Utilization of sexual and reproductive health services and associated factors among adolescents in youth-friendly service implemented and non-implemented high school of South Ari District, South Omo Zone, Southern Ethiopia, 2019.

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Abstract

Background

In Ethiopia a number of efforts have been made to support sexual and reproductive health services (SRHS) for adolescents. However, there is limited information regarding the level of SRH utilization and associated factors among adolescents. Therefore, this study aimed to assess the magnitude of utilization of sexual and reproductive health services and associated factors among secondary school adolescents in youth friendly services (YFS) implemented and non- implemented areas of South Ari Woreda, South Omo zone, Southern Ethiopia, 2019.

Methods

Institution based comparative cross-sectional study with multistage stage sampling procedure was employed. Data were collected by self-administered questionnaire. The collected data were entered in to Epi Data version 4.4.1 software and then exported to SPSS version 20 statistical packages for further analysis. Descriptive statistics were computed and summarized by tables, frequencies, graphs, mean, and proportion. Both Bivariate and multivariable analysis were carried by using binary logistic regression. Variables with a p-value ≤ 0.25 in Bivariate logistic regressions were taken as potential candidate for multivariable logistic regression analysis to control confounders. Association between reproductive health services utilization and associated factors were reported by odds ratio at 95% CI. Variables having p-value less than 0.05 in multivariable logistic regression model were considered as statistically significant.

Results

The magnitude of SRHS in YFS implemented and non- implemented schools were 33.8% [95% CI (28.2-40.4)] and 9.4% [95% CI (5.6, 13.6)] respectively. Grade ten level adolescents and those who discuss SRH issues with their family members were three times
[AOR=3.28, 95% CI (1.7, 6.29)] and [AOR=3.3, 95% CI (1.47, 7.41)] more likely to have sexual and reproductive health care-seeking behavior as compared to grade nine level adolescents and those who didn’t discuss respectively. Furthermore, adolescents who travel less than 30 minutes were six times [AOR=5.72, 95% CI, 2.58, 12.64] more likely to uptake the SRHS as compared to those travel more an hour.

Conclusion
The magnitude of utilization of SRH services were low in YFS non implemented school when compared to YFS implemented school. There is a need of more efforts to scale up SRHS in YFS non implemented schools among stakeholders at different hierarchies. In addition, it is better to promote open discussion with adolescents at family level, and emphasizes should be given for women education.

Background
The World Health Organization defines Adolescence as the age group of 10–19 years old (1). Adolescence is characterized by significant physiological, psychological and social changes that put adolescents for high risk of sexual and reproductive health (SRH) problems (2, 3).

The concern for adolescent sexual and reproductive health services (ASRHS) have been growing. This is mainly because they are vulnerable to health risks, especially those related to sexual and reproduction health (4, 5).

The most common adolescent problems related to sexuality and reproductive health include HIV/AIDS, unwanted pregnancy, unsafe abortion, early marriage and teenage pregnancy and sexually transmitted infections (5). Secondary school students are the most vulnerable group for RH problems due to their inclination to be engaged in risky sexual behavior(6).

In Ethiopia, the sexual and RH of young people has become a major public health concern.
Among the many sexual and RH problems faced by adolescents and youth in Ethiopia are gender inequality, sexual coercion, early marriage, polygamy, female genital mutilation, unplanned pregnancies, closely spaced pregnancies, abortion, STIs, and AIDS (7, 8). Worldwide, an estimated 260,000 adolescents between the ages of 15 and 19 were newly infected with HIV in 2016. Almost three quarters of those new infections were in sub-Saharan Africa, where 7 in 10 infections occurred among adolescent girls. As HIV prevention and treatment improve, young children are living longer and surviving into adolescence. As a result, an estimated 2.1 million adolescents aged 10 to 19 were living with HIV worldwide in 2016-15 per cent more than in 2010. Yet in 2016, only one third of this cohort had access to ART(9).

Young people from sub-Saharan Africa countries are more at risk of sexual and reproductive health problems than those young people from around the world(10). The region remains the most affected region in the world with an estimate of 22.5 million people living with HIV and approximately 1.7 million new infections occurred in the region. Furthermore, premarital sexual activity has the highest rate in Sub-Saharan Africa; where more than half of girls aged 15-19 have sexual experience(11).

In Ethiopia, very few studies have examined the level of utilization of Adolescent friendly reproductive health services in urban and rural areas. According to the 2016 Ethiopian Demographic and Health Survey, contraceptive use among currently married women of 15-19 years of age was only 31.9%, with nearly 0% utilization of permanent methods, 4.9% and 0.9% utilization of implants and IUD respectively.

Moreover, adolescent sexual and reproductive service is also not sufficiently organized by qualified and dedicated staff, space/room and time. Health facilities also provide AYSRH services as part of the routine health care with no particular focus on AYSRH(12, 13).

Understanding the differences in care-seeking pattern is key in designing interventions
aimed at improving health care service delivery, including prevention and control of reproductive health problems among high school adolescents. For the proper planning of appropriate health services for adolescents, it is crucial to have knowledge of the pattern of their use. Therefore, this finding will help to give a recommendation which is used as evidence and information for government, NGOs, planners and programmers.

Methods

Study design, Period and Setting

School based comparative cross-sectional study design was used to assess the extent of Sexual and reproductive health services utilization among youth friendly service implemented and non-implemented schools and the associated factors among adolescent from 1-30, March 2019 in south Ari district, South Omo, Southern Ethiopia. South Ari is located at a distance of 735 Km away from Addis Ababa, the capital city of Ethiopia. There is a total of six secondary schools in the district, from which two of them are implemented youth friendly services.

Source Population: All adolescents of age between 15-19 years who attended public high school in the year 2019.

Study Population: All adolescents of age between 15 - 19 years in selected public schools during data collection period.

Sample size determination

The sample size for this study was determined using a formula for estimation of two population proportion using Epi info software version 7 with the assumptions of; 41.1% ever users RH services taken from previous study on utilization of RH in urban area for magnitude of utilization of sexual and reproductive health services of Youth-friendly service-implemented site(14), 21.5% ever users of RH services taken from previous study
on reproductive health services utilization among rural adolescents in east Gojjam zone for magnitude utilization of sexual and reproductive health services of non-implemented sites (5), 95% confidence level, 5% margin of error, 80% power, 1:1 YFS implemented to YFS non-implemented ratio, 10% estimated non-response rate and considering a design effect of 2. The total sample size for the first objective was 428 (214 for YFS implemented and 214 for YFS non-implemented areas).

**Sampling procedure**

Multi-stage sampling technique was employed in order to select a representative sample of students. Four secondary schools (two from YFS sites and two non-YFS sites) were selected randomly out of seven secondary schools in the woreda. Samples were selected from the selected schools proportional to their size of the student population. The total sample was allocated to each grade from grade 9 to 12 proportionate to their student population size. From each grade, sections were selected randomly. Finally, the study participants were recruited by a simple random method based on their attendance list in their respective schools. On the day of data collection, the randomly selected students were told to remain in their classes. Finally, the study participants were recruited by a simple random method based on their attendance list. On the day of data collection, the randomly selected students were told to remain in their classes.

**Dependent Variable** was sexual and reproductive health services utilization.

**Independent variables** were predisposing, enabling and need factors. The predisposing factors are sex, age, income status, and place of living and marital status (or relationship condition), knowledge and attitude. The enabling factors are; access to services, cost of the SRH services and perceived parental income status. The need factors include perceived need for SRHS, perceived personal health status, worries (concern) about health.
Operational definition

**Adolescent**

In this study adolescent stands for boys and girls between the ages of 15–19.

**High school-** Grade 9-12

**Reproductive health services**- services provided for adolescents such as advice and counseling on sexual and reproductive issues, Voluntary Counseling and Testing, Condom provision, family planning, abortion & post abortion care, and sexual transmitted infection treatment in Health centers and/or public Hospitals.

**Utilization of sexual and reproductive health services**-this was measured through the dichotomous response (yes or no) by asking whether a participant had utilized one or more of SRH service components within the last 12 months. The positive response was further validated with questions on the type of SRH services utilized. A positive (“yes”) response to any one of these services was regarded as service utilization(15).

**Knowledge of SRH services**- Adolescents who score above the mean of reproductive health service related questions were labeled as having high knowledge and those score below the mean were considered as having low knowledge.

**Attitude**-To measure adolescent’s attitude on YFHS, other questions were used to construct composite score: “Positive Attitude” those who scored above a mean on attitude measuring YFS questions and “Negative Attitude” those who scored a mean or below the mean in the attitude measuring YFS questions.

**Data collection tools and procedures**

The data collection instrument was self-administered questionnaire; a number of questions that can address the objective of the study. The questionnaires were developed by after reviewing previous similar literatures. The questionnaire was prepared in English and
translated to Amharic and back to English for consistency of meaning. Pre-test of the questionnaire was done on 5% of the sample size in people who were not included in the study two weeks before beginning of the actual data collection and modification were made based on feedback from the pretest. Data was collected by four Diploma health workers. Two supervisors with BSc degree in health and fluent in Amharic were assigned.

**Data quality assurance**

To assure the quality of data, properly designed data collection instruments were prepared. Appropriate training for facilitators and supervisors that include a briefing on the general objective of the study, discussing the contents of the questionnaire was given. The overall activity of data collection was supervised and coordinated by the principal investigator. The collected data was reviewed and checked for completeness and relevance before data entry by the supervisors and principal investigator. The variables were defined or coded, then the data editing was carried out during entry of data.

**Data analysis procedure**

Data were entered in to Epi Data version 4.4.1 software and then exported to SPSS version 20 statistical package for analysis. Descriptive statistics were computed and summarized by tables, frequencies, graphs, mean, and proportion. Odds ratios and confidence interval were also calculated to determine the strength of association of the selected variable. The association between utilization and its independent variable were examined by binary logistic regression. Variables which showed significant association and having p-value ≤ 0.25 in bivariate logistic regressions were a potential candidate for multivariable logistic regression analysis to control confounders in regression models. The association between reproductive health utilization and associated factors were reported by odds ratio at 95% CI and variables having p-value less than 0.05 in the multivariable logistic regression
model was considered as statistically significant.

Results

Socio-demographic characteristics

A total of 426 participants (213 from YFS-implemented and 213 for non-implemented) were participated with the response rate of 99.5%. The mean age of the respondents was 16.48 (SD± 1.23). Among the respondents, 136 from YFS-implemented and 133 for non-YFS sites were males, whereas 77 from YFS and 80 for non-YFS sites were females. About 58% of YFS sites and 49% for non-YFS sites were residing in rural areas. The majority of the adolescents were Ari by ethnicity followed by the Amhara and Goffa in both YFS and non-YFS sites. Concerning the educational background of the adolescents’ parents, nearly sixty percent (60%) of the adolescents were from mothers whose educational status was no formal education in both YFS-implemented and non-implemented areas (Table 1).

Predisposing/Cognitive factors

YFS non-implemented areas more than 55% (55.4) do not know at least one component of SRH services. At YFS sites also significant proportion of adolescents (51.2%) do not know at least one component of SRH services. The overall knowledge of the adolescents, 45.1% of them were knowledgeable in YFS-implemented sites as compared to non-YFS sites which were only 27.1%. Regarding the adolescents’ attitudes toward SRH services, significantly greater number of them had positive attitudes in both in both YFS and non-YFS sites (86.4% and 80.3% respectively). (Table 2).

Enabling factors

Among the respondents, only 9% in non-YFS sites and 22% from YFS can access SRH services within 30 minutes. About 19% of adolescents from YFS and 24% from the non-YFS
sites do not know the cost of SRH services \( (Table\ 3)\).
Furthermore, among the respondents, about 51% replied that there is a difficulty or problem with accessing SRH services. Among the problems indicated by adolescents, location of facility (31%), inconvenient working hours of the facility (28.7%) and embarrassment (9.3%) associated with sexual and reproductive health use were the most commonly indicated problems.

The need factors
Among the respondents, more than a half, that is 114 (53.5%) in YFS and 110 (51.6%) needs seriously to utilize SRH services \( (Table\ 4)\).

Magnitude of utilization of sexual and reproductive health services.
The magnitude sexual and reproductive health services in YFS-implemented and non-implemented school were 33.8% [95% CI (28.2-40.4)] and 9.4% [95% CI (5.6, 13.6)] respectively. The magnitude of utilization of sexual and reproductive health services has significant difference between YFS-implemented and non-implemented areas with \( x^2 \)-value 37.49 and p-value 0.00. The most common service utilized by adolescents was voluntary counseling & testing (44.6%). This was followed by Information, Education & Communication (28.3%) and condom provision (12%).

Factors associated with utilization of the sexual and reproductive health service.
From socio-demographic variables, educational status, mother’s educational status and discussion of SRH issues with families were found to be significant with utilization of reproductive health services. Adolescents attending Grade ten and above level were three times \( [AOR=3.28,\ 95\%\ CI\ (1.7,\ 6.29)]\) more likely to utilize reproductive health services as compared to grade nine level adolescents. Mother’s educational status is one of the socio
demographic variables found to be statistically significant. Adolescents whose mothers completed Grade 9-12 were six times [AOR=6.2, 95% CI; 2.00, 19.20] more likely to utilize SRH services as compared to adolescents whose mothers had no formal education. According to this finding, as compared to those who didn’t discuss sexual and reproductive topics with their parents, adolescents who discuss with their parents were three times [AOR=3.3, 95% CI; 1.47, 7.41] more likely to utilize the SRH services. The likelihood of SRH utilization of adolescents with favorable (positive) attitude were four times [AOR=3.55, 95% CI; 1.86, 6.77] more than adolescents with unfavorable (negative) attitude.

From the enabling factors, accessibility with time characteristics was found to be significantly associated. As compared to those who travel more than 1 hour to get for SRHS, adolescents who travel less than 30 minutes were six times [AOR=5.72, 95% CI, 2.58, 12.64] more likely to utilize the sexual and reproductive health services. Furthermore, adolescents who travel 30-1 hour to reach SRH providing centers from their home were two times [AOR=2.36, 95% CI; 1.14, 4.92] more likely to utilize as compared to those travelling more than about an hour. Having information about the cost of SRH services was significantly associated with utilization of reproductive health services. Adolescents who were informed (i.e. Knew that) the SRH services were delivered free were six times [AOR= 6.28 95%CI; 1.79, 22.05] more likely to uptake the sexual and reproductive health services (Table 5).

Discussion

The study revealed that the overall utilization of SRH services was 21.6%. This is lower than a study done in China on Study of Reproductive Health Seeking Behavior among Youth (from age15-24 years) (11). This could be due to socio economic variation between the nations and age group difference.
The magnitude of utilization of reproductive health services in YFS-implemented site was 33.8% and but only 9.4% in non-YFS implemented sites. This study also identified types (or components) of the reproductive health services utilized by adolescents. Accordingly, forty-five percent of adolescents in this study utilized Voluntary Counseling and Testing. It was quite lower than that of a study in Gonder town which was 72.2%(16). This could be explained by different directions. The first could be due to differences in place of study conducted.

Twenty-eight percent of the participants in this study utilized information and education related with SRH. This finding was in line with the study done in Jimma town which was 28.8%(7). It has also concordance with study done in Debre birehan town which was 23% (11).

The study also identified the associated factors of utilization of the SRH services. Accordingly, factors associated with utilization of the sexual and reproductive health services were adolescents’ educational (class) level, mother’s educational level, and discussion of SRH issues with parents, geographical accessibility AFRH services and having informed of the cost of SRH services.

There was also significant difference with educational status in YFS-implemented and non-implemented areas with x²-value 26.38. This difference is because there are more educated adolescents in a YFS implemented sites who have an increased knowledge about the availability of the service, the benefit of preventive health care, and have a higher receptivity towards new health-related information and better communication with their sexual partners.

In this study, mother’s educational status was associated with adolescents’ sexual and reproductive health service utilization. This could be possibly explained as with advancement of educational level; mothers are more likely to exchange SRH messages.
This enhances the adolescent’s reproductive health utilization. This study contradicts the study conducted in Gonder town(16).

Communicating SRH issues with parents is very crucial for adolescents so as to advance their awareness of SRH issues. Discussion of sexual and reproductive issues with family members (especially if the family members have good knowledge on reproductive health problems and reproductive health services) increases adolescents’ feeling of self-trust and there by urges their sexual and reproductive health seeking behavior.

Around eighty-six percent of the adolescents didn’t discuss SRH issues with their families. This figure is quite higher than that of studies conducted in Debrebrehan town(11, 17). This could be because differences in level of socio-cultural influences. Rural adolescents have a higher cultural influence which deters them to raise sensitive and personal issues within the family.

The current study assured that adolescents with favorable attitude towards SRH services were more likely to utilize SRH service as compared to their counterparts. This could be explained by the fact that having of positive feeling derives initiation to seek SRH services. Accessibility of SRH services has significant difference between YFS-implemented and non-implemented sites with $x^2$-value 18.68 and p-value 0.0001. This can be best explained by the fact that unlike the non-YFS sites, the SRH services delivered through A/YFS providing centers are relatively more available in urban areas so that the school adolescents access the services in short time.

Having been informed that AFRHS services delivered free was another important factor found to be significantly associated. This could be possibly related to adolescents’ earlier experience of utilization of reproductive health services. Adolescents already visited AFRHS centers and/or utilized reproductive health services were likely to be informed that the sexual and reproductive health services were delivered costing nothing.
Conclusion & Recommendations

The magnitude of utilization of SRH services were low in YFS non implemented school when compared to YFS implemented school. Mother’s educational status, discussion of sexual and reproductive health issues with family members and physical accessibility of SRH services were among the factors associated with sexual and reproductive health service utilization. There is a need of more efforts to scale up SRHS in YFS non implemented schools among stakeholders at different hierarchies. In addition, advocating about YFS services and creating awareness about SRH is also central to the success of any adolescent reproductive health program. Moreover, it is better to promote open discussion with adolescents at family level, and emphasizes should be given for women education.

Abbreviations

AIDS Acquired Immune Deficiency Syndrome
ASRHS Adolescent sexual and reproductive health services
EDHS Ethiopian Demographic Health Survey
RH Reproductive health
SRH Sexual and reproductive health
YFS Youth-Friendly Services
WHO World Health Organization

Declarations

Ethics approval and consent to participate

Ethical clearance was obtained from Ethical review committee of Arba Minch University, College of Health Science. Permission letter was also obtained from South Ari district health office and was presented to all participants. Written consent and assent were obtained from the study participants and their parents/guardians (for those under 18 years
of age) after they were informed about the study objectives and reading the information sheet. All participants were also informed that they could withhold or withdraw from participation at any time, without any negative consequences. The Interviews were conducted in private class room. Confidentiality and privacy of the study were maintained during data collection, analysis, and reporting.

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and/or analyzed during the current study available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Arba Minch University covered cost for data collection and Supervision. The funder has no role in study design, data analysis and manuscript preparation

Authors Contributions

BH wrote the proposal, participated in data collection, analyzed the data, and drafted the paper. MS, TF and MG approved the proposal, participated in data analysis, interpretation and revised subsequent drafts of the research. All authors read and approved the final manuscript.

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Tables

Table 1: Socio-demographic characteristics in selected YFS-implemented and non-implemented areas in South Ari Woreda, 2019.
| Variables          | Characteristics     | YFS-implemented (213) | YFS non-implemented (213) | Total      |
|--------------------|---------------------|-----------------------|---------------------------|------------|
| Sex                | Male                | 136(63.8)             | 133(62.4)                 | 269(63.1)  |
|                    | Female              | 77(36.2)              | 80(37.6)                  | 157(73.7)  |
| Age                | 15-17               | 166(77.9)             | 173(81.2)                 | 339(79.6)  |
|                    | 18-19               | 47(22.1)              | 40(18.8)                  | 87(20.4)   |
| Marital status     | Single              | 143(67.1)             | 168(78.9)                 | 311(73.0)  |
|                    | Married             | 18(8.5)               | 13(6.1)                   | 31(7.3)    |
|                    | Has boy/girlfriend  | 45(21.1)              | 30(14.1)                  | 75(17.6)   |
|                    | Other               | 45(21.1)              | 2(0.9)                    | 9(2.1)     |
| Educational status | Grade 9             | 73(34.3)              | 134(34.3)                 | 207(48.6)  |
|                    | Grade 10 & above    | 140(65.7)             | 79(37.9)                  | 211(49.5)  |
| Religion           | Orthodox            | 52(24.4)              | 67(31.5)                  | 119(27.9)  |
|                    | Protestant          | 144(76.6)             | 127(59.6)                 | 271(63.6)  |
|                    | Muslim              | 15(7.0)               | 15(7.0)                   | 30(7.0)    |
|                    | Others              | 2(0.9)                | 4(1.9)                    | 6(1.4)     |
| Place of Residence | Rural               | 123(57.7)             | 104(48.8)                 | 227(53.2)  |
|                    | Urban               | 90(42.3)              | 109(51.2)                 | 199(46.7)  |
| Ethnicity          | Ari                 | 146(68.5)             | 132(62)                   | 278(65.3)  |
|                    | Amhara              | 28(13.1)              | 33(15.5)                  | 61(14.3)   |
|                    | Goffa               | 18(8.5)               | 24(11.3)                  | 42(9.9)    |
|                    | Male                | 5(2.3)                | 9(4.2)                    | 14(3.3)    |
|                    | Others              | 16(7.5)               | 15(7)                     | 31         |
| Living Arrangement | Living with single parents | 51(23.9)         | 70(32.9)                    | 121(28.4)  |
|                    | Living with both parents | 88(41.3)       | 78(36.6)                    | 166(38.9)  |
|                    | Living alone        | 4(1.9)                | 7(3.3)                     | 11(2.6)    |
|                    | Living with boy/girlfriend | 5(2.3)            | 3(1.4)                     | 8(1.9)     |
|                    | Living with husband/wife     | 15(7.0)          | 13(6.1)                     | 28(6.6)    |
|                    | Living with brothers/sisters | 23(10.8)        | 21(9.9)                     | 44(10.3)   |
|                    | Living with grandparents | 27(12.7)        | 21(9.9%)                    | 48(11.3)   |
| Father's Educational Status | No formal education | 65(30.5)        | 68(31.9)                    | 133(31.2)  |
|                    | Completes Grade 1st-8th | 36(16.9)          | 42(19.7)                    | 78(18.3)   |
|                    | Completes 9-12th & above | 67(31.5)        | 42(19.7)                    | 109(25.6)  |
|                    | Don’t know          | 45(21.1)             | 61(28.6)                   | 106(24.9)  |
| Mother's Educational Status | No formal education | 126(59.2)        | 129(60.6)                   | 255(59.9)  |
|                    | Completes Grade 1st-8th | 41(19.2)         | 35(16.4)                    | 76(17.8)   |
|                    | Completes 9-12th & above | 16(7.5)          | 6(2.8)                      | 22(5.2)    |
|                    | Don’t know          | 30(14.1)             | 43(20.2)                   | 73(17.1)   |
Table 2: The cognitive factor characteristics in selected YFS-implemented and non-implemented areas in South Ari Woreda, 2019

| Variable (N=426) | Category | YFS-implemented (213) n (%) | YFS non-implemented (213) n (%) | Total N |
|------------------|----------|-----------------------------|---------------------------------|--------|
| Knows at least one SRH services. | Yes | 104(48.8) | 95(44.6) | 199(46.7) |
| | No | 109(51.2) | 118(55.4) | 227(53.3) |
| Knows adverse health outcome of teenage pregnancy | Yes | 115(54) | 94(44.1) | 209(49.1) |
| | No | 98(46) | 119(55.9) | 217(50.9) |
| Knows ways of avoiding unintended pregnancy | Yes | 115(54.0) | 95(44.6) | 210(49.3) |
| | No | 98(46.0) | 118(55.4) | 216(50.7) |
| Knows causes of RTIs | Yes | 154(72.3) | 145(68.1) | 299(70.2) |
| | No | 59(27.7) | 68(31.9) | 127(29.8) |
| A person can get HIV/AIDS through first unprotected sexual intercourse. | Yes | 90(42.3) | 78(36.6) | 168(39.4) |
| | No | 123(57.7) | 135(63.4) | 258(60.6) |
| Knows ways to prevent HIV/AIDS | Yes | 182(85.4) | 209(49.1) | 347(81.5) |
| | No | 31((14.6) | 48(22.5) | 79(18.5) |
| Overall knowledge | Knowledgeable | 96(45.1) | 59(27.7) | 155(36.4) |
| | Less knowledgeable | 117(54.9) | 154(72.3) | 271(63.6) |
| Overall attitude | Positive attitude | 108(50.7) | 104(48.8) | 212(49.8) |
| | Negative attitude | 105(59.3) | 109(51.2) | 214(50.2) |

Table 3: The enabling factor characteristics in selected YFS-implemented and non-implemented areas of South Ari Woreda, 2019.

| Variables (N=426) | Characteristics | YFS-sites n (%) | Non-YFS sites n (%) | Total (N) |
|-------------------|-----------------|-----------------|---------------------|-----------|
| Accessibility(time) | <30 minutes | 47(22.1) | 19(8.9) | 66(15.5) |
| | 30-1hr | 56(26.1) | 37(17.4) | 93(21.8) |
| | >1 hr. | 67(31.5) | 93(43.7) | 160(37.6) |
| | I don’t know | 43(20.2) | 64(30.0) | 107(25.1) |
| Cost of the SRH services | Free | 156(73.2) | 133(62.4) | 289(67.8) |
| | Cheap | 13(6.1) | 20(9.4) | 33(7.7) |
| | Expensive | 4(1.9) | 10(4.7) | 14(3.3) |
| | I don’t know | 40(18.8) | 50(23.5) | 90(21.1) |
| Problems or difficulties in accessing AFRHS | Yes | 125(58.7) | 91(42.7) | 216(50.7) |
| | No | 28(13.1) | 29(13.6) | 57(13.4) |
| | Don’t know | 60(28.2) | 93(43.7) | 153(35.9) |
| Perceived parental Economic status | Better-off | 18(8.5) | 13(6.1) | 31(7.3) |
| | Average | 119(55.9) | 134(6.29) | 253(59.4) |
| | Poor | 76(35.7) | 66(31.0) | 142(33.3) |

Table 4: Need factors in selected YFS- implemented and non-implemented areas of South
Table 5: Factors associated with utilization of sexual and reproductive health services in selected YFS-implemented and non-implemented areas of South Ari Woreda, 2019.

*P-value<0.20, **P-value<0.05; ***= statistically significant Unknown=parents who couldn't clearly remind, educational status.
| Variables                          | Characteristics | Utilization | COR [95%CI] | AOR [95%CI] | \( \chi^2 \) |
|-----------------------------------|----------------|-------------|-------------|-------------|-----------|
| **Variables**                     |                | No n (%)    | Yes n (%)   |             |           |
| **Age**                           |                | 15-17       | 18-19       |             |           |
|                                   |                | 271(81.1)   | 63(18.9)    |             |           |
|                                   |                | 68(73.9)    | 24(26.1)    |             |           |
| **Class level**                   | Grade 9        | 180(53.9)   | 154(46.1)   | 1.00        | 0.98[0.45, 2.13] | 12.36 |
|                                   | Grade 10 and above | 27(29.3) | 65(70.7)    | 1.00        | 2.47[1.49, 4.09] | 3.28 **1.7, 6.29** |
| **Marital status**                | Single         | 252(76.6)   | 54(16.4)    | 1.00        | 1.66[0.66, 3.62] | 1.00 |
|                                   | Have boy/girl friend | 59(67) | 21(23.9)    | 1.00        | 1.49[0.87, 1.27] | 1.00 |
|                                   | Married        | 8(9.1)      |             |             |           |           |
| **Father’s educational status**   | No formal education | 106(31.7) | 63(18.9)    | 1.00        | 0.94[0.46, 1.89] | 0.72[0.26, 1.97] |
|                                   | Grade 1-8      | 63(18.9)    | 78(23.4)    | 1.00        | 0.9[0.33, 2.47] | 0.72[0.15, 1.3] |
|                                   | Grade 9-12 & above | 27(29.3) | 15(16.3)    | 1.00        | 0.9[0.33, 2.47] | 0.72[0.15, 1.3] |
| **Mother’s Educational status**   | No formal education | 36(28.6) | 18(43.9)    | 1.00        | 1.76[0.98, 3.16] | 4.98[1.25, 19.82] |
|                                   | Grade 1-8      | 32(23.4)    | 42(30.6)    | 1.00        | 1.35[0.65, 2.8] | 6.2[2.00, 19.20] |
|                                   | Grade 9-12 & above | 12(9.3) | 4(11.4)     | 1.00        | 1.2[0.4, 3.55] | 0.9[0.15, 1.3] |
| **Parents Discuss on SRH issues** | Yes            | 14(48.3)    | 58(31.5)    | 1.00        | 3.30[1.47, 7.41] | 3.30[1.47, 7.41] |
|                                   | No             | 190(75.1)   | 144(83.2)   | 1.00        | 1.72[0.79, 3.74] | 1.72[0.79, 3.74] |
| **Discussion of SRH with peers**  | Yes            | 190(75.1)   | 144(83.2)   | 1.00        | 2.54[1.57, 4.09] | 2.54[1.57, 4.09] |
|                                   | No             | 14(48.3)    | 58(31.5)    | 1.00        | 1.72[0.79, 3.74] | 1.72[0.79, 3.74] |
| **Knowledge**                     | Less knowledgeable | 196(58.7) | 138(41.3)   | 1.00        | 2.87[1.75, 4.70] | 3.30[1.47, 7.41] |
|                                   | Knowledgeable  | 28(23.4)    | 64(50.8)    | 1.00        | 2.54[1.57, 4.09] | 2.54[1.57, 4.09] |
| **Attitude**                      | Negative attitude | 31(47%)    | 66(71%)     | 1.00        | 3.55[1.86, 6.77] | 0.83[0.42, 1.64] |
|                                   | Positive attitude | 186(55.7) | 148(44.3)   | 1.00        | 3.55[1.86, 6.77] | 0.83[0.42, 1.64] |
| **Accessibility (time)**          | <30 minutes    | 31(47%)     | 66(71%)     | 1.00        | 3.55[1.86, 6.77] | 0.83[0.42, 1.64] |
|                                   | 30-1hr         | 30(90.9)    | 9(9.1)      | 1.00        | 3.55[1.86, 6.77] | 0.83[0.42, 1.64] |
|                                   | >1 hr          | 126(78.3)   | 30(21.7)    | 1.00        | 3.55[1.86, 6.77] | 0.83[0.42, 1.64] |
| **Cost of SRH services.**         | Free           | 207(71.6)   | 82(28.4%)   | 1.00        | 6.73[2.64, 17.2] | 6.73[2.64, 17.2] |
|                                   | Cheap          | 30(90.9)    | 3(9)        | 1.00        | 6.73[2.64, 17.2] | 6.73[2.64, 17.2] |
|                                   | Expensive      | 85(94.4%)   | 5(5.6)      | 1.00        | 6.73[2.64, 17.2] | 6.73[2.64, 17.2] |
|                                   | Don’t know     | 85(94.4%)   | 5(5.6)      | 1.00        | 6.73[2.64, 17.2] | 6.73[2.64, 17.2] |
| **Level of concern about personal health in the last 12 months.** | Not concerned | 4(15.7%)   | 32(86.5%)   | 1.00        | 1.34[0.59, 3.05] | 1.34[0.59, 3.05] |
|                                   | Slightly concerned | 3(9)       | 32(86.5%)   | 1.00        | 1.34[0.59, 3.05] | 1.34[0.59, 3.05] |
|                                   | Somewhat concerned | 8(23.7%)  | 32(86.5%)   | 1.00        | 1.34[0.59, 3.05] | 1.34[0.59, 3.05] |
|                                   | Extremely concerned | 3(9)       | 32(86.5%)   | 1.00        | 1.34[0.59, 3.05] | 1.34[0.59, 3.05] |
| **Perceived need for SRHS.**      | Don’t need     | 31(91.2%)   | 3(8.8%)     | 1.00        | 2.87[0.83, 9.95] | 2.11[0.49, 9.13] |
|                                   | Need slightly  | 126(78.3)   | 35(21.7)    | 1.00        | 2.87[0.83, 9.95] | 2.11[0.49, 9.13] |
|                                   | Need seriously | 171(76.3)   | 53(23.7)    | 1.00        | 2.87[0.83, 9.95] | 2.11[0.49, 9.13] |