

Youth friendly services utilization and associated factors among school youths in North Shewa Zone, Amhara Region, Ethiopia: A mixed-method study

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Abstract

Objective: To assess youth friendly services utilization and associated factors among school youths in North Shewa zone, Ethiopia, 2020.

Methods: Institution-based cross-sectional study complemented with qualitative inquiry was conducted from 25 February to 20 March 2020. Multistage and purposive sampling technique was used. A total of 605 randomly selected students were recruited. Seven in-depth interviews and four focus group discussions were conducted for qualitative study. p -value < 0.05 and adjusted odds ratio with 95% confidence interval were computed to measure the strength of associations between variables. Qualitative data were transcribed verbatim, analyzed manually, and presented in narration.

Result: One hundred ninety-five (32.7%, 95% confidence interval: 29.0%, 36.6%) respondents had used youth friendly services during the survey. Educational level of father (can read and write) (adjusted odds ratio = 3.12, 95% confidence interval: (1.47, 6.65)), being knowledgeable about reproductive health issues (adjusted odds ratio = 4.84, 95% confidence interval: (2.77, 8.47)), discussion on reproductive health issues (adjusted odds ratio = 2.50, 95% confidence interval: (1.49, 4.19)), having sexual exposure (adjusted odds ratio = 3.37, 95% confidence interval: (1.54, 7.39)), perceiving oneself as risky for acquiring HIV/AIDS (adjusted odds ratio = 4.49, 95% confidence interval: (2.63, 7.65)), history of sexually transmitted infections (adjusted odds ratio = 4.40, 95% confidence interval: (1.61, 12.04)), favorable attitude toward service providers (adjusted odds ratio = 2.20, 95% confidence interval: (1.16, 4.17)), and ever supported to use the services (adjusted odds ratio = 4.18, 95% confidence interval: (2.51, 6.97)) were factors associated with youth friendly services utilization.

Conclusion: Compared with previous findings, youth friendly services utilization in the study area was relatively low. Knowledge on reproductive health issues, sexual exposure, perceiving as risky of acquiring HIV, history of sexually transmitted infection, ever supported to use the services, and attitude of youth toward youth friendly service providers were among factors associated with youth friendly services utilization. Health facilities and schools should work coordinately to scale up youth friendly services utilization.

Keywords

Youth, youth friendly service, utilization, Ethiopia

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Introduction

The World Health Organization (WHO) defined youth age as 15–24 years.¹ It is a risky period for smoking and substance abuse, risky sexual practices, and violence.² Around 17% (1.2 billion) of the global population was youth of which 19% of them (226 million) lived in Africa.³ In Ethiopia, the age group 15–24 years accounts nearly 20% of the population.⁴ Youth are suffering from different health problems throughout the world.^{5,6} Globally, about 33% of new HIV infections

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occur among youth.⁷ In Sub-Saharan Africa (SSA), women aged 15–24 years account for almost half of women acquiring HIV.⁸ In 2016, the prevalence of teenage pregnancy was 19.3% and 21.5% in SSA and east Africa, respectively.⁹ Nearly half of pregnancies among youth aged 15–19 in SSA were unintended.¹⁰ Pregnancy-related deaths are the second leading cause of death among female youth.¹¹

In Ethiopia, mortality and morbidity among youth are related to underutilization of health services.¹² Around 6000 new HIV infections occur among youth.^{13,14} Nationally, 44% of pregnancies among youth were unintended, and 46% of which were ended in abortion.¹⁰ Around 80.0% of women aged 20–24 years experienced pregnancy during their adolescent age.¹⁵ Youth were also highly involved in unsafe sexual practices and faced undesired health outcomes.^{16,17} Improving youth friendly services (YFS) provision is believed to address the multifaceted health problems of youth in Ethiopia.^{18,19} In the study area, health facilities urged to provide YFS including information and counseling, promotion of healthy sexual behaviors, family planning information, counseling and emergency contraceptive methods, condom promotion and provision, pregnancy and HIV testing and counseling, management of sexually transmitted infections (STIs), antenatal care, delivery services, postnatal care, prevention of mother to child transmission (PMTCT), post abortion care, and appropriate referral linkage between facilities. However, utilization of the services was not satisfactory.^{20–22} Since 2018, Amref health Africa in collaboration with the government of Ethiopia made a tremendous effort to increase utilization of YFS particularly in the study area.²³ Following the implementation of such measures, there was limited evidence about the current YFS utilization status and its associated factors in the study area. Moreover, since reproductive health (RH) issues are much sensitive, it may not be addressed by quantitative study alone. Instead, it needs qualitative inquiry to obtain detailed understanding of the topic. However, this was not considered in most of the researches conducted so far. Therefore, this study was aimed to fill these information gaps.

Materials and methods

Study settings

The study was conducted in North Shewa zone, Amhara region, Ethiopia. The capital city of North Shewa zone is Debre Berhan, which is located about 130 km North of Addis Ababa, the capital city of Ethiopia. The zone covers an area of 15,936.13 square kilometers. The total population of the zone is 2,248,418 (1,134,117 male and 1,114,301 female), from which youth population accounts nearly 21% (479,205).²⁴ According to the information obtained from North Shewa zone health administration, the zone has 10 hospitals, 97 health centers, and 391 health posts providing health services to the community. Majority (70) of the health centers are providing youth friendly health services in separate YFS clinic/

center. There are also 1076 primary, 58 secondary, and 29 (1 private and 28 public) preparatory schools in the zone.

Study design and period

Institution-based cross-sectional study design complemented with qualitative inquiry was conducted from 25 February to 20 March 2020.

Source and study populations

For the quantitative study, source population was all youth students attending class in public preparatory schools in North Shewa zone in 2019/2020 academic year. The source population for the qualitative enquiry was YFS providers working in the study area and youth students attending class in the public preparatory schools in North Shewa zone in 2019/2020 academic year. The study population for the quantitative part was all sampled youth students from randomly selected public preparatory schools. Purposively selected service providers and youth students were study population for the qualitative inquiry.

Inclusion and exclusion criteria

All youth students attending class in selected schools in 2019/2020 academic year were included in this study. Students who were unable to see or hear were excluded from the study.

Sample size determination

Sample size was calculated using single population proportion formula. By taking proportion of YFS utilization, $p=38.5\%$,²⁵ confidence level of 95%, marginal error of 5%, design effect of 1.5, and adding 10% non-response rate

$$p = 0.39, q = 0.61, d = .05, CI = 95\%, Z_{\alpha/2} = 1.96$$

$$n = \frac{(Z_{\alpha/2})^2 pq}{d^2} = \frac{(1.96)^2 (0.39) (0.61)}{(0.05)^2} = 366$$

$$\text{Total sample size} = (366 + 37) \times 1.5 = 605.$$

The sample size for the qualitative study was determined by the saturation of information during the data collection. To explore cultural and sensitive aspects of YFS utilization, seven in-depth interviews (IDIs), three with the services providers and the remaining four with youth students, were employed. Four focused group discussions, three with female and one with male youth students, were conducted to collect qualitative data. Six to eight participants were included in each focus group discussion (FGD) session. Overall, 10 male

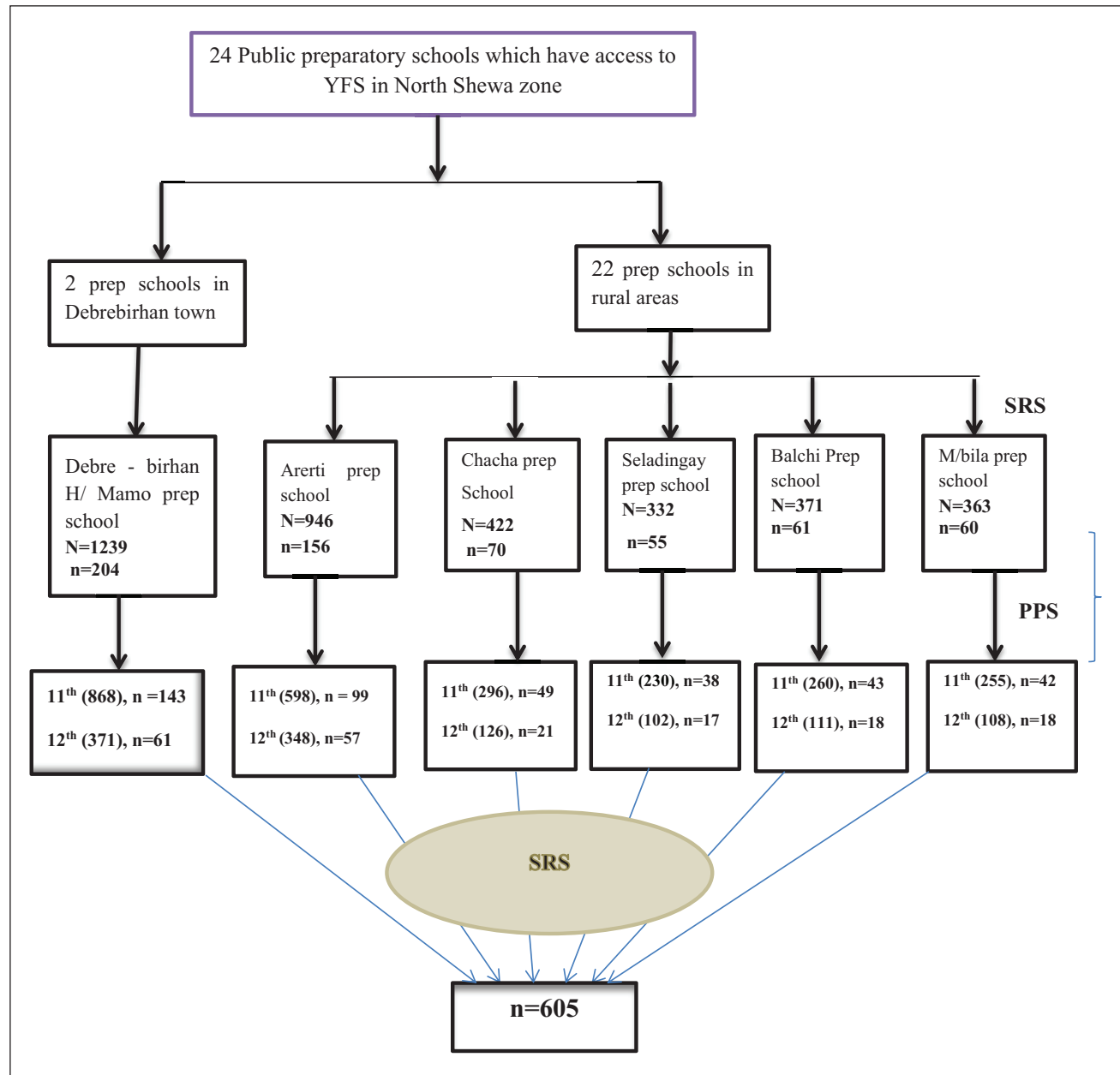


Figure 1. Schematic diagram representing sampling procedure of the survey in North Shewa zone, Amhara Region, Ethiopia, 2020.

and 25 female participants were involved during qualitative data collection.

Sampling procedure

Multistage sampling technique was used to select the study subjects. First, 24 public preparatory schools which had access to YFS were stratified into urban and rural schools. Then, six (one from urban and five from rural) preparatory schools were selected using simple random sampling (lottery) method. Next, the number of respondents was proportionally allocated to each preparatory school and grade levels

(11 and 12). Finally, simple random sampling method was used to select respondents using up-to-date list of students as a sample frame (Figure 1).

Participants of the IDIs and FGDs were selected from the study area using purposive sampling technique. Youth participants who were not involved in the quantitative data collection and had exposure to training on peer-to-peer education and sexual and reproductive health (SRH)-related issues were included in this study. Service providers were selected based on their work experience from three health centers in the study area. All of the providers were clinical nurses by profession and had worked for 2–8 years.

Study variables

Dependent variable: Youth friendly service utilization (yes/no).

Independent variables: Included age of respondent, religion of respondent, education of parents, occupation of parents, living arrangement, respondents' place of residence, marital status of respondents, family/peer support, family income and pocket money, distance from health facility, convenience of working time, waiting time, knowledge about RH, attitude toward YFS and service providers, sexual exposure, previous history of RH problems, age at first sexual contact, and multiple sexual partner.

Data collection procedure and measurements

The data were collected using pretested structured questionnaire which was adapted from John Cleland's illustrative questionnaire for interview survey with young people²⁶ and other literatures.^{20,22} The questionnaire consisted of five parts including questions regarding the socio-demographic and economic characteristics, knowledge and attitude-related factors, health care system-related issues, sexual behavior of youth, and youth friendly service utilization pattern. Six diploma nurses had collected the data under the supervision of two BSc level public health professionals. Selected students were invited for participation in the study through school teachers. The questionnaire was administered in a classroom after each respondent gave informed consent for participation.

Semi-structured open-ended interview guides, separately prepared for YFS providers and youth, were used to facilitate both FGD and IDI interviews. Participants' opinions, beliefs, attitudes, and perceptions regarding the topics were addressed through FGDs while IDIs focused on personal experiences, practices, and behaviors related to YFS utilization. Both FGDs and IDIs were held in private locations where the participants preferred. The selection and arrangement was made through discussion with each participant. During focused group discussions, male and female youth were moderated separately to facilitate easy and free discussions. All FGDs were moderated by principal investigators and notes were taken by BSc level health professional. IDIs took about 30–45 min. FGDs were held for 48–60 min. All discussions and interviews were recorded with permission from the participants. The transcribed data were compared with the notes taken during IDIs and FGDs and the idea were almost inline.

Data quality control

In order to ensure data quality, the questionnaire was translated from English to Amharic and then back to English by language expert to check its consistency. It was pretested on

5% (31) of the population in the school not included in the actual data collection and necessary correction was made. Data collectors and supervisors were trained for 3 days before the data collection. The collected data were also checked for completeness on the daily bases. FGDs and IDIs were held in quiet locations for the convenience and smooth flow of the discussions. Interview guides were prepared in English and translated into Amharic language (local language) by language expert. In the FGDs, male and female participants were aggregated separately for easy and free participation. The audio recorder was checked for functionality before recording and all records were handled carefully.

Statistical analysis

The data were entered into the computer using Epi data version 3.1, exported to SPSS version 25, cleaned, and edited before analysis. Descriptive statistics was carried out to describe the study population. Respondents' scores for questions asked to assess their knowledge and attitude were summed, averaged, and categorized for further analysis. Bivariable logistic regression was used to select candidate variables for multivariable logistic regression. Those candidate variables with a p -value < 0.25 during bivariable analysis were entered into multivariable logistic regression model. Multivariable analysis was done using backward stepwise logistic regression. The Hosmer and Lemeshow goodness-of-fit test was assessed to check for important assumptions of logistic regression and the value was 0.92, indicating that the model best fitted the variables. p -value < 0.05 was used to test statistical significance and adjusted odds ratio (AOR) with 95% confidence interval (CI) as a measure of strength of association between variables. Finally, the data were presented using texts, tables, and charts.

The audio records were transcribed verbatim and translated to English language for analysis. Notes taken during interviews were used to support the transcription. Then, the data were coded line by line and then again read several times that directed to merge codes into categories and then to themes. Hence, thematic analysis was employed manually to extract meanings out of the texts. Accordingly, ideas and concepts of the qualitative data were categorized into four main themes (namely individual, family, community, and health institution-related factors). Finally, important findings were triangulated with the quantitative result.

Operational definitions

Youth: In this study, youth are individuals within age category of 15–24 years.¹

YFS utilization: Referred utilizing one or more of the following health service: abortion, antenatal care, family planning, voluntary counseling and testing (VCT), STI diagnosis and treatment, treatment for any illness,

antenatal care, delivery services, post natal care, information, education and communication at least once within 12 months before the study.²²

Knowledge about RH issues: It was assessed by asking 12 RH knowledge-related questions (fertility, family planning, STI, HIV/AIDS, and VCT) to the youth. Each correct answer was scored “1” and each incorrect answer “0.” Participants who scored above the mean (6.97) were categorized as knowledgeable otherwise not knowledgeable.²⁷

Attitude toward YFS: Was assessed by asking nine (9) questions related to their attitude toward YFS using the 3-point Likert-type scale. The mean score was (5.0) and used as cut-off value to categorize as have favorable attitude if they score equal or greater than the mean score on the attitude questions and unfavorable attitude if they score less than the mean score of the attitude questions.²⁸

Attitude toward service providers: Assessed by asking respondents four questions related to their attitude toward service providers and those who score less than or equal to two out of four were referred as having unfavorable attitude while scored above the cut-off as having favorable attitude.

Awareness about available YFS: Youth were asked 10 questions regarding available types of services and service delivery points to assess their awareness. Those who score above the mean (5.98) of health service-related questions were referred as having good awareness and those who score equal to or below the mean were referred as having poor awareness.²⁰

Duration of waiting time: Duration of waiting time was referred as long if it takes more than half hour (30 min) or short if it takes less than or equal to 30 min to get the service in the facility.

Results

Socio-demographic and economic characteristics of the participants

A total of 596 participants were included in the study with a response rate of 98.5%. Among these 317 (53.2%) of them were females and majority of the respondents 394 (66.1%) were rural residents. Based on the finding, minimum, median, and maximum ages of the respondents were 16, 18, and 24 years, respectively, with interquartile range of 1 (Table 1).

Knowledge and attitude-related information

Out of the total respondents, around 275 (46.1%) of the respondents had discussed on at least two RH issues. Regarding respondents' knowledge about RH issues, almost half (49.8%)

Table 1. Socio-demographic and economic characteristics of public preparatory school students in North Shewa zone, Amhara region, Ethiopia, 2020 (n=596).

Variables	Frequency	Percent
Sex of respondent		
Male	279	46.8
Female	317	53.2
Age of respondent		
15–19	492	82.6
20–24	104	17.4
Marital status of respondent		
Single	575	96.5
Married	21	3.5
Religion of respondent		
Orthodox	572	96.0
Muslim	17	2.9
Protestant	7	1.2
Academic stream of respondent		
Natural	323	54.2
Social	273	45.8
Place of residence		
Rural	394	66.1
Urban	202	33.9
Getting pocket money		
Yes	383	64.3
No	213	35.7
Living arrangement of respondents		
With father and mother	466	78.2
With mother only	54	9.1
With relatives	48	8.1
Others	28	4.6
Educational status of respondents' father		
Can't read and write	116	19.4
Can read and write	373	62.6
Primary school completed	44	7.4
Secondary school and above	63	10.6
Occupation of respondents' father (n=584)		
Farmer	433	74.1
Merchant	92	15.8
Government employee	44	7.5
Others	15	2.6
Educational status of respondents' mothers		
Can't read and write	168	28.2
Can read and write	333	55.9
Primary school completed	45	7.5
Secondary school and above	50	8.4
Occupation of respondents' mothers		
Housewife	446	74.8
Merchant	95	15.9
Government employee	35	5.9
Others	20	3.4
Average monthly family income (in United State Dollar)		
<30.0	72	12.1
30.0–61.0	111	18.6
61.1–92.0	85	14.3
92.1–123	89	14.9
≥123.1	239	40.1

Table 2. Knowledge and attitude-related information of public preparatory school students in North Shewa zone, Amhara Region, Ethiopia, 2020.

Categories	Frequency	Percent
Sources of information (n = 458)		
Parents	38	8.3
Teachers	127	27.7
Health workers	145	31.7
Friends	40	8.7
Media	106	23.1
Sexual partners	2	0.5
Awareness on YFS (n = 595)		
Aware	338	56.8
Not aware	257	43.2
Presence of youth RH club in the school (n = 596)		
Yes	152	25.5
No	444	74.5
Discussion on RH issues (n = 596)		
Yes	275	46.1
No	321	53.9
Discussion with whom (n = 265)		
Parents	50	18.9
Teachers	36	13.6
Health workers	71	26.8
Friends	105	39.6
Sexual partners	3	1.1
RH issues discussed (n = 265)		
Family planning methods	56	21.1
Sexually transmitted infection	49	18.4
HIV/AIDS	148	55.6
Unwanted pregnancy	9	3.4
Others ^a	3	1.1
Frequency of discussion (n = 265)		
Occasionally	242	91.3
Often	23	8.7
Attitude of youth toward YFS (n = 595)		
Favorable	310	52.1
Unfavorable	285	47.9
Preferred provider (n = 596)		
Young provider of the same sex	241	40.4
Young provider of any sex	101	17.0
Adult provider of the same sex	111	18.6
Any person could be	133	22.3
Adult provider of any sex	10	1.7

RH: reproductive health; YFS: youth friendly services; VCT: voluntary counseling and testing.

^aAbortion = 1, VCT = 2.

of the respondents were not knowledgeable. Similarly, 257 (43.2%) of respondents were not aware about YFS. Almost half (47.9%) of the respondents also had unfavorable attitude toward youth friendly health services (Table 2).

Supporting this finding, interviewers stated that youth have limited understanding about SRH services. Many participants in the FGDs and IDIs mentioned few components of YFS when asked to define YFS. But almost all of them agreed on the importance of RH services for youth (Box 1).

Health care system–related information

Nearly half (49.7%) of the respondents reported that the actual working time of the health institutions was not convenient to take the services and majority (67.6%) of them preferred weekends to get (use) YFS. In line with this finding, results from qualitative study showed that youth were not comfortable to take the services at the usual working time of health facilities. Many of FGD and IDI participants mentioned two reasons for this issue. The first and major reason was that youth usually fear exposure to adults and other clients at the health facilities while using reproductive services. The other reason was youth students stay at school during day time; therefore, they could not visit health facilities for health services. As a result, they prefer to get services at night and weekends, but the health centers provide only emergency services that they call a rule. In spite of their unique preferences, no health facility was providing youth friendly health services beyond the usual work time. A 19-year-old participant explained saying,

The usual working time of the health center is not convenient for us. Most of the time, we stay at school including morning and afternoon. The health center is also closed when we visit for health services. For example when we go to the health center at 12 o'clock local time to take any health service, they do not serve us. They give the service for emergency cases only. They give appointment to return on the next day. This is their rule. As a result most students don't get services. Some also prefer to look for other options like visiting private clinics and pharmacies to get the services. (Female, Grade 12, FGD)

Around one third (65.9%) of the respondents mentioned that waiting time to take YFS was long and out of 68 respondents who visited health centers but missed the services, 28 (41.2%) of them reported long waiting time as a reason for missing the services. Most (92.3%) of the respondents reported that the time taken to reach (on foot) the nearby health facility was not more than 1 h (Table 3).

Fear of being seen by their parents or neighbors (118; 29.4%) and lack of awareness where to go (100; 24.9%) were the main reasons of not using YFS from the nearby health facility (Figure 2).

This finding is in line with the ideas reported by participants of IDIs and FGDs, in which most of them mentioned that many of youth lack awareness about the existing youth friendly SRH services, even those who had awareness of fear or ashamed to use RH services. They also repeatedly mentioned that there was poor habit of peer-to-peer education on SRH issues among school youth. An 18-year-old female youth during discussion stated as

The main reason for not using reproductive health services is feeling ashamed or fear. Youth do not need to be seen by others while using health services like family planning service, condom, abortion and testing for HIV. They fear being seen by their families, friends, and communities. This is the major obstacle to use any services from the health facilities. (Female, Grade 11, FGD)

Box 1. The most frequently mentioned phrases related to meaning of youth friendly services by youth participants, North Shewa zone, Ethiopia, 2020.

Any care that a woman took by herself or given by professionals to prevent health problems when she plans to be pregnant.
Any health care given for both male and female youth which helps them to maintain healthy life.
Are training on reproductive health issues, health education and counseling by health professionals.
I have seen it as written on a banner but I don't have detailed information about it.
Are health services like care for pregnant mothers, ambulance service, and addressing health coverage in all kebeles.
These include services like family planning, counseling, and others.

Table 3. Health care system–related information of the respondents, North Shewa zone, Amhara Region, Ethiopia, 2020.

Categories	Frequency	Percent
Convenience of usual working time of health centers for youth (n = 596)		
Yes	300	50.3
No	296	49.7
Convenient time for youth to get the service (n = 296)		
Early morning	36	12.2
Late afternoon	33	11.1
Weekend	200	67.6
Holidays	14	4.7
Night time	13	4.4
Length of waiting time (n = 596)		
Long	393	65.9
Short	203	34.1
Visited health facility but missed the service (n = 596)		
Yes	68	11.4
No	528	88.6
Reason for missing the services (n = 68)		
Waiting time was long	28	41.2
Had no money for services	12	17.7
Found neighbor and ashamed	11	16.2
Service providers refused to give services	2	2.9
Clinic was closed	12	17.6
No reason	3	4.4

Sexual behaviors of the participants

Out of 596 respondents, 99 (16.6%) had at least one sexual exposure and most (81.7%) of them had sexual intercourse with a single sexual partner. The mean age at first sexual exposure was ($M \pm SD$) 17.6 ± 0.9 years (Table 4).

Utilization of YFS

According to the finding from this study, 195 (32.7%), 95% CI (29.0%, 36.6%), of the respondents had used at least one YFS within 12 months prior to the study. Regarding service delivery points, majority 127 (65.5%) of them took the service from health centers while the other 28 (14.4%), 23 (11.9%), and 16 (8.2%) took from hospitals, private clinics, and youth centers, respectively. Out of 596 respondents, 243 (40.8%) of them were supported by their families/friends to use the services. Concerning the types of services, VCT for

HIV/AIDS was the most frequently (37.4%) utilized service followed by information education and counseling service (29.2%), sexually transmitted disease (STD) diagnosis and treatment (15.9%), FP (11.8%), treatment for any illness (3.1%), and ANC service (2.6%).

Participants of the IDIs explained that many youth particularly students were suffering from many RH problems like STIs, HIV/AIDS, unwanted pregnancy, and induced abortion. However, the trend of YFS utilization by youth preparatory school students was still low. They also mentioned that many youth were not familiar with the existing RH services. A 29-year-old female nurse explained,

Youth friendly service utilization is below our plan and expectation. But still it is better than the previous situation. There are some improvements regarding YFS utilization by youth after we separated YFS clinic from other service provision rooms and awareness was created for youth about the services. (IDI, YFS focal)

Factors associated with YFS utilization

Bivariable analysis was done using binary logistic regression to identify candidate variables for multivariable model. In order to control confounding effect of variables, those variables with $p < 0.25$ during bivariate analysis were moved to multivariable logistic regression model. Accordingly, educational level of father (can read and write) (AOR=3.12, 95% CI: (1.47, 6.65)), knowledge on RH issues (AOR=4.84, 95% CI: (2.77, 8.47)), discussion on RH issues (AOR=2.50, 95% CI: (1.49, 4.19)), attitude of youth toward YFS (AOR=2.18, 95% CI: (1.33, 3.59)), having sexual exposure (AOR=3.37, 95% CI: (1.54, 7.39)), perception as risk of acquiring HIV (AOR=4.49, 95% CI: (2.63, 7.65)), history of STI (AOR=4.40, 95% CI: (1.61, 12.04)), ever supported to use the services (AOR=4.18, 95% CI: (2.51, 6.97)), and attitude toward youth friendly service providers (AOR=2.20, 95% CI: (1.16, 4.17)) were continued to be significantly associated.

Respondents whose father can read and write were more than three times more likely to use YFS than those whose father cannot read and write (AOR=3.12, 95% CI: (1.47, 6.65)). Respondents being knowledgeable about RH issues were about five times more likely to use YFS (AOR=4.84, 95% CI: (2.77, 8.47)). Utilizations of YFS among respondents with favorable attitude toward YFS were twice (AOR=2.18, 95% CI: (1.33, 3.59)) more likely than their counterparts. Similarly, respondents with favorable attitudes

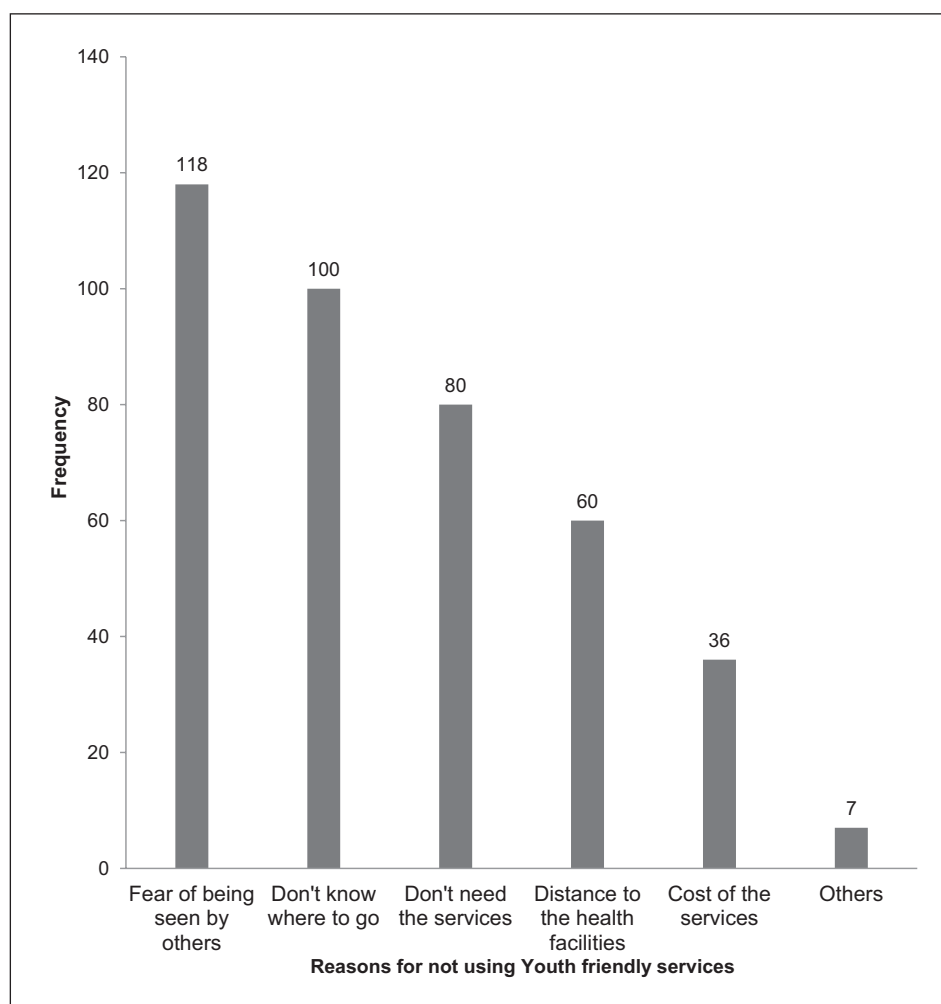


Figure 2. Reasons for not using youth friendly services in the last 1 year by the respondents in North Shewa zone, Amhara Region, Ethiopia, 2020.

toward YFS providers were twice (AOR=2.20, 95% CI: (1.16, 4.17)) more likely to use the services than their counterparts. Respondents who had discussed on two or more RH issues within a year before the study were more than two (AOR=2.50, 95% CI: (1.49, 4.19)) times more likely to use YFS than those who had not discussed. YFS utilization by respondents who have sexual exposure were more than three (AOR=3.37 95% CI: (1.54, 7.39)) times more likely than their counterparts (Table 5).

Supporting these findings, discussants and interviewees also explained additional factors for underutilization of YFS by school youth. These factors arise from youth themselves, their parents, the community, and the health institutions. Almost all participants of FGDs and IDIs reported that many of youth lack awareness about the existing YFS, even those who had awareness were not properly using RH services due to fear/embarassment. They also repeatedly mentioned poor habit of peer-to-peer education among school youth as a reason for lack of awareness and underutilization of RH services. In addition to that lack of family support and poor

habit of discussion on RH issues among family members were underlined by participants. An 18-year-old female interviewee said that

... I know a lady who conceived unwanted pregnancy and lost her life by suicide due to family opposition of her act. This would not be happened if she was supported by her families to get health services. (Grade 12, IDI)

Lack of awareness and unfavorable attitude of the community toward YFS were mentioned as barriers of YFS utilization by school youth. Both getting pregnancy and using family planning services before marriage were pointed as a taboo among the community. A 29-year-old female YFS provider illustrated this idea as:

There is a rumor among the community when they saw youth visiting health center, especially ladies, to use reproductive health services like FP. I was asked about a lady who came to YFS clinic to use YFS, they said, 'we know this lady! She is

Table 4. Sexual behaviors of public preparatory school students in North Shewa zone, Amhara Region, Ethiopia, 2020.

Variables	Frequency	Percent
Having boy or girl friend (n = 596)		
Yes	177	29.7
No	419	70.3
Sexual exposure (n = 596)		
Yes	99	16.6
No	497	83.4
Number of sexual partner (n = 82)		
One	67	81.7
Two	8	9.8
More than two	7	8.5
Age at first sexual contact (n = 82)		
< 18	34	41.5
≥ 18	48	58.5
Use of contraceptive during first sex (n = 55) ^a		
Yes	37	67.3
No	18	32.7
History of pregnancy (n = 42)		
Yes	5	11.9
No	37	88.1
History of STI		
Yes	49	8.2
No	547	91.8

STI: sexually transmitted infection.

^aOnly for female participants.

from our village! Why she came here?’ Even staffs of this health center say the same thing. These rumors make youth to fear/ashamed to use the services freely. (YFS provider, IDI)

Youth participants also reported discouragement and unfriendly approach of service providers as another problem in the health facilities. On the contrary, participants mentioned the absence of isolated clinic for provision of youth RH services; recreational services, quality services, and knowledgeable service providers in the health institutions as the common barriers of youth friendly health services utilization in the study settings. A 32-year-old male interviewee explained this as

As you see this is YFS clinic which is not properly isolated from adult OPDs and other service provision areas. Even lab room, waiting sites and card services are not separated. This has its own negative impact on youth friendly services utilization. Youth who came after passing many challenges from the community suffer another problem here again. In addition to that there are no recreational services to attract youth. (OPD case team coordinator, IDI)

Finally, discussants and interviewees mentioned the need of improvements on the existing health services delivery system and common barriers affecting youth friendly health services utilization. Most participants indicated that youth should avoid fear to use any health services. In addition, participants

argued the importance of giving training and health education for youth and the community to bring behavioral changes. A 19-year-old female interviewee illustrated this idea as

In my opinion it is better to give advice to youth by their intimate partners. Every youth has his/her closer friends who can talk and discusses everything without any fear. Counseling youth by their immediate partners is better than educating them in group. So some of students should be trained by health professionals to counsel and educate their friends. (Female, Grade 12, FGD)

Moreover, introducing recreational service, widening service hours, and showing friendly approach by youth friendly service providers were mentioned as some of the ways to enhance and maximize YFS utilization by school youth. The need of strong coordination between health sectors and schools by establishing functional school RH clubs to increase awareness among school youth was stressed by participants during interviews and discussions. One of the IDI participants stated her idea as

In order to attract youth, there should be additional services like recreational services example table tennis, TV programs, library/reading services, volley ball playing sites etc. It will also better if we strengthen linkage with other sectors and school clubs to meet youth, educate and create awareness on YFS and other health issues. (29 years old female, YFS focal, IDI)

Discussion

In this study, YFS utilization and its associated factors have been assessed among public preparatory school youth students in North Shewa zone, Amhara region, Ethiopia. According to the finding, the overall YFS utilization was 32.7%. Educational level of father (can read and write), knowledge on RH issues, discussion on RH issues, attitude of youth toward YFS, having sexual exposure, perception as risk of acquiring HIV, history of STI, ever supported to use the services, and attitude toward youth friendly service providers were significantly associated with YFS utilization.

The current figure of youth friendly service utilization (32.7%) was similar with the results reported in Metekel zone in Benshangul Gumuz region, south west Oromia, Bahirdar, and Debrebirhan towns in Amhara region, in which YFS utilization was 33.2%, 36.5%, 32.2%, and 33.8%, respectively.^{20,21,29,30} This concordance might be due to similarity of the health facilities in study settings. Particularly participants included in the study conducted at Metekel zone were similar with the current study in terms of maturity, marital status, and their information about youth friendly health services.²⁹

The result was lower when compared to findings from Awabel district in Amhara region (41%), Hadiya zone in SNNPR (38.5%), Harar town in Harari region (63.8%), Bale zone (46.9%), and Goba town in Oromia region (37.2%).^{22,25,28,31,32} The possible explanation for these disparities might be due to differences in study setting and

Table 5. Factors associated with youth friendly SRH services utilization among public preparatory school students in North Shewa zone, Amhara Region, Ethiopia, 2020.

Variables		YFS utilization		COR (95% CI)	AOR (95% CI)
		Yes	No		
Sex	Female	96 (30.3%)	221 (69.7%)	0.79 (0.56, 1.11)	1.0 (0.58, 1.73)
	Male	99 (35.5%)	180 (64.5%)	1	1
Residence	Rural	139 (35.3%)	255 (64.7%)	1.421 (0.981, 2.059)	1.45 (0.84, 2.52)
	Urban	56 (27.7%)	146 (72.3%)	1	1
Getting pocket money	Yes	150 (39.2%)	233 (60.8%)	2.40 (1.63, 3.54)	1.66 (0.95, 2.89)
	No	45 (21.1%)	168 (78.9%)	1	1
Educational status of respondents' fathers	Can't read and write	21 (18.1%)	95 (81.9%)	1	1
	Can read and write	139 (37.3%)	234 (62.7%)	0.51 (0.25, 1.05)	3.12 (1.47, 6.65)*
	Primary school	16 (36.4%)	28 (63.6)	1.38 (0.77, 2.45)	2.54 (0.85, 7.62)
	Secondary+	19 (30.2%)	44 (69.8%)	1.32 (0.59, 2.99)	1.30 (0.46, 3.69)
Knowledge on RH issues	Knowledgeable	158 (52.8%)	141 (47.2%)	7.87 (5.21, 11.90)	4.84 (2.77, 8.47)*
	Not knowledgeable	37 (12.5%)	260 (87.5%)	1	1
Awareness on YFS	Aware	170 (50.3%)	168 (49.7%)	6.17 (4.04, 9.43)	1.47 (0.75, 2.85)
	Not aware	25 (9.7%)	232 (90.3%)	1	1
Heard about YFS	Yes	171 (38.4%)	274 (61.6%)	3.30 (2.05, 5.32)	1.15 (0.54, 2.44)
	No	24 (15.9%)	127 (84.1%)	1	1
Presence of youth RH club	Yes	60 (39.5%)	92 (60.5%)	1.49 (1.02, 2.19)	1.13 (0.63, 2.01)
	No	135 (30.4%)	321 (69.6%)	1	1
Discussion on RH issues	Yes	140 (50.9%)	135 (49.1%)	5.02 (3.45, 7.29)	2.50 (1.49, 4.19)*
	No	55 (17.1%)	266 (82.9%)	1	1
Attitude toward YFS	Favorable	162 (52.3%)	148 (47.7%)	5.8 (3.89, 8.64)	2.18 (1.33, 3.59)*
	Unfavorable	33 (11.6%)	252 (88.4%)	1	1
Convenience of working time	Yes	122 (40.7%)	178 (59.3%)	2.09 (1.48, 2.97)	1.40 (0.82, 2.40)
	No	73 (24.7%)	223 (75.3%)	1	1
Having boy or girl friend	Yes	83 (46.9%)	94 (53.1%)	2.42 (1.68, 3.49)	0.59 (0.29, 1.17)
	No	112 (26.7%)	307 (73.3%)	1	1
Sexual exposure	Yes	72 (72.7%)	27 (27.3%)	8.11 (4.98, 13.20)	3.37 (1.54, 7.39)*
	No	123 (24.7%)	374 (75.3%)	1	1
Perceived risk of acquiring HIV	Yes	125 (59.5%)	85 (40.5%)	6.64 (4.55, 9.69)	4.49 (2.63, 7.65)*
	No	70 (18.1%)	316 (81.9%)	1	1
History of STI	Yes	35 (71.4%)	14 (28.6%)	6.05 (3.17, 11.54)	4.40 (1.61, 12.04)*
	No	160 (29.3%)	387 (70.7%)	1	1
Ever supported to use YFS	Yes	143 (58.8%)	100 (41.2%)	8.28 (5.61, 12.22)	4.18 (2.51, 6.97)*
	No	52 (14.7)	301 (85.3%)	1	1
Distance to health facility	Close	185 (33.6%)	365 (66.4%)	1	1
	Far	10 (21.7%)	36 (78.3%)	0.10 (0.55, 1.14)	0.31 (0.09, 1.03)
Average family income	<1000	26 (36.1%)	46 (63.9%)	1	1
	1001–2000	27 (24.3%)	84 (75.7%)	0.57 (0.30, 1.09)	1.59 (0.58, 4.36)
	2001–3000	22 (25.9%)	63 (74.1%)	0.62 (0.31, 1.22)	1.33 (0.47, 3.75)
	3001–4000	31 (34.8%)	58 (65.2%)	0.95 (0.49, 1.81)	1.17 (.042, 3.25)
	>4000	89 (37.2%)	150 (62.8%)	1.05 (0.61, 1.82)	1.40 (0.57, 3.40)
Attitude toward providers	Favorable	64 (59.8%)	43 (40.2%)	4.07 (2.63, 6.29)	2.20 (1.16, 4.17)*
	Unfavorable	131 (26.8%)	358 (73.2%)	1	1

SRH: sexual and reproductive health; YFS: Youth Friendly Service; RH: reproductive health; COR: crude odds ratio; AOR: adjusted odds ratio; CI: confidence interval; STI: sexually transmitted infection.

* $p < 0.05$.

socio-demographic status of the respondents. For example, the proportion of married respondents in the study done at Awabel district were higher (13.0 %) than this study (3.5%) which may cause the YFS utilization higher. On the

contrary, the studies conducted in Harar, Bale, and Goba were carried in the town; again town residents may have better information, access, and utilization of YFS. Moreover, in the study done in Bale zone, nearly 40% of

the participants had exposure to sexual intercourse and 10.7% of them were married during the survey, which is higher compared to the current study. In turn, this might affect YFS utilization.³⁰ The current finding was also lower as compared with the study conducted in Ghana, which reported utilization of YFS as 55.8%.³³ The possible reason for this difference might be due to difference in educational level of study participants and health services delivery system. For instance, most of the participants in study conducted in Ghana were college students attending training on nursing. They might have better awareness and perception about RH services and more likely to use services than the current participants.

The current finding was higher than the results reported in Woreta town in Amhara region (24.6%), Mecha district (18.4%), and Nekemte town in Oromia region (21.2%).^{34–36} This discrepancy might be due to difference in age and grade level of participants. The possible reason for variation particularly with report from Woreta town may be difference in grade level where almost half of the respondents were grade 9 and 10 students. Similarly, in the study conducted at Nekemte town, more than 60% of the participants were grade 9 and 10 students. Whereas all participants involved in this study were grade 11 and 12 students who might be more informed, matured, and likely to use the services than lower grade students.³⁶ Moreover, currently non-governmental organizations (NGOs) like Amref Health Africa in Ethiopia have expanded their contribution to widen adolescent and youth sexual and reproductive service provision in the study area. This might cause a significant difference in YFS utilization from the previous findings. Moreover, the current report was higher as compared to other studies done in Makassar, Indonesia, and Bhaktapur district in Nepal where 24.3% and 9.2% of respondents used YFS, respectively.^{37,38} The possible justification for such variation might be difference of socio-demographic characteristics of participants and the study settings in terms of availability and accessibility of YFS facilities. For example, in the above studies, only adolescents participated in the surveys. Adolescents in this age group might be less likely to use the services than older youth.²¹ In addition, the study conducted in Bhaktapur district, Nepal had reported that youth friendly health services were not well integrated in urban clinics during the survey.³⁸ This may also be the reason for lower utilization of youth friendly service.

In this study, fear of being seen by their parents or neighbors (29.4%) and lack of awareness where to go (24.9%) were the main reasons of not using YFS from the nearby health facility. This finding was supported by the study done in Anchar district and Bahirdar town in Amhara region in which fear of to be seen by parents or other adults was a reason of not utilizing the services for 45.5% and 28.5% of the respondents, respectively. This was supported by the finding from qualitative study in which most participants of IDI and FGD indicated fear or feeling ashamed as the major

barrier to use YFS. Furthermore, participants explained that negative attitude of the community, absence of isolated clinic and recreational services in the health facilities hindered YFS utilization. On the contrary, studies done in Metekel zone in Benshangul Gumuz region, Goba town and Bale zone in Oromia region showed that being not ill was the major reason for 31.2%, 54%, and 67.7% of the respondents, respectively.^{28,29,32}

In this study, respondents whose father can read and write were more than three times more likely to use YFS than those whose father cannot read and write. This finding was not in line with the result of the studies in southwest Oromia and Bale zone in Oromia region where educational status of respondents' father was not significantly associated with YFS utilization. The possible explanation might be fathers of respondents who can read and write and could have better information and understanding on RH issues of their children than those who cannot read and write. As a result, they may allow youth to discuss on RH issues freely which has valuable role to encourage youth for YFS utilization.

Respondents being knowledgeable about RH issues were about five times more likely to use YFS. This fact was supported by the study done in Machakel district in Amhara region.²⁷ It was also in line with the finding reported in Indonesia, in which knowledgeable youth were nearly twice more likely to utilize YFS than their counterparts. Moreover, discussants and interviewees in the qualitative study mentioned lack of awareness on RH and existing health services as a reason for low utilization of YFS. This is because those who have better knowledge about RH issues will develop good health care-seeking behavior.³⁷

In this study, utilization of YFS among respondents with favorable attitude toward RH services was twice more likely than their counterparts. This finding was supported by the study conducted in Bale and Hadiya zones which reported positive association between attitude of youth toward RH services and YFS utilization. This might be because youth with positive attitude toward YFS might be more likely to be motivated and attracted to the services than those with negative attitude.

According to this study, youth who had favorable attitude toward YFS providers were twice more likely to use YFS than their counterparts. This finding was supported by the study conducted in Harar town which reported having negative perception about youth friendly service providers negatively influenced services utilization. The possible explanation for this association might be due to the fact that having favorable attitude toward YFS providers may predispose youth to use services without fear and embarrassment. In addition, youth who trust providers might be more likely to discuss any RH issues and attracted to utilize RH services.

According to the current study, respondents who had discussed on two or more RH issues were more than two times more likely to use YFS. This finding was supported by the

studies conducted in Nekemte town, Mecha district, Debrebirhan town, Anchar, and Awabel districts.^{20,31,34,35,39} This may be due to the fact that discussion helps youth to acquire relevant information on different health issues and available services. As a result, well-informed youth may be more likely to arrive at the right decision to use the services.

In this study, YFS utilization by respondents who have sexual exposure was more than three times more likely than their counterparts. This finding was in line with the study conducted in Awabel district, Bale zone, South west Oromia, Hadiya zone, Mecha district, and Nekemte town.^{25,28,31,34,35} This might be due to the fact that those who had sexual intercourse may fear adverse health outcomes like acquiring STI, unwanted pregnancy and abortion, and more likely to seek health services. According to the finding from this study, respondents who perceive themselves as risk of acquiring HIV were more than four times more likely to use YFS than their counterparts. This evidence is in line with the studies carried out in Anchar district and Debrebirhan town.^{20,39} The reason for this finding maybe those who perceive themselves as at higher risk of acquiring HIV may need to be tested and know their status. As a result, they are more likely to use YFS than those who did not perceive themselves as risk of acquiring HIV/AIDS.

In this study, respondents who had history of STI in the last 1 year before the study were more than four times more likely to use YFS. This finding is consistent with the evidence reported by the studies conducted in Bahirdar town, Bale zone, Hadiy zone, and Nekemte town.^{21,25,32,35} The possible reason for this may be due to the fact that having RH problem like STI pushes youth to seek treatment for their illness as a result increase YFS service utilization. Youth who were supported to use the YFS were also about four times more likely to use the services than their counterparts. Supporting this finding, IDI and FGD participants of the qualitative inquiry mentioned that the presence of family support and approval as the primary determinant of youth friendly health services utilization. This might be because any support from families or friends encourages and helps youth to make the right decision on service utilization. Moreover, family support has direct implication in providing the right information and approving youth to utilize appropriate health services.

Limitation

Since the study was institutional based and which was also confined to the public schools, generalization of the findings to the general youth population is limited. As this study required participants to remember information retrospectively, recall bias may also be another limitation. In addition to that, social desirability bias might be introduced while assessing some sensitive issues.

Conclusion

In this study, utilization of YFS was relatively low, as compared with the previous findings. Knowledge on RH issues,

sexual exposure, perceiving as risky of acquiring HIV, history of STI, ever supported to use the services, and attitude of youth toward youth friendly service providers were among factors associated with YFS utilization. Health facilities and schools should work coordinately to scale up YFS utilization. Policy makers and health managers should widen interventions to increase health-seeking behavior of youth and change negative attitudes toward YFS.

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Author contributions

All of the authors contributed in the conceptualization, data curation, formal analysis, investigation, methodology, software, supervision, and validation, visualization, writing, and editing the manuscript.

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Ethical approval

Ethical approval letter for this study was obtained from Hawassa University, Institutional Review Board (Approval number: 082/2012). Ethical clearance letter was obtained from Hawassa University, College of Medicine and Health Science institutional review board (IRB) under approval number of 082/2012. For teenagers, written informed consent was obtained from school directors on behalf of students' parents. The aim of the research was explained for the study participants and informed written consent was obtained from (18 years and above) respondent before the interview. The right to withdraw the consent whenever they want was also respected. The participants' anonymity, confidentiality, and privacy were ensured. Participants of FGDs and IDIs had also given informed oral consent before the study and their privacy and confidentiality were ensured as well. Moreover, precautions to prevent COVID-19 transmission (wearing a mask, keeping social distance, and using alcohol-based hand rubs) were applied throughout the study.

Informed consent

Written informed consent was obtained from the participants (18 years and above) before the study. Since students were at schools, which are far from their parent's permanent residence, the school directors are authorized and had taken the responsibility to closely monitor and follow the students on behalf of their parents. As a result, we could not directly meet students' parents to gain informed consent for participation. Hence, we got permission from

the IRB to obtain written informed consent from school directors on behalf of parents of teenagers.

Trial registration

Not applicable.

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Supplemental material

Supplemental material for this article is available online.

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