

AIDS

Acquired Immunodeficiency Syndrome

AOR

Adjusted Odds Ratio

COR

Crude Odds Ratio

ETB

Ethiopian Birr

HIV

Human Immunodeficiency Virus

SRH

Sexual and Reproductive Health

STIs

Sexually Transmitted Infections

## Declarations

*Acknowledgments:* We would like to express our heartfelt gratitude to Woldia University for financial support. Our special appreciation also goes to North Wollo Educational bureau for the provision of the necessary information that was an important input for the study; the School directors for their support in the research work. Also we would like to thank the data collectors and study participants who were devoted their time for the study.

*Ethical approval and consent to participate:* To conduct the study permission and ethical approval letter was obtained from Woldia University College of Health Sciences ethical review committee. Written and informed consent was obtained from the school directors who were expected to be the guardian for participants at the school environment. After having permission from School Directors, information was collected. As we took written consent from the

directors and because of participants legal age differences to participate in this study informed verbal consent were taken from all the respondents. For participants under the age of 18 written and informed consent were taken from school directors on behalf them.

*Consent for Publication:* This manuscript doesn't contain any individual/personal data in any form; so it doesn't need consent for publication.

*Availability of data and Materials:* The data set used and analyzed for the study are available from the corresponding author on reasonable request. The Investigators are responsible for all information's provided to the journal.

*Competing interest:* No competing interest

*Funding:* Woldia University covered all the costs incurred by the study.

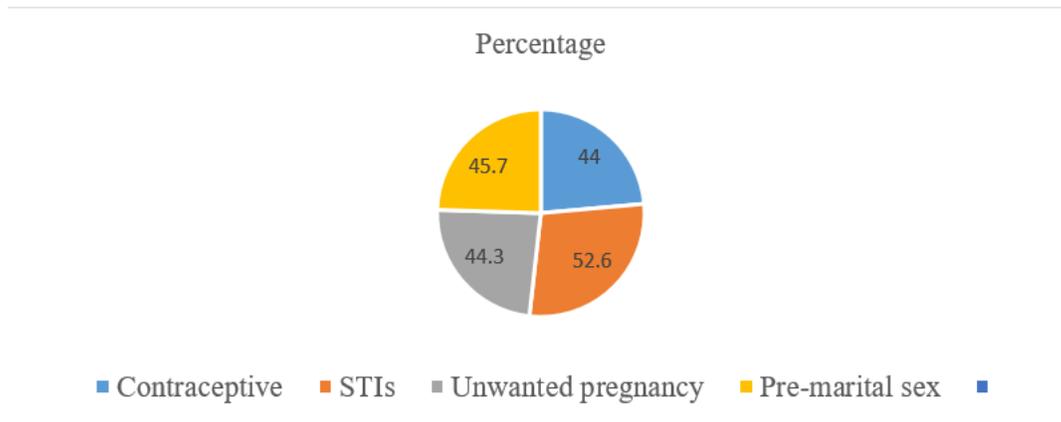
*Authors' contributions:* SA, GD, IA, DK, ZA, AD and EM wrote the proposal, participate in the data collection and entry processes. SA and GD analyzed the data and drafted the manuscript and revised subsequent drafts of the paper. All authors have read and approved the manuscript.

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## Figures



**Figure 1**

Discussion on different Sexual and Reproductive health issues between Adolescent and Parent among Woldia town secondary and Preparatory school students, 2019

## Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

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