



Original Article

Reproductive health service utilization and associated factors among adolescents at public school in Adama town east Shewa Ethiopia, 2018Abenet Menene Gurara¹, Admasu Belay Gizaw^{2*}, Awoke Koyachew Ayalew³, Aliye Kediro Adem¹¹Department of Nursing, Arsi University, Assella, Ethiopia²School of Nursing and Midwifery, Institute of Health, Jimma University, Jimma, Ethiopia³Adama General Hospital and Medical College, Adama, Ethiopia

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ABSTRACT

Background & Aim: Reproductive health services utilization is an important component of health services in preventing adolescents' sexual and reproductive hedgies & take corrective measures. The main purpose of this study is to determine reproductive health services utilization status and associated factors among adolescents at public schools in Adama town Ethiopia.**Methods & Materials:** Institution based cross-sectional study design was used with a total sample size of 367 adolescents in the schools. The sample size was proportionally allocated to grade nine, ten, eleven, and twelfth. The study subjects were selected by simple random sampling. A Standard pre-tested self-administered questionnaire was used to collect data after getting informed consent from the study participants. Data were entered and analysed using SPSS version 20 software. Descriptive statistics and Logistic regression were done to describe and identify factors associated with reproductive health services utilization. A P-value of less than 0.05 was considered to declare a level of significance.**Results:** The magnitude of reproductive health service utilization in this was 122(34%). Discussion with a sexual partner and peer, student's educational status, sex, knowledge about the availability of reproductive health service were among the factors associated with the use and non-use of RH service.**Conclusion:** Utilization of Reproductive Health services among adolescents in the study area was low. Therefore, interventions such as advancing adolescents' knowledge, encouraging open discussion forum, strengthening of youth centers, and school reproductive health clubs are important.**Introduction**

Reproductive health is a state of complete physical, mental, and social well-being in all matters relating to the reproductive system. It implies that people can have a satisfying and safe sex life, the capability to reproduce, and the freedom to decide if, when, and how often to do so (1). Sexual and reproductive health (SRH) during adolescence affects not only a wide range of health but also a person's future economic wellbeing, status in the community, and overall ability to reach their full potential. It is strongly linked to their particular social, cultural, and economic environment (2).

Access to health care and sources of education, information, and support also varies widely.

Worldwide, more than 16 percent of people are adolescents aged 10-19 an estimated 250 million adolescent girls aged 15-19 live in developing countries and account for about one-sixth of all women of reproductive age 15-49 (3). About 33% of Ethiopian populations are aged 10-24 years, with nearly 22% of them being adolescents, aged between 10 and 19. Most adolescents engage in early and unplanned sexual activity, which incurs the risk of unintended pregnancies and transmission of sexual infections. The consequences have social, economic, and physical health ramifications like illegal abortion, dropping out from school, out of wedlock births as well as

*Corresponding Author: Admasu Belay Gizaw, Postal Address: School of Nursing and Midwifery, Institute of Health, Jimma University, Jimma, Ethiopia. E-mail: admasu.belay@ju.edu.et

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contracting sexually transmitted diseases (STDs) and HIV(4).

Current approximations indicated that 17.0% of the global population, 20.0% of Sub-Saharan Africa, and 17.9% of the Ethiopian population is composed of youths aged 15-24 years. Globally adolescences are facing diverse sexual and reproductive health (SRH) problems like unwanted pregnancy, unsafe abortion, sexually transmitted infections (STI) including human immune deficiency virus (HIV) (5).

The utilization of reproductive health services is an important component in preventing adolescents from different sexual and reproductive health problems. Worldwide more than 2 million adolescents are living with HIV (5). According to the WHO, about half of all HIV infections worldwide occur among people aged 25 years and under. And up to 100 million youths become infected with a curable STD. Teenage pregnancy is a major health concern because of its association with higher morbidity and mortality for both the mother and the child. Childbearing during adolescence is known to have adverse social consequences, particularly regarding educational attainment, as women who become mothers in their teens are more likely to drop out of school (6-7). Access to information, education, and services is central to the promotion of sexual and reproductive health and rights (SRHR) among young people. It enables young people to make informed choices on sexuality matters, hence reduce teenage pregnancies and STI (8).

A survey conducted in 70 developing countries, 35 countries in Africa including Ethiopia, 22 in Asia, and 13 in Latin America and the Caribbean about sexual and reproductive health services utilization by adolescents showed modern contraceptive use was low among adolescents in all regions of Africa. In more than two-thirds of the countries in Africa, contraceptive use was lower than 20%. The proportions were highest by far in Swaziland (43%), Namibia (39%), and Zimbabwe (35%). In Ethiopia according to the 2016 EDHS report showed

that only 7.4 percent of all female adolescents between age 15-19 report the current use of any modern contraceptive method (9).

Utilization of VCT was lowest in Western Africa, where 2–11% of adolescents had been tested and it falls between the range 15% and 33% across the continent. A study conducted in USA STI testing and treatment services utilization was not more than 17% across the years [21]. In Africa (Niger and Zimbabwe), less than one in three adolescent women with an STI or an STI symptom obtained utilized the recommended care modalities for STI managements, but the proportion that went to a health facility was lowest in Kenya (13%), Niger (13%) and Zimbabwe (17%) the highest level was in Egypt (68%) (11).

Certain individual characteristics such as having a history of sexual intercourse, having knowledge of reproductive health, discussion with health workers, discussion with a peer group, discussion with a sexual partner, perception of risk towards HIV/AIDS, history of STI syndrome, substance use, feeling of being young to start modern contraceptive and feeling of afraid are factors affects utilization of SRH. Poor access to SRH has been associated with young people's vulnerability to sexual health risks, such as early pregnancies and sexually transmitted diseases (11).

Among socio-demographic and socio-economic factors: Age, being female adolescent, being a student, educational status, parental communication, religious affairs, maternal education and exposed to mass media (having functional television and radio at home, and access to a newspaper on sexual and RH issues) were found to be associated with reproductive health service utilization in different studies (12). Domestic findings in Bahir Dar, Gondar, Debre Markos, Harar, Bale, Madawelabu, and Jimma also support these findings (13-20, 29).

Federal Ministry of Health of Ethiopia launched numerous strategies to promote adolescents and youth reproductive Health Services which includes National

Reproductive Health Strategy implemented during 2006–2015, and National Adolescent and Youth Reproductive Health Strategy implemented during 2007–2015, National Adolescent and Youth Health Strategy implemented during (2016–2020), Standards on Youth Friendly Reproductive Health Services and tools for planning, implementation, and monitoring Reproductive Health Services at different levels of the health system. Despite policy actions and strategic efforts made to promote Sexual and Reproductive Health Service utilization among adolescents in Ethiopia, its utilization remains very low and Ethiopia still has an enormous gap in retrieving and addressing adolescents' reproductive health services (21).

Cultural ideas, values, and practices are usually very resistant to change, particularly in the Sexual Reproductive Health where open and, frank discussion and debate are not usual, let alone encouraged. While others were not using SRH services because of inconvenience service hour, feel fear to be seen by others, too long waiting hours, providers are judgmental and unfriendly, feel embracement at seeking RH services (21). The majority of adolescents did not discuss with their parents, friends, and health care providers about sex related issues. About three fourth of adolescents in Ethiopia felt shame to talk to family about sex related issues. In the other way, the majority of adolescents discussed with their brothers, sisters, boyfriends and girlfriends (22).

In Ethiopia, 13% of women age 15-19 have begun childbearing: 10% have given birth, and an additional 2% are pregnant with their first child (23). A few studies have been done in Ethiopia regarding reproductive health service utilization particularly the study area. Therefore, assessing the utilization of reproductive health services and its associated factors in general and the adolescents, in particular, are very vital in designing, implementing, and monitoring effective adolescent-friendly intervention programs.

Methods

Study Design

Institution-based cross-sectional study.

Study Area & Period

The study was conducted at public schools in Adama town East Showa Oromia region Adama Town. The town is located in the Rift Valley region, 99 Km east of the capital city, Addis Ababa, Ethiopia in 2028. According to information obtained from city administration, the total population is estimated to be 324,000. Data obtained from the school administrative registered office revealed the town has three governmental secondary and two preparatory schools with 11982 total number of students attending in secondary (grade 9-10) and preparatory (Grade 11th and 12th) school from those 5936 were males and 6046 were females. Regarding health facilities obtained from the Adama city administration health office that is found in the city, there is one public, four private Hospitals, Seven public health centers. In addition, there are 38 private and 02 NGO medium clinics. The study was conducted at a public school from March to June 2018.

Sample size determination

A total of 367 students were selected for this particular study by standard sample size calculation formula for a single population.

Sampling techniques

All the five public schools in Adama town were included in the study. Stratification by sex for each grade was done to maintain sex balance. The total sample size was allocated to the total number of males and females in each grade in each of the five high schools based on the proportionate allocation. Finally, the study subjects were selected from their attendance sheet using a systematic random sampling method.

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Data collection instrument and procedure

The questionnaire was developed by combining the John Cleland's Illustrative questionnaire for interview-survey with young people's (21), and also different kinds of literature were reviewed to achieve the research objectives (9, 11-12, 16 and 30). The main points included in the questionnaire were: socio-demographic characteristics; adolescents' individual attribute regarding sexuality and reproductive health; service accessibility (geographical accessibility); and four main aspects of RH services (sexual and RH information and education, modern contraceptive, voluntary counseling and testing for HIV, STI diagnosis and treatment). Three diploma nurses were trained on how to assist students, take consent, and how to monitor the overall data collection process. In order to identify the clarity of questions and their sensitiveness as well, pre-testing of the instrument on 5% of the study subject in other selected schools were conducted. During the pre-testing discussion was held with the students on the problems they encountered during filling the questionnaire and correction was incorporate in the final questionnaire.

Data processing and Analysis

After checking for its completeness, data was entered and analysed by SPSS version 21. Descriptive and analytical statistics including, Bivariate and multivariate analysis was employed. Candidate variables with P-value <0.25 in binary regression were entered into multiple logistic regression; finally, a corresponding p-value of <0.05 was considered as a cut-off point to declare statistically significant association.

Ethical Consideration

Ethical clearance and permission were obtained from Adama Hospital Medical College Ethical Review Board and Permission was obtained from the Adama

education bureau and respective schools. Written informed consent was obtained from individual respondents and the school dean bureau. Confidentiality of the information was assured and the privacy of the respondents was maintained. Respondents have been told that their participation was completely voluntary and they have the right to withdraw the interview at any stage.

Results

Socio-demographic characteristics of the study participant

From a total of 367 participants, 359 of them responded to the questionnaires yielded a response rate of 97.8 %. Out of 359 participants, 152(42.3%) were males and 207 (57.7%) were female. two hundred thirty-six (65.7%) respondents were Orthodox, protestant followed by eighty-three (23.2%), Among the respondents, two hundred ten (58.5%) and one hundred forty-nine (41.5%) were attending grade 9th to 10th and 11th to 12th respectively (Table 1).

Family characteristics of participants

Regarding characteristics related to adolescent families, from the total respondents, 251(69.9%) were living with their parents, followed by 45(12.5%) living with relatives and the rest were either with mother only or with father. Regarding the educational status of their mothers, 135(37.6%) of their mothers were attended only their primary education, followed by 88 (24.5%) secondary education, 59(16.5%) above secondary education and the rest 77(21.4%) were not attended formal education at all. Regarding the habit of communication about reproductive Health Services, only 125(34.8%) communicates with their parents and the rest were not. Majority 82 (22.8%) reported their family's income of 1401-2350 per month and only 78(2.7) were >5000 respectively (Table 2).

Table 1. Socio-demographic characteristics at public school in Adama town east Shewa Oromia Ethiopia, 2018 (N=359)

Sociodemographic characteristics	N (%)
Age	
10-14	12 (3.3)
15-19	347 (96.7)
Sex	
Male	152 (42.3)
Female	207 (57.7)
Marital status	
Single	325 (90.5)
Married	17 (4.7)
Divorced	14 (3.9)
Separated	3 (0.8)
Educational status	
High school	210 (58.5)
Preparatory school	149 (41.5)
Religion	
Orthodox	236 (65.7)
Muslim	40 (11.1)
Protestant	83 (23.2)
Ethnicity	
Amhara	105 (29.2)
Oromo	200 (55.7)
Tigre	21 (5.8)

Table 2. Family characteristics at selected public school in Adama town east Shewa Oromia Ethiopia, 2018 (N=359)

Study Variables	N (%)
Habit of communication about RHS with both parents	
Yes	125 (34.8)
No	234 (65.2)
Maternal educational status	
No education at all	77 (21.4)
Primary school	135 (37.6)
Secondary school	88 (24.5)
Above secondary school	59 (16.5)
With whom do you live	
Living with both parents	251 (69.9)
With my mother only	38 (10.6)
With father only	3 (0.8)
Alone	22 (6.1)
With relative	45 (12.5)
Family's income per month	
150- 650	20 (5.6)
651-1400	39 (10.9)
1401-2350	82 (22.8)
2351-3550	64 (17.8)
3551-5000	76 (21.2)
>5000	78 (21.7)

Information about RHS on Adolescent

Sixty (16.7%) of the study participants were reported that they have had a

discussion on reproductive health issues with peers. Discussion on the same issues was also reported by 52 (14.5%) and 27 (7.5%) of the respondents with their sexual

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partner and with health workers respectively. Regarding the accessibility of reproductive health service delivery points; the study participants were asked about the nearest service delivery point, estimated distance from home, and the average time is taken to walk. The mean distance from the respondents' home to the nearest service delivery point was 1.43km and it was

reported to take an average of 19 minutes to walk. The majority of the participants said that there was an RH service delivery center within a 30-minute walk (87.7%) and within 1.6 km radius (50.7%) from their home. In this study, television and newspaper were found to be the main source of information about RH services constituting 50.6% and 23.5% for each respectively (Table 3).

Table 3. Information about RH services among Adolescents at public school in Adama east Shewa Ethiopia, 2018 (n=359)

Information about RH	N (%)
Knowledge about reproductive health service	
High	279 (77.7)
Low	80 (22.3)
Exposure to mass media	
Yes	547 (96.7)
No	12 (3.3)
Habit of communication about RHS issue with a sexual partner	
Yes	52 (14.5)
No	307 (85.5)
Habit of communication about RHS issue with peer	
Yes	60 (16.7)
No	299 (83.3)
Habit of communication about RHS issue with a health worker	
Yes	27 (7.5)
No	332 (92.5)
Distance of RHS delivery health facility	
<1.6 kms	177 (49.3)
> 1.6 kms	182 (50.7)
Walking time of RHS delivery point in minutes	
< 30 minutes	315 (87.7)
> 30 minutes	44 (12.3)

Utilization of reproductive health services by Adolescents

A total of 359 adolescents were involved in the study, 122(34%) of Adolescents have utilized the reproductive health services like modern contraceptives, Voluntary Counselling and Testing of HIV, STI prevention and management and information about Reproductive Health Issues. Regarding the utilization of modern contraceptives in this study, findings revealed that 36 (15.5%), concerning voluntary counseling and testing of HIV utilization among adolescents seems equivalent across different places. The

findings of this study revealed 52 (14.5%) and 60 (16.7%) have a habit of communication about sexual and reproductive health issues with their sexual partner and peer respectively. In this study the study participants have a high knowledge level about available Reproductive Health Services in the town 279 (77.7%).

Factors associated with Utilization of reproductive health Services

In order to identify variables that can significantly affect the utilization of RH services both binary and multiple logistic

regressions were used. Bivariate analysis Sex, student's educational status, discussion of sex-related issues with a sexual partner, peer, knowledge about reproductive health services, knowledge about the availability of reproductive health service provider, and service accessibility were found to have a

significant association with Adolescents RH service utilization. On multivariate logistic analysis sex, student's educational status, discussion of sex-related issues with a sexual partner, peer, and service accessibility were continued to be significant (Table 4).

Table 4: Factors associated with RH services utilized utilizing among adolescent at public school in Adama town east Showa Oromia Ethiopia, 2018

Study variables	Utilization RH Services		COR (95%CI)	AOR (95%CI)	P-value
	Yes	No			
Sex					
Male	74(48.7)	78(51.3)	3.143(1.998,4.944)	3.246(1.881,5.601)	<.001
Female	48(23.2)	159(76.8)	1.00	1.00	
Educational Status					
Grade 9 th - 10 th	54(25.7)	156(74.3)	0.412(.264,0.645)	0.441(0.261,0.748)	0.002
Grade 11 th - 12 th	68(45.6)	81(54.4)	1.00	1.00	
Habit of communication about RHS sexual partner					
Yes	28(53.8)	24(46.2)	2.644(1.456,4.802)	2.954(1.229,7.101)	0.016
No	94(30.6)	213(69.4)	1.00	1.00	
Habit of communication about contraception, STI, HIV/AIDS and other reproductive health issues with peer					
Yes	32(53.3)	28(46.7)	2.654(1.510,4.666)	2.731(1.163,6.415)	0.021
No	90(30.6)	209(69.9)	1.00	1.00	
Knowledge about Reproductive health services					
Yes	103(36.9)	176(63.1)	1.879(1.063,3.321)	2.110(1.075,53,4.141)	0.030
No	19(23.8)	61(76.2)	1.00	1.00	
Walking time to RHS provider point					
≤30 minutes	114(36.2)	201(63.8)	2.552(1.147,5.679)	3.457(1.338,8.930)	0.010
>30 minutes	8(18.2)	36(81.8)	1.00	1.00	

Discussions

Reproductive Health Service Utilization

This study showed that the magnitude of Reproductive Health Service utilization among adolescents was 34%. This finding was almost similar with the result of a study done at Jimma town (22) in which current Reproductive Health Service users are 34.7%, but the result was higher than study at Bahir Dar 32.2% (17) and lower when compared with the studies conducted in Hadiya 38.5%, Goba town 37.2% (7), Southwest Oromia 36.5% (6) and North Shewa zone 36.5% (12). The difference might be related to socio-demographic and socio-economic & individual factor factors and level of knowledge about Reproductive Health Services, educational status, level of

discussion with health workers, peer group, and sexual partner. On the other hand, this finding was not consistent with a study conducted in Mandalay city, Myanmar and Tanzania where 75% of adolescent were utilized Reproductive and sexual Health health services (67%) (9, 13). The difference might be due to differences in the source of information, awareness level, the health care system, and service accessibility among these countries.

Utilization of modern contraceptive regarding utilization of modern contraceptive

In this study, findings revealed that 36 (15.5%), relatively consistent compared with study at Jima town 16.5%. The consistency might be due to similarities of service

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delivery centers, socio-demographic characteristics of the respondents, knowledge about Reproductive Health Service components and source of information, and exposure to a relatively common source of media in both study areas. The finding of this study is lower compared to a study conducted at North Shewa (12) in which the finding showed 95.7% of the adolescents heard about family planning, but to the contrary adolescents in Southwest Ethiopia might not access service delivery points. Only 11 (8.2%) adolescents heard about family planning. The findings of this study were much lower than the results of a study conducted in Ghana in which 49% of adolescents' utilized modern contraception (30).

Voluntary counseling and testing of HIV

Concerning voluntary counseling and testing of HIV utilization among adolescents seems equivalent across different places. For instance; 74.1% of Madawelabu University students 72.2% (17) adolescents in Gondar town (25) increased to 88.4% among sexually experienced 67.3% in Goba town (29) were obtained VCT service. The other findings in Hadiya zone (18) reports indicated that the utilization of VCT 68.9%, this finding lowered 83(35.8) % and higher in Kazakhstan (15%), Mongolia (6%) and Kyrgyzstan (6%) (15). Possible justification might be sexual experience and marital status. Regarding STI treatment, in this study 43(18.5%) higher when compared with a study done at Mekelle Town (15%) in Kenya (13%), Niger (13%) and Zimbabwe (17%) the lowest in Egypt (68%) (11, 12, 16, 23-24), the variation might due to information and education communication utilization. Regarding the IEC related issue of SRH utilization in this study, findings showed to 70 (30.2%). The result is lowered when compared with domestic findings in rural areas of East Gojjam 38.3% adolescents had ever heard about RH services, this variation could possibly be justified by

exposure to mass media, socio-demographic characteristics of the respondents and knowledge difference.

Habit of communication about reproductive health issues

The findings of this study revealed 52 (14.5%) and 60 (16.7%) have a habit of communication about sexual and reproductive health issues with their sexual partner and peer respectively. This finding is significantly lower compared to study conducted at Debreworkos town North West Ethiopia, in which the finding showed 36.9% of respondents had discussed Sexual and reproductive Health Issues with their parents and sexual partner, a study conducted in Bullen wereda (29%), Hawassa (30.4%), Lesotho (20%), a study conducted in Zimbabwe (44%) and Malawi (74%) (16, 28). The difference might be due to the relative age difference among the study participants being enrolled under the adolescent category and also might be the wrong perception of family members to talk about sexual and reproductive issues for students.

Knowledge about reproductive health services

In this study, the study participants have a high knowledge level about available Reproductive Health Services in the town 279 (77.7%). The findings of this study are much better compared to a study conducted at Debreworkos town North West Ethiopia in which only 57.3% of the respondents were knowledgeable about Reproductive Health Service issues. The difference might be due to differences in cultural and religious (20).

Factors associated with reproductive health service utilization

Grade 9th to 10th students was 0.441% less likely to use Reproductive Health Services (RHS) compared to grade 11th to 12th students [AOR 0.261(0.227, 0.748)]. This finding is supported by studies in

northwest Ethiopia where the educational level difference is significantly associated with RH services utilization (20). This is due to more disclosure for RHS information and secondary behavioral change. In this study from the total study participants about 17 (4.7%) of the adolescents were married at the time of the survey. This finding is lower with the findings of the study done in the Bale zone southeast were 153(42.7%) (7).

The likely hood of RH service utilization was 3.246 times higher among males than females.

Opposite to this finding study done on reproductive health needs and service utilization among youths in west Badewacho Woreda, Hadiya(18) Ethiopia, female youths were more likely to utilize reproductive health services. But study findings from Metekel (27) and rural Ethiopia and Nigeria found results in line with our findings (17, 26, 27).

Ever discussed RHS service 2.731(AOR= 1.163, 6.415) times more likely use RHS services than their counterparts. The opposite to this finding in domestic findings in north Shewa (12), those ever not discussed about RHS service 5.074(AOR=5.074, 95%CI: 2.070, 12.440) times more likely use FP services than their counter parts. It is known that measuring service accessibility needs multiple considerations.

Geographical accessibility is among the one and the most important parameter to assess service accessibility. Though there are different ways to measure, distance from home, and walking time-based on In this study, it was found to be geographical accessibility was 87.7% compared 95% in Jimma town (10). Possibly, the distribution of service delivery points in the study area socio Economic difference of the respondent across the two areas might consider as a cause for the discrepancy.

Conclusion

Even though the majority of the adolescents had high geographical accessibility and fair knowledge on RH

services and service providers, utilization of RH services among adolescents in the study area was low. Voluntary counseling and testing (for HIV) was the most frequent service that the adolescents used and on the contrary, modern contraceptive was the least. Discussion with a sexual partner and peer, student's educational status, sex, knowledge about the availability of reproductive health service were among the factors associated with the use and non-use of RH service.

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Conflict of Interest

The authors declared that they have no conflict of interest.

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