The Open Public Health Journal

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RESEARCH ARTICLE

Parent-Adolescent/Youth Sexual and Reproductive Health Communication: The Case of Secondary and Preparatory School Students in Fiche Town, Oromia Regional State, Ethiopia

Mulugeta Feyissa[1,*], Haweni Adugna[2], Temesgen Aferu[3] and Tadesse Nigussie[4]

[1]*Department of Midwifery, College of Health Sciences, Selale University, Fiche, Ethiopia*
[2]*Department of Nursing, College of Health Sciences, Addis Ababa University, Addis Ababa, Ethiopia*
[3]*Department of Pharmacy, College of Health Sciences, Mizan Tepi University, Mizan Aman, Ethiopia*
[4]*Department of Public Health, College of Health Sciences, Mizan Tepi University, Mizan Aman, Ethiopia*

Abstract:

Background:

Adolescence/youth is a continuum of physical, cognitive, behavioral, and psychosocial development. Due to a lack of comprehensive knowledge regarding sexual and reproductive health, adolescents face a number of problems. Clear family communication of reproductive health issues often leads to increased awareness of reproductive health matters and reduces risky behaviors and its consequences in adolescent populations.

Objective:

To assess parent-adolescent/youth communication and associated factors among students attending secondary and preparatory schools in Fiche town, Oromia Regional State, Ethiopia.

Methods:

An institution-based cross-sectional study was conducted from March 27 to 30,2017, using a structured self-administered questionnaire. Two schools in the town were included in the study. Data were entered using epidata manager version 4.0.2.101 and exported to SPSS version 21 for analysis. Multivariable logistic regression analysis was performed, and variables with a p-value of less than 0.05 were considered statistically significant.

Results:

The number of students who had ever discussed sexual and reproductive health issues with their parents was 118 (31.2%). Mothers' educational status of diploma [adjusted odds ratio (AOR)=3.52, 95%CI=1.13-10.95], fathers' educational status of diploma [AOR=3.84, 95%CI=1.29-11.41], students' perceived importance of sexual and reproductive health issues discussion [AOR=6.69, 95%CI=2.04-22.00], students' knowledge about sexual and reproductive health issues [AOR=4.80, 95%CI=2.56-9.01], and students' attitude towards sexual and reproductive health issues [AOR=3.13, 95%CI=1.76-5.57] were identified as independent predictors of parent-student sexual and reproductive health communication.

Conclusion:

The level of parent-student sexual and reproductive health communication is low among secondary and preparatory schools in Fiche town. Therefore, school administration, in collaboration with stakeholders, should facilitate adolescent-friendly services to enhance sexual and reproductive health-related awareness.

Keywords: Sexual and Reproductive Health, Parent-Adolescent/Youth Communication, Student, Fiche, Preparatory school students, School administration.

Article History	Received: February 29, 2020	Revised: May 26, 2020	Accepted: May 31, 2020

1. INTRODUCTION

To begin with, while adolescents are individuals aged between 10 and 19 years, youth are between 15 and 24 years. The two are together called young, people aged between 10 and 24 years. In other words, the term young covers both adolescents and the youth [1]. Because of their developmental stage, young people are exposed to problems like accidental and intentional

* Address correspondence to this author at the Department of Midwifery, College of Health Sciences, Selale University, Fiche, Ethiopia; Tel: +251-912807647; E-mail: mulkb21@gmail.com

injuries, suicide and mental disorders, and substance abuse [2]. It is said that nearly 2 billion people of the world live at a cross-road between childhood and adulthood among which 9 out of the 10 live in developing countries [3].

Studies reveal that the magnitude of ill reproductive health is increasing among young people on account of inherited traditions which discourage discussion between parents and children during early sexual initiation [4]. Worldwide, more than a million STIs are acquired every day [5]. The increased risk of sexually transmitted diseases in adolescents and youths may result in future sexual and reproductive health problems related to fertility and birth [6]. Unwanted pregnancy is also one of the major reproductive health challenges confronted by many adolescents in Ethiopia. Thirty-seven percent of pregnancies among girls aged 20-24 are unwanted because of lack of awareness concerning sexual physiology, limited use of contraceptives and inadequate access to reproductive health information and education [7]. Again, owing to lack of communication, adolescents believe that using contraceptives other than condoms cause infertility [8].

For different reasons, adolescents lack adequate access to reproductive health information, which exposes them to a number of problems [9]. Parent-adolescent/youth communication has the advantage of delaying early sexual initiation supposed to result in unwanted outcomes [10, 11]. In more clear terms, when parents have sexual and reproductive health communication with their children, they shape their behavior positively [12]. Parent-adolescent communication concerning sexuality and reproductive health seems a factor in the study of family influence on sexuality. Thus, parent-adolescent/youth communication concerning sexual and reproductive health matters is often considered salient and perceived to be an effective means of encouraging adolescents/youths to accept responsible sexual behaviors [13]. A study conducted in Northern Ethiopia showed that adolescents did not communicate with their parents on reproductive health issues associated with teenage pregnancy [14]. It was also shown that adolescents who had communication on SRH had less chance of participating in risky sexual behaviors [15] (Fig. **1**). The status of parent-adolescent/youth SRH communication is low in Ethiopia [4, 15 - 22]. In spite of this, the status of this issue is not well known in the study settings in particular. Therefore, this study has been conducted to assess parent-adolescent/youth sexual and reproductive health communication in selected schools.

2. METHODOLOGY

2.1. Study Setting and Period

The study was conducted from March 27 to 30, 2017, in one secondary and one preparatory public schools of Fiche town. The town is located in the central part of Ethiopia, 110 kilometers away from Addis Ababa, the capital city of Ethiopia. A total of 2342 students, 1173 (50.1%) were females who were attending the schools by academic year 2016/2017. There were a total of 40 sections in both schools; each section contained 60 students on average [23].

2.2. Study Design

A school-based cross-sectional study design was employed.

2.3. Source and Study Population

All regular adolescent/ young students attending secondary and preparatory schools in Fiche town were the source population, whereas randomly selected adolescent/young students who fulfilled the inclusion criteria were taken as the study population.

2.4. Inclusion and Exclusion Criteria

All regular secondary and preparatory school students aged 10 to 24 years who were willing to participate in the study were included. Students who had sight problems and sick at the time of data collection were excluded.

2.5. Sample Size Determination

The sample size was determined using a single population proportion formula, taking proportion from a study conducted on parent-student communication in Debre Markos town. The proportion of communication among adolescents is 36.9% [24], level of confidence, 95% $(Z\alpha/2)^2 = 1.96$, 5%, margin of error (d= 0.05), and an additional 10% for possible non-response rate. Accordingly, the sample size $n = [(Z/2)^2 P (1-P)]/d^2$ is $= (1.96)^2 \times (0.369) \times (0.631)/ (0.05)^2 = 358$. Adding a 10% non-response rate, the total sample size was calculated to be 394.

2.6. Sampling Technique

The study participants were selected from *Abdissa Aga high school,* grades 9 and 10 and *Fiche preparatory school*, grades 11 and 12. The calculated sample was first allocated proportionally to both schools. The share of each school was then allocated proportionally to each grade in the school. The sampling frame was also prepared from the already existing students' registration book (roster) in the respective schools' records office. The sections were selected randomly from each grade, and the share of each grade was then proportionally allocated to the randomly selected sections. The study participants from each of the selected sections were also recruited randomly.

2.7. Data Collection Tools

Data were collected using a self-administered question-naire adapted from studies conducted on this issue previously [4, 24, 25]. The questionnaire contained the socio-demographic characteristics of the students and parents, knowledge and attitude of students about sexual and reproductive health issues, and factors affecting parent-student communication of Sexual and Reproductive Health (SRH) issues. The questionnaire was prepared in English and then translated into the local languages (both Afan Oromo and Amharic). The Afan Oromo and Amharic versions were then back-translated to English to check message consistency. The Afan Oromo version questionnaire was pretested on 5% of the study sample in a similar area outside the study site (at Degem secondary and

preparatory school). Necessary modifications like reshuffling the order of some questions and grammar were made based on the results found prior to the actual data collection.

2.8. Data Collection Procedure

The revised questionnaires were distributed by data collectors to randomly selected students who met the inclusion criteria. The distribution was made at the same time in both schools to prevent the contamination of information. Supervisors followed the questionnaire filling activity and helped participants who faced difficulties.

2.9. Data Processing and Analysis

To ensure the quality of data, the entire filled questionnaires were checked for completeness and consistency. Then, data were entered using Epi Data Manager version 4.0.2.101 and exported to SPSS version 21 for statistical analysis. While the descriptive statistical analysis was used to compute the frequency, percentage, and mean for the dependent and independent variables, binary logistic regression analysis was applied to check the association between outcome and explanatory variables. Variables with an association in the bivariate analysis (p-value ≤ 0.25) were taken in multivariable analysis to determine the independent predictors of parent-adolescent communication on sexual and reproductive health issues. In so doing, P-values below 0.05 were considered statistically significant.

2.10. Study Variables

The dependent variable was parent-student communication/discussion on SRH issues. The independent variables included socio-demographic characteristics like age of students, educational status of the parents, living arrangement of students, family size and income. Individual factors such as knowledge of students about SRH issues, their attitude about SRH issues, cultural factors, and beliefs/taboos were also regarded as independent variables.

2.11. Operational Definitions

- **Parent:** This study refers to the bearer and/or guardian of the student.
- **Parent-student Communication:** In this particular study context is a simple discussion on issues like STIs (sexually transmitted infections), sexual intercourse, menstruation, and unintended pregnancy in the last six months. The presence of parent adolescents was considered if they had discussed at least two points from listed above.
- **SRH Knowledgeable:** students who scored points more than the mean score out of prepared knowledge questions on selected SRH topics.
- **Positive Attitude Toward SRH Communication:** Those respondents who had a positive stance toward SRH communication and who scored points more than the mean score out of the prepared attitude questions.
- **Negative Attitude Toward SRH Communication:** Those respondents who had a negative outlook towards SRH communication and who scored points less than the mean score out of the prepared attitude questions.

2.12. Data Quality Control

Data collectors were adolescents who completed grade twelve. In this regard, half-day training was given to data collectors on the objectives of the study, sampling procedure, and on how to check the completeness of the questionnaire. The questionnaire was also pre-tested prior to the start of the actual data collection.

3. RESULTS

3.1. Socio-Demographic Characteristics

As it was said earlier, a total of 394 self-administered questionnaires were distributed to adolescent/young students attending Fiche secondary and preparatory schools. All participants filled the questionnaire and returned it, yet not all of them were complete. In other words, of the 394 participants, 378 completed making a response rate of 95.94%. The mean age of the respondents was 17.39 (±1.51) years. More than half of the participants, 196 (51.9%) were males. Ethnic wise, the majority participants were Oromo, 366 (96.8%) and religion-wise many of them were Orthodox Christians, 340 (89.9%). Most of the participants were attending grades nine, 151 (39.9%) and ten, 143 (37.8%). With regard to living arrangements, more than half of the participant students, 225 (59.5%) is living with their parents (Table **1**). The majority of the participant students' parents were living together in a marital union, 293 (77.5%). Mothers of 149 (39.4%) students could not read and write and 125 (33.1%) students' fathers attended only primary school. Farming is the main occupation on which the parents of the study participants relied on. In this regard, fathers of 207(54.8%) respondents and mothers of 122 (32.3%) of them are farmers (Table **2**).

Table 1. Sociodemographic characteristics of students attending secondary and preparatory schools in Fiche town, Oromia, Ethiopia, June 2017 (N=378).

Variable	Category	Frequency	Percent
Age (in years)	15-19	346	91.5
	20-24	32	8.5
Grade	9	151	39.9
	10	143	37.8
	11	43	11.4
	12	41	10.8

Sex	Male	196	51.9
	Female	182	48.1
Religion	Orthodox Christian	340	89.9
	Protestant	27	7.1
	Waqefata	11	2.9
Ethnicity	Oromo	366	96.8
	Amhara	12	3.2
Living Arrangement	With parents	225	59.5
	With friends	51	13.5
	Living alone	59	15.6
	With relative	43	11.4

Table 2. Sociodemographic characteristics of students' parents in secondary and preparatory schools in Fiche town, Oromia, Ethiopia, June 2017 (N=378).

Variable	Category	requency	Percent
Marital status	Together	293	77.5
	Divorced	45	11.9
	At least one parent not alive	40	10.6
Mother's educational status	Do not read and write	149	39.4
	Primary	126	33.3
	Secondary	28	7.4
	Diploma and above	75	19.8
Father's educational status	Do not read and write	122	32.3
	Primary	125	33.1
	Secondary	18	4.8
	Diploma and above	113	29.9
Mother's occupational status	Housewife	113	29.9
	Government employee	79	20.9
	Farmer	122	32.3
	Merchant	35	9.3
	Private employee	29	7.7
Father's occupational status	Farmer	207	54.8
	Government employee	111	29.4
	Merchant	33	8.7
	Private employee	27	7.1
Family size	≤3	20	5.3
	4-6	202	53.4
	≥7	156	41.3

3.2. Knowledge of Students on Selected Sexual and Reproductive Health

Concerning this, 318 (84.1%) of the respondents have ever heard about sexual and reproductive health issues. In this regard, the primary sources of information according to them were school 238 (74.8%) and mass media 64 (20.1%) (Fig. **2**).

Regarding STI, 370 (97.9%) of the participants reported that they had an awareness of one or more STIs. HIV was the most commonly known STI among respondents, 364 (98.3%) and followed by gonorrhea 235 (63.5%) (Fig. **3**).

Of all participants, 320 (84.7%) of them have awareness about one or more contraception options available. For example, 224 (70.0%) of the respondents know about condom and 195 (60.9%) about contraceptive pills (Fig. **4**).

3.3. Students' Attitudes Towards Selected Sexual and Reproductive Health Issues

The majority of the respondents 333 (88.1%) believed that premarital sex is not acceptable. Again, 196 (51.9%) participants believe that parent-adolescent/young sexual and reproductive health communication has the capacity to delay first sexual intercourse. Similarly, 192 (50.8%) agreed that unmarried couples must use condoms if they want to commit sexual intercourse. Concerning the protection of condoms against STIs and HIV, 213 (56.3%) of the respondents agree that condoms could protect against these infections (Table **3**).

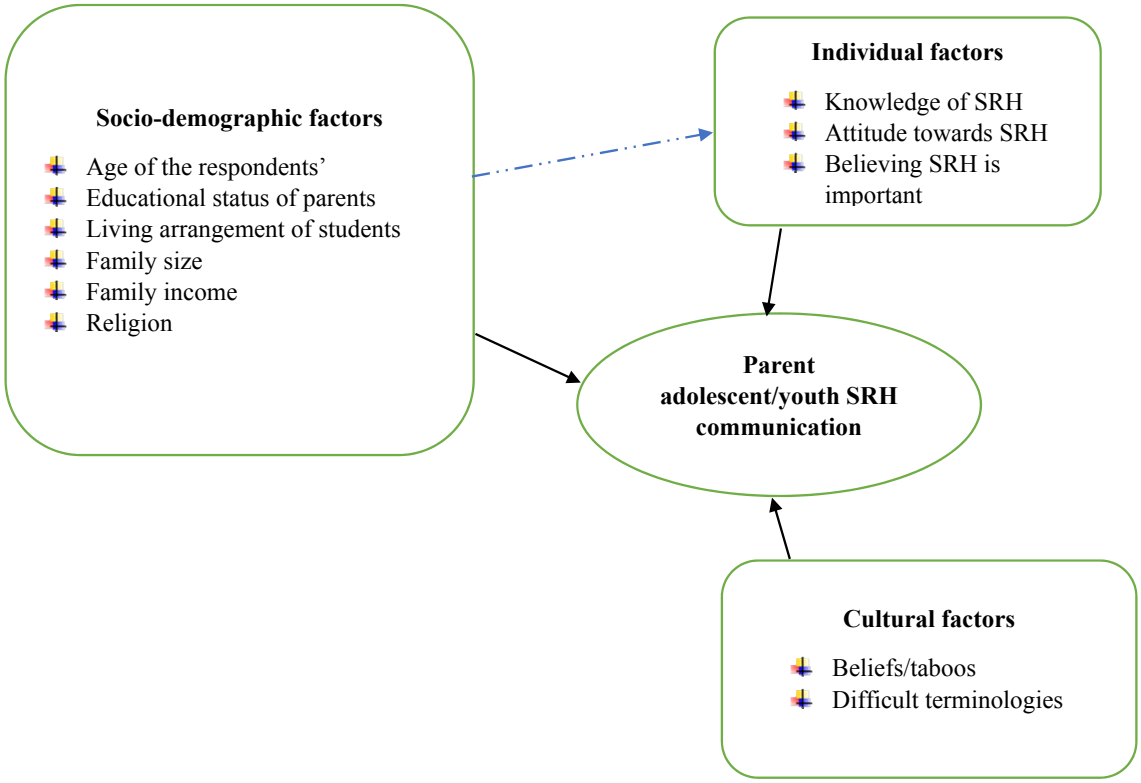

Fig. (1). Conceptual framework showing Parent-adolescent/youth SRH communication, developed by reviewing literature [12, 14, 18 - 22].

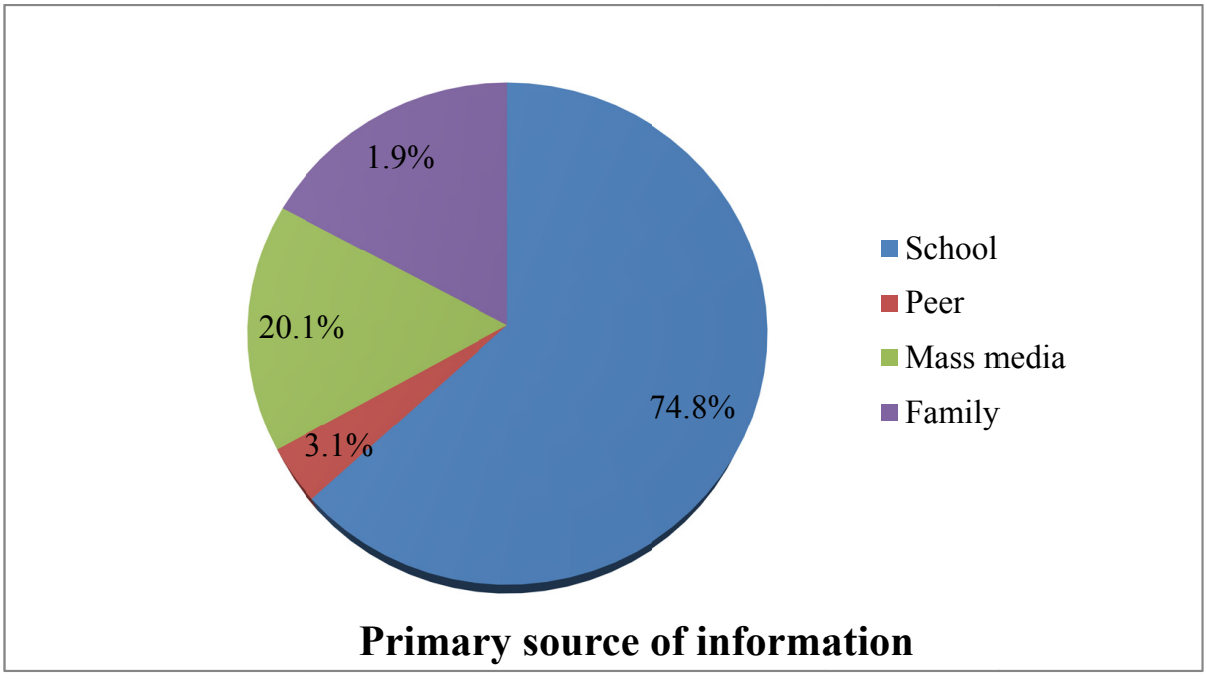

Fig. (2). Source of information on sexual and reproductive health issues among students attending secondary and preparatory schools in Fiche town, Oromia, Ethiopia, June 2017 (N=318).

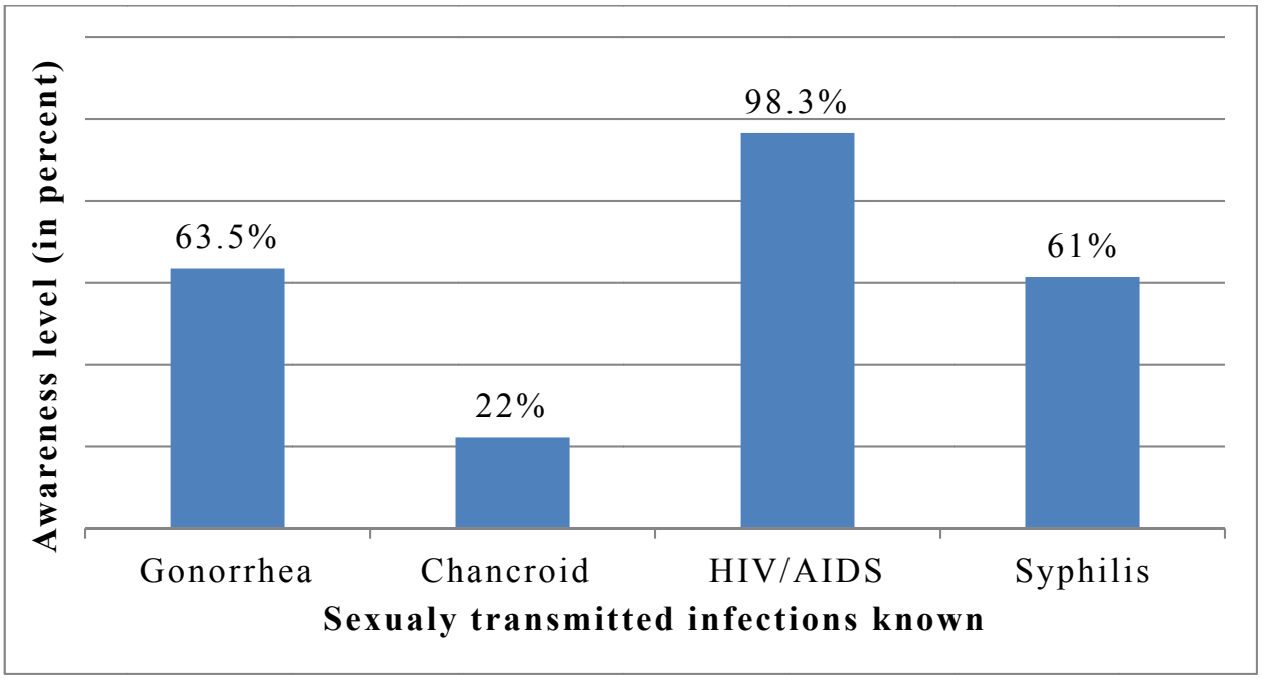

Fig. (3). Knowledge about STIs among students attending secondary and preparatory schools in Fiche town, Oromia, Ethiopia, June 2017.

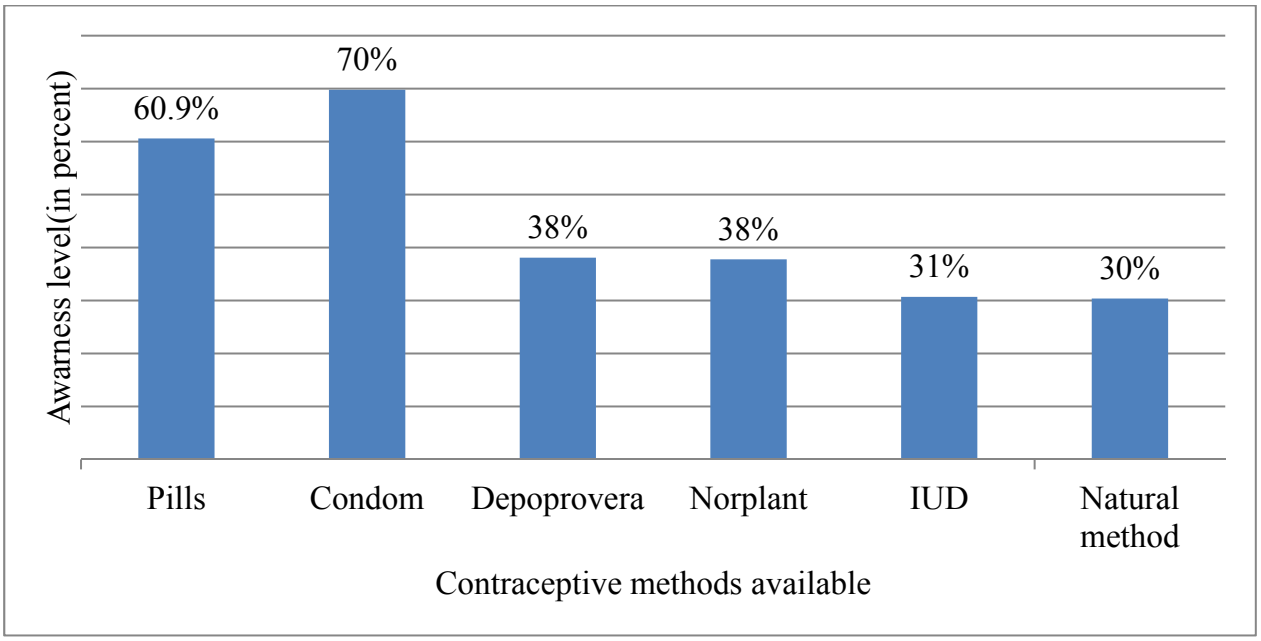

Fig. (4). Awareness of contraceptive methods among students attending secondary and preparatory schools in Fiche town, Oromia, Ethiopia, June 2017.

3.4. Parent-Student Sexual and Reproductive Health Communication

The majority of the respondents, 335 (88.6%) reported that it is important to discuss sexual and reproductive health issues with parents. However, only 118 (31.2%) of the students discussed sexual and reproductive health issues with either of their parents on at least two topics of SRH issues (Table **4**).

3.5. Factors Associated with Parent-Students SRH Communication

Binary logistic regression analysis was used to see the relationship between the dependent variable (students'

discussion of SRH issues with either of their parents) and the independent variables. In the bivariate analysis, sex of the respondents, mothers' occupational and educational status, fathers' educational status, family size, students' knowledge about and attitude towards SRH issues, and perceived importance of SRH issues discussions with parents were found to have a P-value less than 0.25. The multivariable analysis made on the above variables indicate that mothers' educational status above diploma[AOR=3.52, 95%CI=1.13-10.95], fathers' educational status again above diploma[AOR=3.84,95% CI=1.29-11.41], students' knowledge about SRH issues[AOR=4.80, 95%CI=2.56-9.01], students' attitude towards SRH issues[AOR=3.13, 95%CI=1.76-5.57], and students' perceived importance of SRH issues discussion with parents[AOR=6.69, 95%CI=2.04-22.00] were independently associated with students' discussion on at least two sexual and reproductive health topics with either of their parents (Table **5**).

4. DISCUSSION

The current study reveals that only 118 (31.2%) respondents had ever discussed two or more topics of sexual and RH issues with either of their parents. This finding is lower than the results of a study conducted in Debre Markos secondary and preparatory school (36.9%) [24], Mekelle city (57.6%) [4], Boditi town, southern Ethiopia (40.70%) [26], Robe Town, Bale zone, Southeast Ethiopia (47%) [27], and Brong Ahafo Region Ghana (72.8%) [21]. This might be due to differences in the degree of openness between parents and their children in discussing SRH issues. Parents of the present study area might be less open in discussing SRH issues with their children compared to the aforementioned studies. The result is however, slightly higher than a study conducted in Benishangul Gumuz, Bullen woreda where 29.6% of the study participants had ever discussed more topics of sexual and SRH issues with either of their parents [17]. It is also higher than a study conducted in Dera Woreda, Northwest Ethiopia which shows only 8.8% of the participants discussed with their parents [28]. This could be due to differences in sociodemographic profile, degree of openness between parents and students for discussion, and access to reproductive health information.

It was found that 84.7% of students know at least one contraceptive method. This indicates the awareness about the contraceptive method is high. This high percentage of awareness of the contraceptive method may have resulted from the high accessibility of SRH issue-related information in and around the study settings. The contribution of school/youth-based clubs, mass media, and health extension workers might be great in this regard. The awareness of the majority of the respondents about the contraceptive method may open them access to choose from the available contraceptive methods and protect themselves from SRH-associated problems.

Table 3. Attitudes toward sexual and reproductive health issues among students attending secondary and preparatory schools in Fiche town, Oromia, Ethiopia, June 2017 (N=378).

Questions	Category	Frequency	Percent
Premarital sex has no problem on students	Agree	42	11.1
	Disagree	333	88.1
	Not sure	3	0.8
Parent-adolescent communication on SRH issues delays the first sexual Intercourse.	Agree	196	51.9
	Disagree	71	18.8
	Not sure	111	29.4
If couples want to have sexual intercourse before marriage, they must use a condom	Agree	192	50.8
	Disagree	87	23.0
	Not sure	99	26.2
STIs and HIV can be prevented using a condom.	Agree	213	56.3
	Disagree	89	23.5
	Not sure	76	20.1

Table 4. Topic of communication and person to communicate among students attending secondary and preparatory schools in Fiche town, Oromia, Ethiopia, June 2017.

Topic of discussion	N (%) discussed	With whom they discussed*				
		Mother	Father	Bro/sis	Peer	Teacher
Contraception	71(18.8)	64(90.1)	12(16.9)	12(16.9)	34(47.9)	9(12.7)
STI/HIV	151(39.9)	84(55.6)	99(65.6)	43(28.5)	100(66.2)	55(34.1)
Sexual intercourse	24(6.3)	21(87.5)	8(33.3)	9(37.5)	7(29.1)	5(20.8)
Unwanted pregnancy	77(20.4)	70(90.9)	13(16.8)	19(24.7)	34(44.1)	5(6.5)
Condom use	11(2.9)	8(72.7)	5(45.4)	4(36.3)	4(36.3)	1(9.1)
Menstruation	91(50.0)	89(97.8)	2(2.2)	24(26.4)	35(38.5)	3(3.3)

**Multiple responses are possible Bro/sis-Brother or sister.*

Table 5. Factors associated with parent-student sexual and reproductive health communication in Fiche secondary and preparatory schools, Fiche town, Ethiopia, June 2017.

Variables	Categories	Discussion		COR (95% CI)	AOR (95% CI)
		Yes	No		
Sex	Male	51(13.5)	145(38.3)	1	
	Female	67(17.7)	115(30.4)	1.66(1.07-2.57)	0.61(0.35-1.06)
Educational status of mothers	Do not read and write	18(4.8)	131(34.6)	1	1
	Primary	47(12.4)	79(20.9)	4.33(2.35-7.98)	3.34(1.41-7.91) *
	Secondary	15(4.0)	17(4.5)	6.42(2.74-15.05)	5.54(1.63-18.81) *
	Diploma and above	38(10.0)	33(8.7)	8.38(4.25-16.52)	3.52(1.13-10.95) *
Educational status of fathers	Do not read and write	15(4.0)	105(27.8)	1	1
	Primary	35(9.2)	96(25.4)	2.55(1.31-4.96)	1.32(0.53-3.27)
	Secondary	17(4.5)	16(4.2)	7.44(3.11-17.77)	5.25(1.25-22.09)
	Diploma and above	51(13.5)	43(11.4)	8.30(4.22-16.33)	3.84(1.29-11.41) *
Students' perceived importance of SRH discussion	No	113(29.9)	215(56.9)	1	1
	Yes	5(1.3)	45(11.9)	4.73(1.83-12.25)	6.69(2.04-22.00) *
Students' knowledge about SRH issues	Low	22(5.8)	130(34.4)	1	1
	High	96(25.4)	130(34.4)	4.36(2.59-7.36)	4.80(2.56-9.01) *
Students' attitude towards SRH issues	Negative	54(14.3)	175(46.3)	1	1
	Positive	64(16.9)	85(2.2.5)	2.44(1.56-3.81)	3.13(1.76-5.57) *

*P-value<0.05,COR-crude odds ratio, AOR-adjusted odds ratio and CI- confidence interval

Regarding STIs knowledge, the study shows that 98.3% of the participants have awareness about HIV which is in line with a study conducted in Ghana [21]. HIV is one of the most highly spoken and targeted health issues in the modern era, and the widespread of information to the public about it might make the majority of the participants in the current study get aware of it.

Findings from the current study also identified mothers' educational status is among factors that predict parent-adolescent/youth sexual and reproductive health communication. More specifically, students whose mothers have completed primary school were 3.34 times more likely to discuss SRH issues and students whose mothers completed secondary school were 5.54 more likely to discuss about the same issues with either of their parents compared to students whose mothers are illiterate. Here, one has to note that this finding mirrors with some studies that have been done previously. For example, a study conducted in Boditi (town in southern Ethiopia) reveals similar outcome in that students from educated family background discuss more openly than their illiterate family counterparts about SRH matters [26]. Therefore, from this finding, it is possible to deduce that education is a key tool in increasing the awareness of mothers about SRH matters and their openness for discussion concerning issues that are connected with their children. In short, the bare bones of the argument concerning education seems to lay on the statement that the more awareness of mothers about SRH issues, the more open they become and the more freedom they give to their children to discuss SRH issues.

The same is true with fathers. It was found that fathers' educational status is one factor that positively determines parent-student SRH issue discussions. That is, students whose fathers received a diploma and above were 3.84 times more likely to discuss SRH issues with either of their parents compared to students whose fathers could not read and write. A study in Haiyk Town (North East Ethiopia) also shows that educational status of parents influences parent-adolescent/ youth SRH communication positively [29].

Students who did not accept the importance of discussion about sexual and reproductive health issues with either of the parents were 6.69 times less likely to discuss SRH issues than their counterparts. This result is similar to the study conducted at Debre Markos secondary and preparatory school [24] and in Boditi town, southern Ethiopia [26].

Knowledge of students concerning SRH was strongly associated with parent-student sexual and reproductive health issues discussions. Respondents who knew well about SRH issues were4.8 times more likely to discuss SRH issues with either of their parents when compared to those who had low knowledge. This is similar to the study conducted in Dire Dawa Ethiopia [25] and in Harar, Eastern Ethiopia [30]. Increased discussion with increased knowledge may help students to protect themselves and their friends from bad sexual practice and its consequences.

Students' attitudes towards SRH issues were also strongly associated with parent-student sexual and reproductive health communication. That is, students who had a negative attitude towards SRH issues were less likely to discuss when compared to students who had positive attitude. And this mirrors with a study conducted in Uganda [31] and Harar, Eastern Ethiopia [30].

5. LIMITATION OF THE STUDY

Students' self-reported data might not provide complete information about the communication they have with their parents because their communication was not observed. There were no data received from the parents' side regarding the details of the communication they had with their children.

CONCLUSION AND RECOMMENDATION

Students in the study settings knew various components of SRH issues. Students who were more knowledgeable about SRH issues and had a positive attitude toward these issues were open to discussion with their parents. In this regard, students from literate parents discuss more about SRH matters compared to students from illiterate ones. All in all, school administration in collaboration with other stakeholders should establish an adolescent friendly reproductive health centers and should increase awareness by delivering various SRH issues related services at the center.

AUTHORS' CONTRIBUTIONS

MF involved conceiving the idea, study design, data analysis, and interpretation, and managing the overall progress of the study. TN involved in study design, data analysis, and writing up of the manuscript. HA and TA contributed to study design, data analysis, and revising the manuscript. The final manuscript was read and approved by all authors.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Ethical approval and clearance were received from the Research and Ethics Committee (REC) of the School of Allied Health Sciences, Addis Ababa University, Ethiopia (study protocol No. 139/2017). The letter of permission was written to the Regional Education Bureau and to the zonal school office and finally to each school to conduct the study.

HUMAN AND ANIMAL RIGHTS

No animals were used in this research. All human research procedures followed were in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national), and with the Helsinki Declaration of 1975, as revised in 2013.

CONSENT FOR PUBLICATION

The purpose of the study was explained to the respondents, and consent was obtained.

AVAILABILITY OF DATA AND MATERIALS

All data generated and/or analyzed during the study are available from the corresponding author [M.F] upon reasonable request.

CONFLICT OF INTEREST

The authors declare no conflict of interest financial or other wise.

FUNDING

Fund was obtained from the Addis Ababa University School of Allied Health Sciences.

ACKNOWLEDGEMENTS

The authors would like to thank Addis Ababa University for funding to conduct this study. Besides, we are sincerely thankful to Seyoum Haile (Ph.D.) senior staff in the department of foreign language and literature for editing the paper thoroughly.

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