

**ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCES
SCHOOL OF ALLIED HEALTH SCIENCES
DEPARTMENT OF NURSING AND MIDWIFERY**

**REPRODUCTIVE HEALTH SERVICES UTILIZATION AND ASSOCIATED
FACTORS AMONG ADOLESCENT OF AGE 15-19 IN DEBRE BIRHAN TOWN**

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List of abbreviations/acronyms

AIDS: Acquired Immunodeficiency Syndrome

AOR: Adjusted Odds Ratio

CI: Confidence Interval

EDHS: Ethiopian Demographic and Health Survey

FP: Family Planning

HIV: Human Immunodeficiency Virus

ICPD: International Conference on Population Development

IRB: Institutional Review Board

MSc: Master's Degree in Science

NGO: Non-Governmental Organization

OR: Odds Ratio

RH: Reproductive Health

RHS: Reproductive Health Service

SRH: Sexual and Reproductive Health

STD: Sexually Transmitted Disease

STI: Sexually Transmitted Infection

VCT: Voluntary Counseling and Testing (for HIV)

WHO: World Health Organization

Abstract

Background: Reproductive health care is the constellation of methods, techniques and services that contribute to reproductive health and well-being by preventing and solving sexual health problems. Utilization of those services is an important component in preventing adolescents from different sexual and reproductive health problems.

Objective: This study was aimed to investigate the level of reproductive health services utilization and associated factors among adolescents of age 15-19 who live in DebreBirhan town, Amhara National Regional State (ANRS), Ethiopia, 2016.

Methodology: A community-based cross-sectional study was employed to assess reproductive health service utilization and its associated factors by administering a pre-tested semi-structured questionnaire from April 5 - May 1, 2016. A multi stage systematic sampling technique was used to select a total of 648 adolescents living in 5 randomly selected kebeles of DebreBirhan town. Data were entered and analyzed by SPSS version 21 software package. Logistic regression was done to identify possible factors associated with reproductive health service utilization. P value less than 0.05 was considered as a level of significance.

Results: About one-third (33.8%) of adolescents utilized at least one of reproductive health services. Adolescents who had discussed sexual and reproductive health issues with their sexual partner and peers were 2 times more likely to use RH services than their counter parts (AOR= 2.368, 95% CI: 1.168-4.802 and AOR= 2.360, 95% CI: 1.155-4.820 respectively). Adolescents who weren't co-resided with both their parents were also about 2 times more likely to utilize RH service than those who were living together (AOR= 2.570, 95% CI= 1.155-4.820). Positive perception of oneself towards acquisition of HIV/AIDS urged the adolescents to use RH services twice than those who didn't perceive themselves as risky (AOR= 2.231, 95%CI: 1.001 – 4.975).

Conclusion and recommendation: Utilization of RH services among adolescents in the study area were low. Discussion with sexual partner and peers, risk perception of oneself towards the acquisition of HIV/AIDS was among the predictors of RH services usage. Therefore, interventions such as advancing adolescents' knowledge, facilitating parent to child communication, strengthening of youth centers and school reproductive health clubs are important steps to improve adolescent reproductive health service utilization.

Key words: Reproductive health, Service utilization, Adolescent (of age 15-19)

1. Introduction

1.1. Background

Today's generation of adolescents is the largest in history and more than three fourth of this population lives in developing nations. According to World Health Organization (WHO), adolescents are people between 10 and 19 years of age; they make 20% of the world's population, of whom 85% live in developing countries. Adolescence is characterized by significant physiological, psychological and social changes that put them for high risk sexual and reproductive health problems. This has partially been because adolescents were considered to be relatively healthy, without a heavy "burden of disease" [1, 2].

Reproductive health care is defined as the constellation of methods, techniques and services that contribute to reproductive health and well-being by preventing and solving sexual health problems [3].

The concern about adolescent sexual and reproductive health has grown due to unprecedented increasing rates of sexual activity, early pregnancies and sexually transmitted infections including human immune deficiency virus among adolescents [4, 5]. Published studies from some countries in Africa suggest that there were many factors to adolescents' involvement in reproductive health programs and makes the service utilization low. Lack of information from formal sources was cited as one of the main problems. For example, adolescents in rural Nigeria and Kenya [6] suggest that discussing sexual issues with parents was a taboo. Other reasons for low reproductive health service utilization include, service inaccessibility, cultural influence, lack of knowledge about the service provided (where, what, when), feelings of discomfort, fear of being seen by parents and significant others while they are in health care delivery points and embarrassment while seeking reproductive health care services [7].

Here in Ethiopia also, the 2011 Ethiopian Demographic and Health Survey figured out contraceptive use among adolescents was lower when compared with other age groups [8]. This figure suggests there is a gap in addressing Adolescents sexual and reproductive health issues which in turn affect their health and productivity quietly negatively.

1.2. Statement of the problem

According to the World Health Organization (WHO) about one 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 sexually transmitted disease (STD). Every year an estimated of 1.7 million youths lose their life prematurely due to preventable or treatable problems such as accidents, violence, pregnancy related complications and other illnesses. WHO also estimates 60% of all new HIV infections occur in youths aged 15-19 years in Africa [2].

Sub-Saharan Africa remains the most affected region in the world with an estimate of 22.5 million people living with HIV. Approximately 1.7 million new infections occurred in the region. Ten million young people aged 15–24 years and almost 3 million children under 15 years were living with HIV. Rates of premarital sexual activity were highest in Sub-Saharan Africa, where more than half of girls aged 15-19 have sexual experience [9].

According to the 2011 Ethiopian Demographic and Health Survey (EDHS), among the age group of 15-24 years, HIV prevalence was 0.4%. The utilization of family planning services in the existing health care system by young people was also very low. As a result, there is a high rate of unwanted pregnancies which often result in abortions and their complications. The majority (67.2%) of those seeking treatment for an incomplete abortion were under 24 years of age [8].

The above mentioned devastated adolescents' problems can be justified by RH service utilization either directly or indirectly. As it's obvious that, the more readily the services are utilized, the less the problems will be challenging. But studies conducted in East Gojjam Zone; Gonder, Mekelle, Jimma towns as well as Medawelabu University [10-13] showed that the Reproductive health services utilization among adolescent populations were quite low. This low service utilization, whatever the reason could be, taken as the major factor and makes the adolescents' problem more complicated.

Despite higher proportion of the world population being in the 10–24 age groups, the reproductive health needs of adolescents have neither been researched nor addressed adequately [7].

Globally, a number of strategies have been adopted to promote the adolescent's reproductive health. For instance, Universal Access to Sexual and Reproductive Health Services for Adolescents was added as a target to the revised Millennium Development Goals framework in 2005 [14]. Prior to this, since the 1994 International Conference on Population Development (ICPD) in Cairo, Egypt, adolescent-friendly reproductive health services have been recognized as an appropriate and effective strategy to address sexual and reproductive health needs of adolescents [15]. Nevertheless, the needs of the young people remain poorly understood or served in many parts of the world [16].

Here in Ethiopia also, the Federal ministry of health (FMOH) launched several strategies to promote adolescents and youth reproductive health including National Reproductive Health Strategy 2006-2015; National Adolescent and Youth Reproductive Health Strategy 2007-2015; Standards on Youth Friendly Reproductive Health Services and also Tools for planning, Implementation and Monitoring at different levels of the health system were prepared. Youth friendly health services are established attached to existing health facilities to provide RH services to adolescents and youths. In spite of this, Ethiopia didn't archive a remarkable success regarding to Adolescent and Youth reproductive health [7].

Even though certain factors were raised as a reason for low service utilization which in turn affect the adolescents' reproductive health in some areas of the country, more other factors need to be investigated specially at areas where no prior studies have been conducted on the issue. Therefore, the rationale behind this research was to investigate the level of reproductive health services utilization and associated factors among adolescents who live in Debre Birhan town, in order to provide evidence based information and recommendations for possible future interventions.

1.3. Significance of the study

Even though, some studies were conducted in Ethiopia on the same issue, investigations relating with RH services utilization by adolescence and its associating factors at any level in the country is very important. Because Ethiopia is multicultural country and there are significant differences among socio-demographic variation which makes the result unique.

So, this study is expected to give insight into factors affecting RH service utilization among adolescents of age 15-19 who are living in Debre Birhan town because interventions are primarily focused on factors (causes). It also generates relevant information that could help to design appropriate RH programs for this segment of population in the future. Because interventions which targeted this adolescent should consider their particular setting's status que, local contexts and diverse needs to be effective. The findings of this study will also serve as a reference for other researchers who want to conduct further investigations. As relevant recommendations will be submitted to the North Shoa zone health office and Amhara national regional health bureau in advance, it can be served as a reference to find out gap towards achieving their goal.

2. Literature review

2.1. Introduction

Reproductive Health Service includes access to information and services on prevention, diagnosis, counseling, treatment and care, and requires that all people can safely reach services without travelling for a long time or distance. Services and treatments must be affordable and based on the principle of equity. It also requires that services are of adequate quality and that providers do not discriminate on the basis of sexuality, gender, ethnicity and age [17].

Studies shown that, even with a lot of perceived barriers against the utilization of sexual and reproductive health service by adolescents, efforts in recent years needs to focused on not only ensuring health service availability but also making its provision adolescent friendly that is, accessible, acceptable, equitable, appropriate, and effective [18].

Afterward, prior findings that have done within global, regional and Ethiopian context regarding to the level of Adolescents' reproductive health service utilization will be reviewed. The scope of this study is limited to four components of sexual and reproductive health service. Namely, modern contraceptive, HIV counseling and testing, diagnosis and treatment of STI and sexual and reproductive health Information and education. Factors associated with the utilization of RHS will be discussed.

2.2. Utilization of reproductive health service

Adolescents' utilization of reproductive health services is not only varying from one part of the word to the other, but also it varies within a single country. It also noted that utilization of RHS in many countries is low and lags far behind what is expected to be even after decades of extensive investments [19]. For instance, findings in USA show that family planning and reproductive health service utilization was increased by 9% from 1995 to 2002, including rising use of services for contraceptive provision and counseling and STI testing, especially among the youngest women [20, 21]. But another finding which aims to investigate reproductive health service use by young women in the USA between 2002 and 2008, reported that from the pooled sample (n = 4421) reproductive

health service usage was 59%, including contraceptive (48%), gynecological exam (47%) and counseling services (37%). According to the data, the lifetime family planning service usage was declined by 15% from 2002 to 2008 ($P = 0.001$) and recent reproductive health service use by 8% ($P = 0.01$), including gynecological exam (8%, $P = 0.03$) and contraceptive (6%, $P = 0.02$) services. Between 2006 and 2008, USA women were less likely to use reproductive health and contraceptive services than in 2002 [OR= 0.6, CI= 0.5, 0.8, $P = 0.001$ and OR= 0.7, CI 0.6, 0.9, $P = 0.005$, respectively]. The research also added trends across the year among sexually experienced women which were found similar but smaller in magnitude, 5% decline in both reproductive health (OR 0.7, CI 0.6, 1.0, $P = 0.02$) and contraceptive (OR 0.8, CI 0.6, 1.0, $P = 0.03$) service use [22].

2.2.1. Modern contraceptive

Survey assembled from 70 developing countries, 35 countries in Africa including Ethiopia, 22 in Asia and 13 in Latin America and the Caribbean which aimed to provide an up-to-date and comprehensive overview of the use of sexual and reproductive health services by adolescent women aged 15–19 in the developing world was conducted. According to the result great variation was observed on modern contraceptive use among married women adolescents across and within sub-regions of Asia. Overall, proportions ranged from 0% in Armenia to 52% in Mongolia. But 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%). From countries that the survey covered, unmarried adolescent women in Cuba take the lead in contraceptive use by 83% [23].

Research was conducted in Mandalay City, Myanmar on 444 randomly selected youths aged between 15 and 24 to assess baseline information on access to and utilization of RH services and unmet needs among youths living in resource- limited, suburban communities of Mandalay City, Myanmar. The finding showed 67% participants had ever utilized at least one type of RH service (the study focused on four services namely; SRH information services, family planning services, comprehensive maternal care services and STI/HIV testing services). The most utilized service was family planning (70%) [24].

Coming to our country Ethiopia, the 2011 Ethiopia Demographic and Health Survey showed that only 5 percent of all female adolescents between age 15-19 report current use of any modern contraceptive method [12]. Community-based cross sectional studies were also conducted in Gondor town, rural area of East Gojjam Zone, Jimma town and Goba town [10-12, 25]. Despite the fact that, sexual and reproductive health service components assessed were varies in number, adolescents who live in Gonder town had high rate service utilization (75.8%) followed by Goba town, Jimma town and rural areas of East Gojjam zone (70.2%, 41.1% and 21.5% respectively). Regarding to Family planning service utilization, figures were quite different among the listed areas with 79.5% in Gonder, 71.4% in Goba town, 27.7% in rural areas of east Gojjam and 16.3% in Jimma town [11, 25, 10 and 12].

In addition to this, institution based studies in Mekelle town which involve 1031 female and male high school students aged 14–19 years and Madawalabu University which involve 568 regular undergraduate students of Madawalabu University (though age is not specified) were done[26,13]. Service utilization was quite different among two settings. Among the total respondents in the first study (high school students) only 22% of the respondents had visited SRH services delivery points in the past 12 months whereas 80.5% of University students in Madawelabu ever utilized reproductive health services. This difference between those studies potentially due to; first, the time bound for the result in first study makes the figure small whereas ‘ever use’ in the later study makes the figure large. Second, Unspecified age range in the second study can be reason for the variation. More over this, university students are believed to be knowledgeable, relatively free from fear of being seen by others and autonomous than high school students. Regarding to modern contraceptive usage 16% of high school students obtain condom with the past 12 months prior to the study [26] whereas 27.7% of university students have ever used modern contraceptives [13].

2.2.2. Voluntary counseling and testing of HIV

Concerning to voluntary counseling and testing of HIV, finding indicates low service utilization among adolescent women in Africa, developing countries of Asia, Latin America and Caribbean. VCT was lowest in Western Africa, where 2–11% of adolescents had been tested and it fall between the range 15% and 33% across the continent. In most of

the 14 Asian countries with data, no more than 4% of adolescent women had had an HIV test in 2014. Only in Kazakhstan (15%), Mongolia (6%) and Kyrgyzstan (6%) were proportions somewhat higher. In the Latin American and Caribbean countries of Bolivia, Colombia, Costa Rica, Haiti, Honduras and Mexico, no more than 10% of adolescent women had had an HIV test in 2014 [23].

In Ethiopia, Voluntary counseling and testing of HIV/AIDS service utilization among adolescents seems equivalent across different places. For instance; 74.1% of Madawelabu University students [13], 72.2% adolescents in Gonder town (this figure increased to 88.4% among sexually experienced) [11], 67.3% in Goba town [26] were obtained VCT service.

2.2.3. Diagnosis and treatment of STI

Study conducted in USA which aimed to describe associations between use of alcohol and other substances and SRH service utilization among young women in the United States from 2002-2008 with 4,421 young women ages 15-24 years showed that among the respondents STI testing and treatment services usage were not more than 17% across the years [27].

In three African countries (Ethiopia, Niger and Zimbabwe), fewer than one in three adolescent women with an STI or an STI symptom obtained care. The proportion who went to a health facility was lowest in Kenya (13%), Niger (13%) and Zimbabwe (17%) the highest level was in Egypt (68%). The proportions of adolescent women in Latin America and the Caribbean who sought treatment for an STI or STI symptoms were generally higher than that in Africa and Asia, ranging from 52% in Bolivia to 84% in Peru [23].

The above study that mention Ethiopia's figure on STI treatment seeking habit have similarity with the domestic finding that was conducted in Mekelle town (diagnosis and treatment of STI = 15%) [26].

2.2.4. SRH Information and education

The last component of RHS that going to be reviewed in this paper is utilization of information, Education regarding to sexual and reproductive health issues among adolescent.

Research conducted in USA to examine associations between receipt of communication about RH issues and use of services among adolescent population with 2,326 adolescents aged 15–19 in 2002 and 2006–2008 showed that the majority of adolescents had received parental (75%) and formal (92%) sexual and reproductive health communication; among those 43% reported recent service use [28].

Domestic finding in rural areas of East Gojjam showed that, 38.3% adolescents had ever heard about RH services and reported health professionals 80.4% as the main sources of information followed by radio 15.5%, television 3.1% and print media (posters/leaflets) 1% [10]. In Jimma town also 28.8% of adolescent were users of Information Education and Communication about SRH issues [12].

2.3. Factors associated with utilization of reproductive health services

2.3.1. Socio-demographic factors

Among socio-demographic and socio-economic factors: Age, being female adolescent, being a current student (in- school), educational status, parental communication, religious affairs, maternal education and exposed to mass media (having functional television and radio at home, and access to newspaper on sexual and RH issues) were found to be associated with reproductive health service utilization in different studies.

Domestic finding in Jimma town showed that age group of 18 to 19 years were 1.4 times more likely to ever use RH services than those in the age group of 15 to 17 years old (AOR=1.4 95% CI (1.10, 1.9) [12]. Being female adolescent is cited as of the socio-demographic factor associated with RHS utilization [11, 26]. Female adolescents were about 2.6 times (AOR = 2.6, 95% CI: 1.79, 3.80) more likely to utilize VCT service than the males [11] but on the other side, a school based study in Mekelle town showed that the utilization of SRH services was lower among female students (AOR; 0.5, 95% CI= 0.3, 0.7) [26].

Being a current student (in-school) were also associated with increased utilization of RHS (AOR= 5.88, 95% CI; 2.44-14.28, $P < 0.001$) [24]. In addition to this, according to the study in Gonder town, the odds of having VCT was about 2 times (AOR = 2, 95% CI: 1.09, 3.41) higher for in-school adolescents than out of school ones [11].

Adolescent's education status is frequently cited as a factor for the use of RHS. Adolescents in secondary education were used RH services 2 times more likely than elementary school adolescents (AOR = 2.41, 95% CI (2.98, 7.11)) [10]. This variable also described in another study, adolescents with secondary education and above were about 9 times more likely to utilize FP service as compared to those with no formal education (AOR = 9, 95% CI: 1.45-54.14) [11].

Study in USA showed that parental communication with adolescents regarding to sexual and reproductive health issues were positively associated with service usage (AOR=1.6, 95% CI: 0.8-2.3). Different studies here in Ethiopia also correlate parental communication with service usage among adolescents. Among them study in rural areas of East Gojjam zone showed that the likelihood of services uptake was about 4 times higher where there was adolescent-parent communication regarding RH topics (AOR = 3.70, 95% CI: 1.89-5.68) [10]. Another study in Gondar showed that, Adolescents who had had parental discussion on VCT services were 10 times (AOR = 10, 95% CI: 6.09-17.55) more likely to use the service [11].

Religious opposition 28 (17.6%) were the major reasons for not utilizing contraceptives among sexually active respondents of Madawelabu university students [13]. Maternal education was also associated with increased family planning services among adolescents in study conducted in Gondar town, (AOR = 6.4, 95% CI: 1.39, 29.72) [11].

2.3.2. Individual attributes

Certain individual characteristics such as having history of sexual intercourse, having knowledge of reproductive health, discussion with health workers, discussion with peer group, discussion with 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 which determines the utilization of RHS.

According to study in Mandalay City, Myanmar, having a history of sexual exposure were increase adolescents' RH service utilization by 3 times (AOR=3.12, 95% CI; 1.35-7.24) [24]. Studies in Gonder town and Madawelabu University also revealed that Adolescents who had romantic sexual relationships were about 6.5 times (AOR = 6.5, 95% CI: 1.23, 34.59) more likely to utilize family planning services than those who had not had romantic sexual relationships and sexually active respondents utilized reproductive health service 6 time more than sexually inactive students [AOR 5.99, 95% CI; 2.60-13.81] respectively [11, 13].

The second mostly cited individual factor is having knowledge of RH. Adolescents having a high knowledge of RH service increased the likelihood of utilizing those services (AOR=1.43, 95% CI: 1.18-1.73) [24], and also Adolescents who have knowledge of family planning and VCT services were 9 and 3 time more likely to ever use RH services, (AOR =8.9, 95 % CI: 2.3 - 26.6) and [AOR=2.8, 95% CI; 1.5- 5.3] respectively [12].

Findings from Madawelabu University showed that, students who ever made discussion on VCT with the health workers made them 2 fold to take VCT (AOR =2.06, 95% CI: 1.21-3.48) [13] whereas in Goba town, those adolescents who had discussed with health workers were 4 times more likely to utilize VCT service than their counterparts (AOR=4.48, 95% CI: 2.01- 9.99), and who had discussed with friends were 2 times more likely to utilize VCT service (AOR=2.04, 95% CI; 1.035-4.403). The same study revealed that the odds of family planning (FP) service utilization among those adolescents who have discussed with their sexual partner were 3 times higher than their counterparts (AOR=3.62, 95% CI: 0.15-0.84) [25].

Adolescents' exposure to mass media on SRH issues were associated with increased usage of RHS in Mandalay City, AOR; 2.20 (95% CI; 1.25-3.86, P= 0.006) [24]. But study in Jimma town showed that adolescents in the households with functional radio and access to Newspapers were likely to ever use RH services [AOR= 1.7, 95% CI (1.1, 2.7), AOR=2.5 95% CI: 1.9-3.3), respectively]. It also revealed that adolescents who had access to pamphlets and posters as source of information for RH services were more likely to be ever user [AOR=4.7, 95% (3.7 6.2); and AOR=1.7, 95% CI (1.2 2.3), respectively] [12].

Perceiving a risk towards HIV/AIDS was also found to be one of the predictors for the utilization of VCT. Adolescents who had a perception of risk towards HIV/AIDS were about 30 times more likely to utilize VCT services than those who had no perception of risk at all (AOR = 30, 95% CI: 10.65-83.01) [11] and having history of STI syndrome had a 2 times increased likelihood of using VCT service (AOR=1.99, 95%CI; 1.04-3.82) [13].

Study conducted in USA showed that all substances were positively associated with STI service use. However, daily smoking was negatively associated with contraceptive service use (AOR=0.6, 95%CI: 0.4-0.8, P=0.001) [27].

2.3.3. Service accessibility

In principle, service delivery points which aimed to deliver sexual and reproductive service to adolescent and youth population should be: attractive and appealing for young people, including input and support from the community and decorations selected by those attending, services for young people should be free of charge, health professionals should have additional qualities on top of appropriate training and the service need to be promoted to the community in order to fill the gap [29].

Study conducted in Mandalay City, Myanmar showed that among all respondents majority of them had a high level of geographical accessibility (79%). It was also associated service accessibility with service utilization as; having a high level of accessibility to RH services were twice increased the likelihood of utilizing those services (AOR=1.96, 95%CI; 1.14-3.36, P= 0.013) [24].

2.4. Conceptual framework

The conceptual framework is adopted from a similar model developed for family planning under the Evaluation Project that illustrates the pathways by which reproductive health programs achieve their objectives. The original framework, created for FP programs, can readily adaptable to other areas of RH services. Modifications are done to address the areas of interest without disrupting pathways of the original framework.

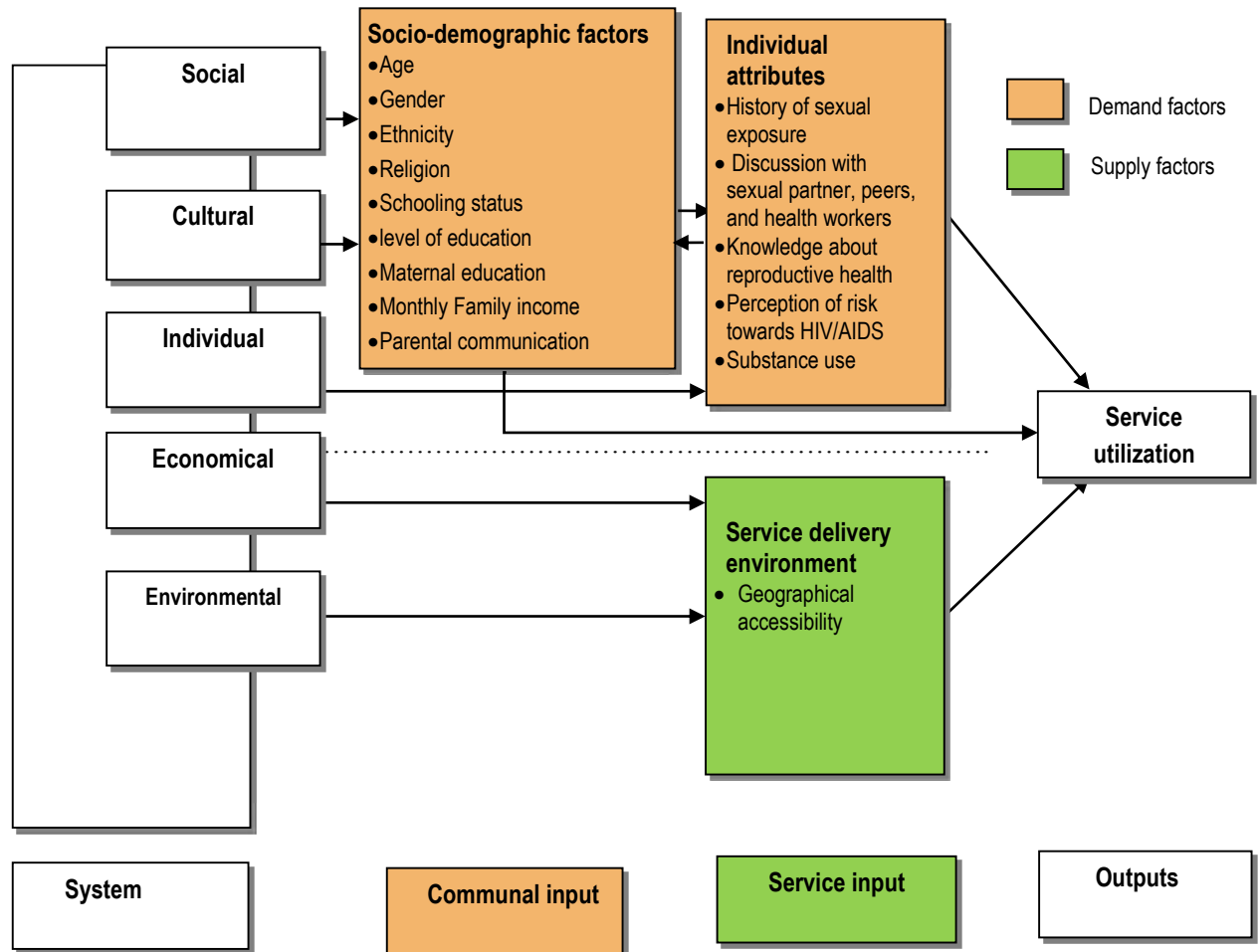


Figure 1: Conceptual framework of the study on RH service utilization and associated factors among adolescents of age 15-19 in DebreBirhan town: adopted from Family planning and reproductive health service evaluation framework. Developed by United States Agency for International Development (USAID) and President's Emergency Plan for AIDS Relief (PEPFAR).

3. Objectives

3.1. General objective

To assess the reproductive health service utilization and its association factors among adolescents of age 15-19 living in Debre Birhan town.

3.2. Specific objectives

1. To measure the extent of reproductive health services utilization among adolescents of age 15-19 in Debre Birhan town.
2. To identify factors associated with reproductive health service utilization among adolescents of age 15-19 in Debre Birhan town.

4. Methodology

4.1. Study area and period

The study was conducted from April 5- May 1, 2016 in Debre Birhan town, North Shoa Administrative Zone, Amhara National Regional State, Ethiopia. Debre Birhan town is located at 9°41'N 39°32'E/9.683°N 39.533°E, that is, 130 km North of Addis Ababa, capital city of Ethiopia. It has 2,840m elevation above sea level and covers 14.71km². The town is founded by Emperor Zara Yakob in 1456 [29] and it has 9 administrative kebeles. According to the information obtained from District Health Office, in 2015/16, the total population size of the district was putted as 92,887 out of which 54.78% (50,883) were females. From those females 23.58% (21,903) were age between 15-49. The number of households and adolescents (10-19) in the district were estimated to be 18,453 and 22,014 respectively. In the town, there were 2 hospitals, 3 health center, 9 health posts, 6 clinics and 17 pharmacies which render health services for the community. Family planning service was available in most of the health facilities including health posts.

4.2. Study design

A community based cross-sectional study design that generates quantitative data was implemented.

4.3. Population and sampling

4.3.1. Target population

The target population was all households of Debre Birhan town that reside adolescents of age 15-19

4.3.2. Source of population

The source population was all households of 5 selected kebeles of Debre Birhan town that hosts adolescents of age 15-19

4.3.3. Study population

Selected households from 5 selected kebeles of Debre Birhan town that hosts adolescence of age 15-19

4.3.4. Study subjects

Adolescents of age 15-19 who were living in the selected household

4.4. Eligibility criteria

4.4.1. Inclusion criteria

Those adolescents age 15-19 years who have resided in the selected kebeles for at least 6 months before the data collection time were included in the study.

4.4.2. Exclusion criteria

Adolescents who were homeless. Because the sampling technique and procedure, which targeted households, was not appropriate to reach this segment of the population.

4.5. Sample size and Sampling procedure

4.5.1. Sample size calculation

The actual sample size was determined considering the following assumptions: level of confidence was taken to be 95% with 0.05 α value (which yields $Z \alpha/2 = 1.96$ on the standard normal distribution curve), a 5% margin of error ($d = 0.05$) and a proportion of 72.2% voluntary counseling and testing (VCT) service utilization obtained from previous study conducted in Gonder town among adolescents age 15-19. Based on this assumption, the actual sample size for the study was computed using one sample population proportion formula as indicated below.

$$n = \frac{\left(Z \frac{\alpha}{2} \right)^2 p(1-p)}{d^2}$$

Where, n = Sample size

z = The value of the standard normal curve score corresponding to the given confidence interval = 1.96

p = Prevalence rate of RH service utilization = 0.72

d = The permissible margin of error (the required precision) = 5%

$$\frac{(1.96)^2 \times 0.72(1-0.72)}{(0.05)^2} = 309.8$$

As the sampling procedure is multistage, Design effect need to be considered =2

$$309.8 \times 2 = 619.6 \approx 620$$

Additional 10% allowance for absenteeism and refusal to participate in the study (non-response rate) was considered. The actual sample size therefore: $620 + 62 = 682$

4.5.2. Sampling procedure

A multi-stage sampling technique was employed for the selection of the sampling units. In the district there were 9 kebeles, of which a total of 5 kebeles namely kebele 02, 04, 06, 07 and 09 were selected using simple random sampling method (lottery method). The sample size for each of the selected kebeles was determined proportionally to the number of households within each kebele as below.

Proportionate allocation: $n_j = \left(\frac{n}{N} f\right) N_j$

Where, n_j = sample size of j^{th} stratum

N_j = population size of the j^{th} stratum

$n = n_1 + n_2 + n_3 + \dots + n_k$ is the total sample size

$N = N_1 + N_2 + N_3 + \dots + N_k$ is the total population size

Data obtained from the 2015/16 work plan of the District Health Office showed that the number of households in kebele 02= 2780, kebele 04= 2961, kebele 06= 2405, kebele 07=852, and kebele 09= 2370.

Therefore:

- ✓ Sample size for kebele 02 = $682/11368 \times 2780 = 167$
- ✓ Sample size for kebele 04 = $682/11368 \times 2961 = 178$
- ✓ Sample size for kebele 06 = $682/11368 \times 2405 = 144$
- ✓ Sample size for kebele 07 = $682/11368 \times 852 = 51$
- ✓ Sample size for kebele 09 = $682/11368 \times 2370 = 142$

The first household which resided the first adolescent to be sampled was determined from the kebele house number register using simple random sampling method. Then, systematic sampling method was employed to select the next households from each kebele. The researcher's assumption to do this was 'one household resides at least one adolescent of age 15-19'. The next household was identified systematically every 17th by going in a clockwise direction. In cases of household with more than one eligible respondent, only one respondent was selected by lottery method. If there wasn't eligible respondent from the selected household, immediate neighbor household (right or left) that

host eligible adolescent was selected and the interval calculated at the beginning have been kept.

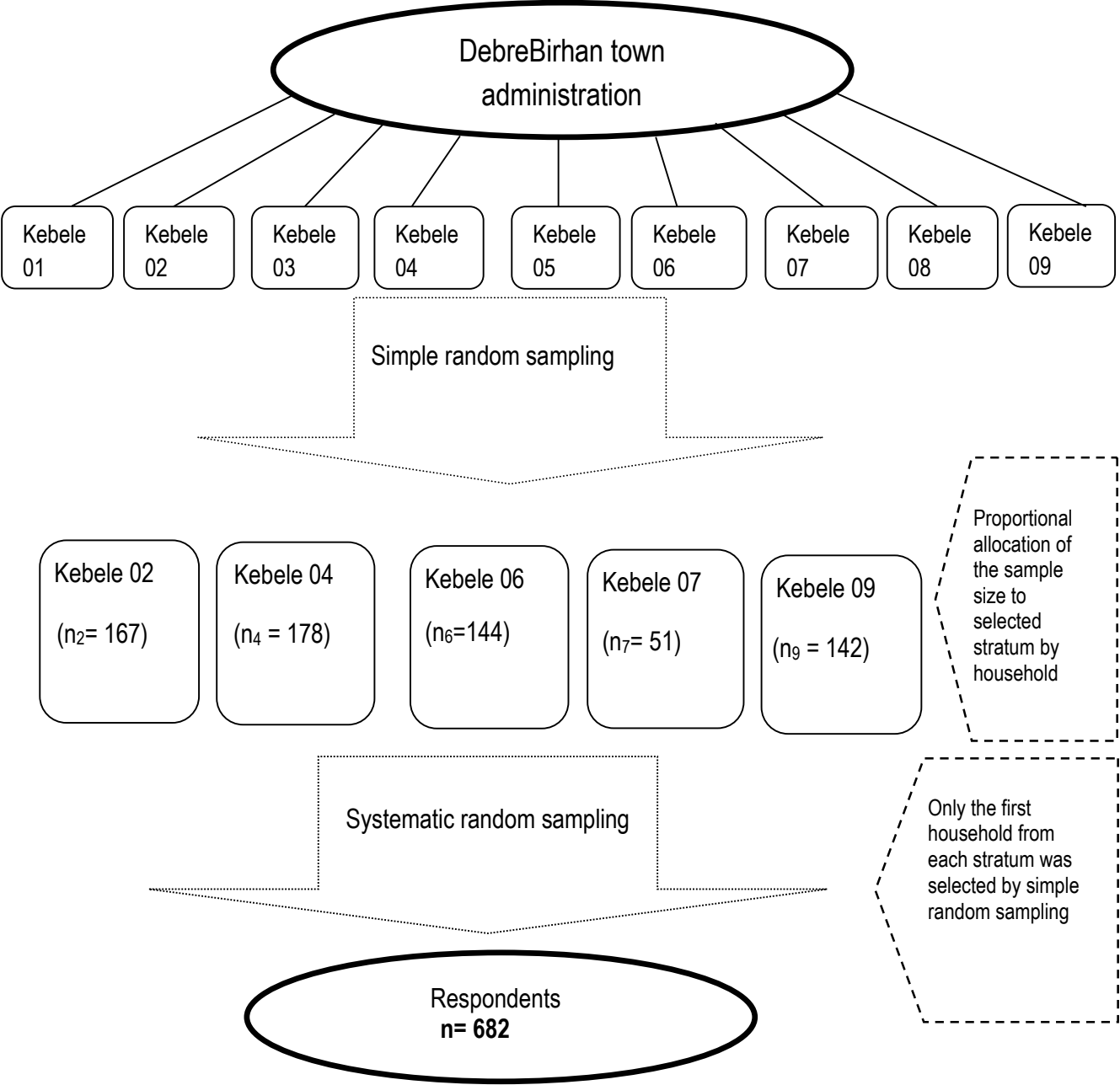


Figure 2: Schematic diagram of sampling procedure for the study on Reproductive Health service utilization and associated factors among adolescents age 15-19 in Debre Birhan Town, Ethiopia, 2016.

4.6. Study variables

4.6.1. Independent variables

A. Socio-demographic variables

- Age
- Sex
- Ethnicity
- Religion
- Marital status
- Schooling status
- Education status
- Mother's education status
- Parental communication on SRH issues
- Perceived monthly income of the family
- Living arrangement of parents

B. Individual attributes

- Knowledge about reproductive health services
- History of sexual exposure
- Discussion on SRH issues with sexual partner, peer or health workers
- Perception of risk towards HIV/AIDS
- Media Exposure on SRH issues
- Substance use

C. Service delivery environment: Geographical accessibility

4.6.2. Dependent variables: Utilization of reproductive health service

4.7. Data collection tools and procedure

A self-administered, semi-structured questionnaire was used. The questionnaire was developed by combining the John Cleland's Illustrative questionnaire for interview-survey with young people's [31] and several literatures reviewed to achieve the research objective. The main points included in the questionnaire were: socio demographic characteristics, adolescents' individual attribute regarding to 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). The data was collected by 6 trained data collectors for 25 days under close supervision and facilitation by 1 supervisor and the principal investigator as needed.

4.8. Data quality assurance

The questionnaire and consent documents was first developed in English language, then translate into Amharic, local language, for data collection and finally retranslated back into English by another translator to check consistency. Face validity of the questionnaire was assessed. Items interpretability and understandability by the study participants was evaluated by pre-testing the questionnaire on 34 adolescents (5% of the total sample size) living in unselected kebeles and necessary correction have been taken accordingly. Six data collector (3 females and 3 males) third year BSc. nursing students from DebreBirhan University have been oriented to the overall project plan, how to approach and communicate with adolescents to elicit reliable data. The anticipated time duration to complete the questionnaire was not more than 30 minute. For respondents who were absent in the first visit, a maximum of two additional schedules were established for revisit. Supervision was also done on the spot by principal investigator and supervisor. The collected data was checked for its completeness and clarity by the principal investigator daily. Data cleaning and cross-checking have also done before analysis.

4.9. Data processing and analysis

After checking for its completeness, data was entered and analyzed by SPSS version 21. Descriptive and analytical statistics including, bivariate and multivariate analysis was employed. Percentage, ratios, frequency distribution, measure of central tendency and measure of dispersion have been used for describing different variables. Bivariate analysis has been used to examine association between dependent and independent variables. All variables with $p < 0.05$ in bivariate analysis was fitted in to the multiple variable logistic regression model to identify factors associated with RH service utilization. P value less than 0.05 was considered as a level of significance.

4.10. Operational definition

Knowledge about reproductive health service- 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. The questions were about the available types of services and types of service delivery points (providers) within the area, which included a total of eight types of services and seven service delivery points.

RH service accessibility: The accessibility in this study was applied to geographical accessibility based on adolescents' own perception. Adolescents who lived within 1.6 kilometer (1 mile) radius distance from the nearest RH service center from their home and less than 30-minute walking were classified as having high geographical accessibility and low otherwise.

SRH information and education service utilization: Adolescent who received information and education regarding to sexual and reproductive health issues from health worker working in any of the service providing points within the past 12 months.

Modern contraceptive service utilization: Adolescent who used any of modern birth controlling methods (contraceptives) in the past 12 months.

VCT service utilization: Adolescent who ever received HIV counseling and testing service in life.

STI Diagnosis and treatment service utilization: Adolescent who ever obtained STI diagnosis and treatment service in life.

RH service utilization: Adolescents having sought or received at least one of the four RH services that the study focused. I.e. SRH information and education service, modern contraceptive service, VCT service and STI diagnosis and treatment service utilization.

Substance use: Using alcohol, khat or cigarette with either frequency of; more repeated than daily, daily, weekly or monthly in the past 12 months prior to the study.

History of sexual exposure: Adolescents who ever experience sex in life were classified as having the history of sexual exposure and not otherwise.

Discussion on SRH issues: Adolescents who discussed at least two SRH issues (Condom, STI/HIV/AIDS, abstinence, unwanted pregnancy, contraception) with health care provider in the last 12 months. The same was applied with peer, and sexual partner.

Media exposure on SRH issues: Adolescents who exposed to mass media (including radio, television, magazine/newspaper and pamphlet) on at least two SRH issues (Condom, STI/HIV/AIDS, abstinence, unwanted pregnancy, contraception) in the past 12 months.

Perception of risk towards HIV/AIDS: Adolescent's attitude towards perceiving themselves as susceptible to HIV infection.

Adolescent: in this study adolescent stands for boys and girls of age 15-19.

4.11. Ethical consideration

Ethical clearance was obtained from Addis Ababa University College of Health Science Department of Nursing and Midwifery Institutional review board (IRB). Official letter was received from the department of nursing and midwifery and submitted to North Shoa Zone Health Office. The office permitted the request and announce each selected kebeles' administration office for cooperation. The purpose of the study was explained to participants. Informed consent was obtained from participants more than 18 years old and oral consent was obtained from parents under the age of 18. Confidentiality was reserved. Participants' involvement in the study was on voluntary basis and they didn't ask to write neither their name nor their address.

4.12. Dissemination and utilization of results

The results will be disseminated to all kebeles of the town administrations with their local language, North Shoa Zone Youth and children affairs Office, North Shoa Zone health Office, Amhara Regional state health Bureau, Addis Ababa University School of Allied Health science department of Nursing and Midwifery, Federal Minister of Health and NGOs that are interested in working in the area. Attempts will be made to publish in known international publishers and to present it in scientific conferences for better communication of the result.

5. Results

5.1. Socio demographic characteristics of the study participants

From the total 682 participants, 648 of them responded to the questionnaires yielded a response rate of 95.01%.

Out of 648 participants 348 (53.7%) were males. The mean and median age of the respondents were 17.13 (SD $\pm$ 1.33) and 17.0 respectively. Six hundred four (93.2%) respondents were Orthodox Christian followed by 27 (4.2%) Muslim and 17 (2.6%) protestant. Based on their ethnic group, Amhara constituted 611 (94.3%) and except a few, majority of the respondents 624 (96.3%) were single.

Regarding to schooling status, 606 (93.5%) were currently enrolled at school. Only 5 (0.8%) of the respondents were found with no formal education rather, more than three-fifth, 443 (68.4%) of the respondents reported their educational status as secondary education (Grade 9-12) followed by primary education (Grade 1-8) and above secondary education 132 (20.4%) and 68 (10.5%) respectively.

Concerning Participants' mother educational status, nearly similar figures were reported that lies between 20th and 30th percentile with slight percentage increment in mothers with no formal education 175 (27.0%). Out of the total respondents, 412 (63.6%) reported that there is no habit of discussion on sexual and reproductive issues in their family. The median perceived monthly family income were 2095.0 Ethiopian Birr. More than three-fourth, 493 (76.1%) of the study participants were living with their mother and father together (Table 1).

Table 1: Socio-demographic characteristics of adolescents of age 15-19 in DebreBirhan town, Ethiopia, May, 2016.

Variable		Frequency n=648	Percentage (%)
Sex	Male	348	53.7
	Female	300	46.3
Age	15-17	356	54.9
	18-19	292	45.1
Ethnicity	Amhara	611	94.3
	Oromo	15	2.3
	Tigre	12	1.9
	Gurage	9	1.4
	Other	1	0.15
Marital status	Single	624	96.3
	Married	19	2.9
	Divorced	2	0.3
	Separated	3	0.5
Current enrollment at school	In school	606	93.5
	Out school	42	6.5
Educational status	No formal education	5	0.8
	Primary education	132	20.4
	Secondary education	443	68.4
	Above secondary education	68	10.5
Mother's educational status	No formal education	175	27.0
	Primary education	171	26.4
	Secondary education	155	23.9
	Above secondary education	147	22.7
Habit of communication with in family on	Yes	236	36.4
SRH issues	No	412	63.6
Co-residence with both parents	Yes	493	76.1
	No	155	23.9
Perceived monthly income of the family (ETB)*	150-650	35	5.4
	651-1400	134	20.7
	1401-2350	167	25.8
	2351-3550	139	21.5
	3551-5000	104	16.0
	>5001	69	10.6

‘*’ income category was based on civil service taxation cutoff points

5.2. Respondents' individual attribute related with sexuality and reproductive health

To assess their knowledge, study participants were asked about the components of reproductive health service and service delivery points which have a total score of 15. Respondents who had high knowledge (scoring above the mean = 8.6 (SD $\pm$ 3.4)) were 356 (54.9%).

Out of the total participants, 232 (35.8%) have had boy/girlfriends, and among those who had boy/girlfriend, nearly half of them 114 (49.1%) had one boy/girlfriend (mean=2.06, SD $\pm$ 1.44). One hundred sixty-two (25.0%) of the respondents have had sexual intercourse in their life. One hundred eighty (27.8%) of the study participants were reported that they have had discussion on at least two of the sexual and reproductive health issues [SRH discussion points; Abstinence, condom use, STI/HIV/AIDS, unwanted pregnancy, contraception] with their peers in the last 12 months prior to the study. Discussion on the same issues was also reported by 88 (13.6%) and 82 (12.7%) of the respondents with their sexual partner and with health workers respectively.

Depending on their risky behavior, the study participants reported their perception towards acquisition of HIV infection. Based on this, 559 (86.3%) respondents perceived themselves as free from HIV infection risks.

Regarding to the participants' last 12-month experience of alcohol, 'khat' or cigarette use, majority of them 568 (87.2%) reported that they didn't consume any of them. The remaining use at least one of those drugs at a different regularity. Majority, 28 (33.7%) of the 'drug-users' who used those drugs less frequent than monthly followed by weekly 20 (24.1%), monthly 17 (20.5%), daily 15 (18.1%) and more frequent than daily 3 (3.61%). Considering the operational definition used in this study, 55 (8.5%) of the respondents had use those substances (Table 2).

Table 2: Adolescents' individual attribute related with sexuality and reproductive health, DebreBirhan town, Ethiopia. May, 2016

Variable		Frequency n=648	Percentage (%)
Knowledge about reproductive health service	High	356	54.9
	Low	292	45.1
Ever had sexual intercourse	Yes	162	25.0
	No	486	75.0
Discuss about SRH issues* with sexual partner in the past 12 months (n=162)	Yes	88	54.3
	No	74	45.7
Discuss about SRH issues* with peer in the past 12 months	Yes	180	27.8
	No	468	72.2
Discuss about SRH issues* with Health worker in the past 12 months	Yes	82	12.7
	No	566	87.3
Perception of risk towards HIV/AIDS	Yes	89	13.7
	No	559	86.3
Exposure to mass-media on SRH issues* in the past 12 months	Yes	484	74.7
	No	164	25.3
Substance use in the past 6 months	Yes	55	8.5
	No	593	91.5

* SRH issues: Abstinence, condom use, STI/HIV/AIDS, unwanted pregnancy, contraception

The study participants were also asked about their experience in the past 12 months whether they expose for mass media which attempted to deliver information and education on at least two SRH issues [SRH issues: Abstinence, Condom use, STI/HIV/AIDS, Contraception and Unwanted pregnancy] or not. The finding showed that, out of the total study participants, 484 (74.4%) hit the response 'Yes' for mass media exposure.

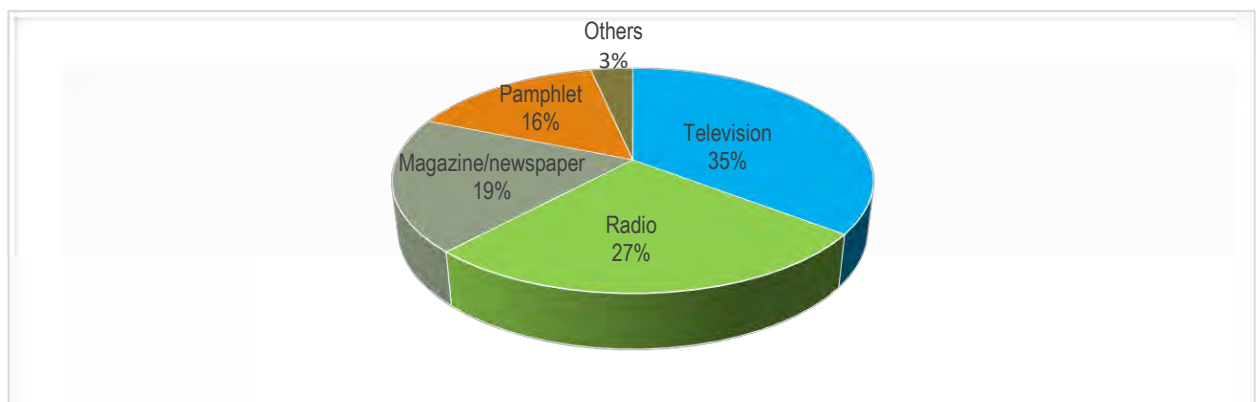


Figure 3: Exposure of adolescents to mass-medias that convey message on SRH issues in the past 12 months, DebreBirhan town, Ethiopia. May, 2016.

Among the mass medias, television was the most frequently reported 351 (35.8%) followed by radio 263 (26.8%), magazine/newspaper 191 (19.5%) and pamphlet 143 (14.6%) and other communication means like school mini-medias and subject matters, social medias and trainings constituted the remaining 33 (3.4%) (figure 3).

5.3. Geographical accessibility of Reproductive health service delivery points

Regarding to the accessibility of reproductive health service delivery points; the study participants were asked about the nearest service delivery point, estimated distance from home and average time taken to walk. Hospital and Health centers were among the commonly mentioned service delivery points 250 (38.6%) and 239 (36.9%) respectively followed by Clinics (both private and NGOs') 62 (9.6%), Pharmacy 42 (6.5%), Health posts 22 (3.4%), Youth friendly health service clubs 17 (2.6%) and Health extension workers 16 (2.5%). 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 RH service delivery center within a 30-minute walk (69.4%) and within 1.6 km radius (88.4%) from their home which yields an overall high geographical accessibility of 68.5% and low geographical accessibility of 31.5%. There was a slight variation of geographical accessibility between male and female respondents. A summary of the geographical accessibility and service utilization level for male and female respondents presented in Table 3.

Table 3: Comparison of geographical accessibility and service utilization between male and female adolescents in DebreBirhan town, Ethiopia, May, 2016. n = 648

		Sex		Total, n (%)
		Male, n(%)	Female, n(%)	
Distance from home	≤1.6km	250 (71.8)	200 (66.7)	450 (69.4)
	> 1.6km	98 (28.2)	100 (33.3)	198 (30.6)
Walking time	Less than 30 minute	306 (87.9)	267 (89)	573 (88.4)
	More than 30 minute	42 (12.1)	33 (11)	75 (11.6)
Overall Geographical accessibility	High	246 (70.7)	198 (66.0)	444 (68.5)
	Low	102 (29.3)	102 (34.0)	204 (31.5)
Service utilization	Yes	113 (32.5)	106 (35.3)	219 (33.8)
	No	235 (67.5)	194 (64.7)	429 (66.2)

5.4. Pattern of reproductive health services utilization among adolescents

Nearly 1 among 3 adolescents, 219(33.8%) had used at least one of the reproductive health services.

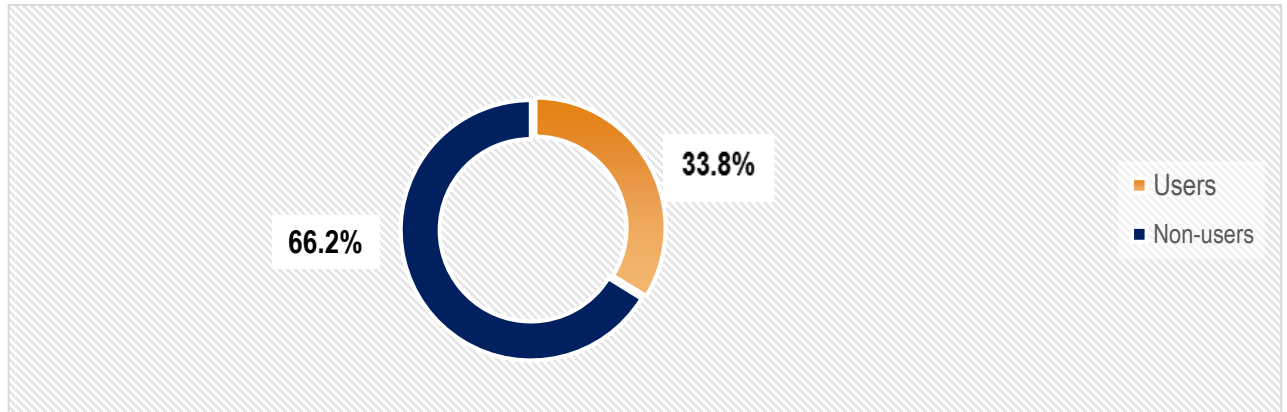


Figure 4: Pattern of reproductive health services utilization among adolescents of age 15-19 in DebreBirhan town, Ethiopia, may 2016.

Among the four reproductive health services that the study focused on, respondents were mentioned which service they received.

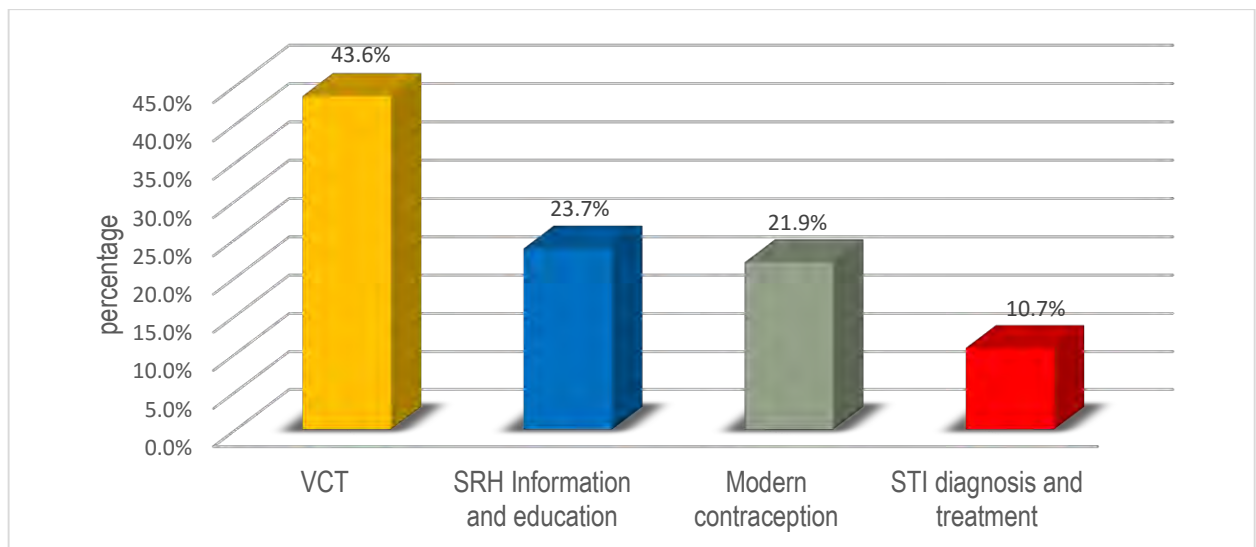


Figure 5: Reproductive Health services utilized by adolescents in DebreBirhan Town, Ethiopia, May 2016.

Based on the users' response (n= 219), voluntary counselling and testing service for HIV (ever used) was the most frequently used service 175 (43.6%) followed by SRH information and education service delivered by health worker (the past 12 months) 95

(23.7%), modern contraceptive usage (the past 12 months) 88 (21.9%) and STI diagnosis and treatment service (ever used) 43 (10.7%) [The services reported exceed the users because multiple response was possible] (Figure 5).

Regarding to SRH information and education services were asked about which type of SRH information and education service they got from health workers in the past 12 months. The most frequently information and education they got was on VCT (41.5%) followed by modern contraception (26.7%), sexual health (14.7%), STI (12.7%), safe abortion (3.5%).

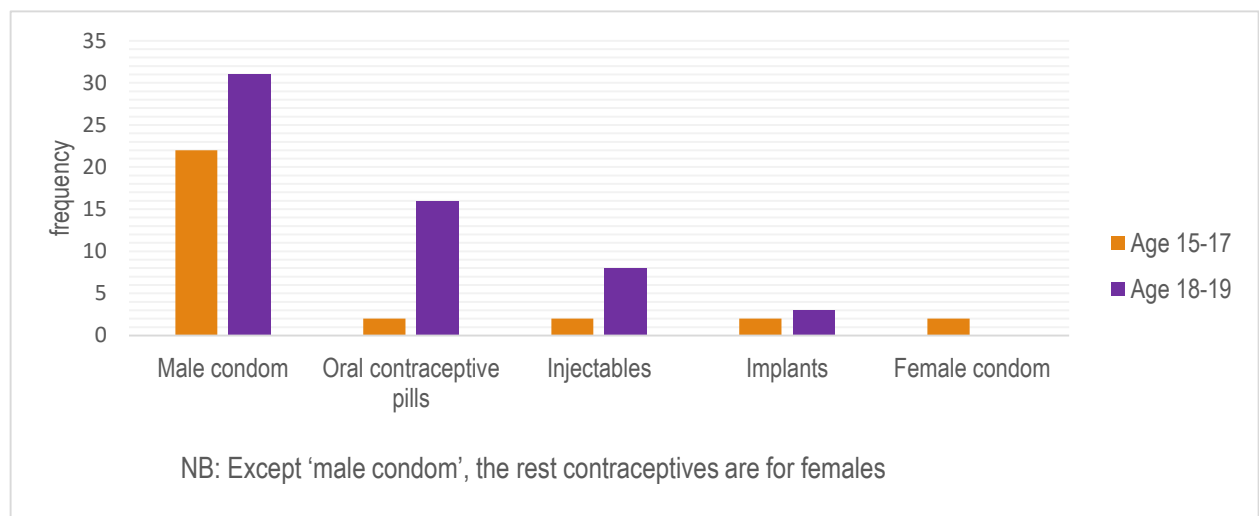


Figure 6: A comparison of modern contraception types used with the age category of adolescents in DebreBirhan town, Ethiopia, May, 2016.

The most frequently used modern contraceptive method by the adolescents was male condom (60.2%) followed by Oral contraceptive pills (20.4%). Figure 5 shows the types of modern contraception service the adolescents used based on their age category.

5.5. Factors associated with RH service Utilization

Based on the Bivariate analysis, factors found to be significantly associated with reproductive health service utilization were; Age, Marital status, educational status, mothers' educational status, habit of communication on SRH issues with in the family, co-residence with both parents, monthly family income, history of sexual intercourse, discussion SRH matters with sexual partner, discussion SRH matters with pears, discussion SRH matters with Health workers, perception of risk towards HIV/AIDS, exposure to mass-media, substance use and Geographical accessibility.

The Bivariate analysis produced statistically significant association between service utilization and majority of the independent variables. For instance; those married respondents were more likely to use RH services than their single counter-parts (COR=7.950, 95%CI: 2.605 - 24.260). Being an older age (18-19) were confined with increase the chance of service usage than being in lower age category (15-17) (COR=1.971, 95%CI:1.417-2.741). Those respondents living with their parents together were less likely to use RH services than those who were not (COR=1.970, 95%CI: 1.361-2.853).

Study participants who had high knowledge about the components of reproductive health services and service delivery points were more likely to utilize those services than the one who know less (COR= 7.934, 95%CI: 5.337 - 11.794).

Regarding to sexual history, having sexual history in life was positively associated with service usage (COR=7.934, 95%CI: 5.337 - 11.794). But Interestingly, geographical accessibility was inversely associated with service usage; the more the respondents nearer to the service delivery points the less they use the service (COR=0.644, 95%CI: 0.456 - 0.909).

Risk perception of oneself towards HIV/AIDS acquisition and substance use were also positively linked with service utilization (COR=3.485, 95%CI: 2.199-5.524 and COR=3.282. 95%CI: 1.862-5.785 respectively). Table 4 shows the bivariate analysis of factor associated with RH service utilization.

Table 4: Bivariate analysis of factors associated with reproductive health service utilization among adolescents, DebreBirhan town, Ethiopia, May 2016. n =648

Variables		Service utilization		Crude OR (95% CI)	p-value
		Yes	No		
Gender	Male	113	235	1	
	Female	106	194	1.136(0.820-1.575)	0.443
Age	15-17	96	260	1	
	18-19	123	169	1.971(1.417-2.741)	<0.0005*
Marital status	Single	200	424	1	
	Married	15	4	7.950(2.605-24.260)	<0.0005*
	Divorced	2	0	-	-
	Separated	2	1	4.240(0.382-47.035)	0.239
Current enrollment at school	In-school	199	407	1	
	Out-school	20	22	1.859(0.991-3.487)	0.053
Educational status	No formal education	2	3	1.356(0.224-8.205)	0.740
	Primary education (1-8)	39	93	0.853(0.559-1.302)	0.462
	Above secondary education	32	36	1.808(1.080-3.029)	0.024*
	Secondary education (9-12)	146	297	1	
Mother's educational status	No formal education	66	109	1	
	Primary education (1-8)	73	98	1.230(0.800-1.892)	0.345
	Secondary education (9-12)	42	113	0.614(0.384-0.980)	0.041*
	Above secondary education	38	109	0.576(0.356-0.930)	0.024*
Habit of communication with in family on SRH issues.	Yes	106	130	2.158(1.542-3.018)	<0.0005*
	No	113	299	1	
Co-residence with both parents.	Yes	148	345	1	
	No	71	84	1.970(1.361-2.853)	<0.0005*
Ever had sexual intercourse.	Yes	112	50	7.934(5.337-11.794)	<0.0005*
	No	107	379	1	
Perceived monthly family income.	1401-2350	56	111	1	
	150-650	18	17	2.099(1.005-4.384)	0.049*
	651-1400	57	77	1.467(0.917-2.347)	0.110
	2351-3550	33	106	0.617(0.372-1.023)	0.061
	3551-5000	32	72	0.881(0.521-1.491)	0.637
	>5000	23	46	0.991(0.547-1.796)	0.976
Knowledge about reproductive health services.	High	128	228	1.240(0.892-1.723)	0.200
	Low	91	201	1	
Discussion with sexual partner(n=162).	Yes	68	20	2.318(1.173-4.581)	0.016*
	No	44	30	1	
Discussion with peers.	Yes	94	86	2.999(2.099-4.284)	<0.0005*
	No	125	343	1	
Discussion with health workers.	Yes	47	35	3.076(1.917-4.936)	<0.0005*
	No	172	394	1	
Perception of risk towards HIV/AIDS.	Yes	53	36	3.485(2.199-5.524)	<0.0005*
	No	166	393	1	
Exposure to mass- media.	Yes	183	301	2.162(1.430-3.267)	<0.0005*
	No	36	128	1	
Substance use.	Yes	33	22	3.282(1.862-5.785)	<0.0005*
	No	186	407	1	
Geographical accessibility.	High	136	308	0.644(0.456-0.909)	0.012*
	Low	83	121	1	

*statistically significant association

With an intention of controlling confounding effect, variables that produce statistically significant relationship with the outcome of interest on bivariate analysis were fitted in to multiple variable logistic regression. Based on this, adolescents how had discussed sexual and reproductive health issues with their sexual partner and peers were 2 times more likely to use at least one of the four services that the researcher focused on than their counter parts (AOR= 2.368, 95% CI: 1.168-4.802 and AOR= 2.360, 95% CI: 1.155-4.820 respectively). Adolescents who weren't co-resided with both their parents were about 2 times more likely to utilize RH service than those who were living together (AOR= 2.570, 95% CI= 1.155-4.820). Positive perception of oneself towards acquisition of HIV/AIDS was spurred the adolescents to use RH services twice than those who didn't perceive themselves as risky (AOR= 2.231, 95%CI: 1.001 – 4.975) (table 5).

Table 5: Multiple variable logistic regression of factors associated with utilization of RH service among adolescents in DebreBirhan town, Ethiopia, May, 2016.

Variables		Service utilization		Adjusted OR (95% CI)	p-value
		Yes	No		
Discussion with peers	Yes	94	86	2.360(1.155-4.820)	0.018
	No	125	343	1	
Co-residence with both parents	Yes	148	345	1	0.035
	No	71	84	2.570(1.070-6.170)	
Discussion with sexual partner(n=162)	Yes	68	20	2.368(1.168-4.802)	0.017
	No	44	30	1	
Perception of risk towards HIV/AIDS	Yes	53	36	2.231(1.001-4.975)	0.048
	No	166	393	1	

6. Discussion

This study assessed a range of possible predictors, including socio-demographic, adolescents' individual attributes including sexual history and knowledge about RH services, geographical accessibility of RH service delivery centers. The percentage of adolescents who visit health facilities for basic RH service like family planning and HIV preventive services are one of the indicators of the immediate and long term RH needs of young people [1]. Taking this in to consideration, this community-based study which assessed the patterns of adolescent reproductive health services utilization and associated factors have got important figures which can be served as an indicator for the stakeholders to appreciate the progress towards achieving their goals.

Before rushing to discuss major topics of the study, it might be better to compare some common socio-demographic and individual related aspects of the respondents with other studies as it gives information on comparison between studies are logically appropriate or not. Based on the respondents' mean age, a mean age of 17.13 ($SD \pm 1.33$) in this study shown considerable similarity with 16.96 ($SD \pm 1.4$) in Gonder and 17.39 ($SD \pm 1.4$) in Goba towns [11, 25]. But it differs from finding in rural area East Gojjam which was 14.6 ($SD \pm 4.1$) and this was due to the age category the study was focused at (which was 10-19 years old) [10]. According to the respondents living arrangement, 76.1% of the respondents in this study were living with both their parents at the data collection time which was larger figure than 60.6%, 61.7% and 66.8% in rural area East Gojjam, Gonder town and Goba town respectively [10, 11 & 25]. Twenty-five percent of the respondents in this study respond that they had sexual intercourse compared with 52.9% in Mandalay city, Myanmar; 52.6 in Goba town and 63% in USA [24,25,27].

The measurement of utilization of RH services varies widely. Some studies used just one aspect of RH services [10-13] while others used multiple aspects [24]. However, very few studies assessed all four essential aspects of RH services as did in this study.

This study revealed that the overall service utilization was 33.8% which was much smaller than study in Mandalay city, Myanmar (67%) and recent local finding in Gonder town (79.5%) [24,11]. This variation possibly due to; economical, socio demographical variation

(e.g. the study was in the age group of 15-24) and including maternal care in the service package may inflate the figure in Mandalay city. In contrast, study in Gonder specifically focused on those adolescents who had sexual exposure which potentially increase the likelihood of service usage. Adolescents' service utilization in this study slightly closer to study in Jimma town (41.1%) [12]

Twenty-three percent of the participants in this study were utilize information and education related with sexual and reproductive health from health care workers and this finding concordance with 28.8% of the same service usage in Jimma town. Regarding to modern contraception utilization, the record in this study (21.9%) agreed with the large scale survey, includes 35 countries in Africa, that reported as in more than two-thirds of the countries in Africa, contraceptive usage among adolescents of age 15-19 was slightly lower than 20% [23]. Family planning service usage in rural areas of East Gojjam and in Jimma town were also 27.7% and 16.3% respectively [10, 12]. This variation could possibly justified by distribution of service delivery centers, socio-demographic characteristics of the respondents and knowledge difference across the study areas. For instance, In Jimma Town, it was reported that 95% of the adolescents could access information education and communication service with the very easy access. This high service accessibility might help the adolescent to utilize modern contraceptive more readily than adolescents in DebreBirhan Town and rural areas of East Gojjam zone. To the contrary adolescents in rural areas of East Gojjam zone might not access service delivery points nearby as the areas was rural. In addition to this, because the study in rural areas of East Gojjam zone was conducted between the age group 10-19, it might reduce the percentage of service usage as adolescents of age closer to the lower cut point (10 years old) might not use contraceptive as adolescents with age of closer to 19 did.

Regarding to voluntary counseling and testing for HIV, local research findings in Gonder and Goba towns (72.2% and 67.3% respectively) showed that remarkable variation with this study which labeled VCT service utilization at 43.6%. This variation could be due to; adolescents' perception of risk towards HIV which was lesser in this study and nation widely noticeable deducted emphasis for HIV related health promotion and prevention activities through years.

Communication of sexual and reproductive health issues with in the family (especially if the family members have good knowledge on reproductive health problems and reproductive health services) allows the adolescent to enhance their knowledge, build their confidence and in turn scale up their tendency to use those services in demand. Unfortunately, 63.6% of the study participants in this study reported that there was no habit of communication on sexual and reproductive health matters with in their family. Nearly similar record was obtained from research conducted in East Gojjam area (68.0%) and Goba town (54.2%) [10,25].

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 the adolescents' own perceptions have been used in this study which were possess some sort of similar with the studies conducted in Myanmar [24], and it is effective where using Geographic Information System (GIS) is practically difficult [32]. In this study, the researcher found that geographical accessibility was 68.5% compared to 79.3% in Mandalay city, Myanmar and 95% in Jimma town [24,12]. But respondents in Mandalay city were asked about their own perception of service affordability and then service accessibility was computed by considering both geographical accessibility (average distance from home and time taken for walk) and service affordability. On the contrary, here in our setup, services were fee free in governmental health institutions while the privates' demand charges. Due to this reason the researcher intentionally omitted to incorporate the respondents' perception on service affordability. So possibly, the distribution of service delivery points in the study areas (it also implicate the countries' economic status) and socio-economic difference of the respondent across the two areas might considered as a cause for the discrepancy. Even though the method and the scale of measurement was different in Jimma town, service utilization was similarly low in both areas.

To have an access and utilize services, adolescents' level of knowledge has an indispensable role. Advocating and increasing awareness about SRH is also central for the success of any adolescent reproductive health program. Knowing which type of service provider can provide what kinds of services enables adolescents to use services

straightforwardly as they need them. In this study, about 55% of the adolescents had high knowledge on RH services and providers compared to 67% in East Gojjam finding. This could be due to the difference in knowledge assessing tool. The mean score of knowledge assessing questions in this study (mean = 8.6 (SD±3.4)) exceed two times more than a study that used the same knowledge assessing tool in Mandalay city, Myanmar (mean = 3.3 (SD ± 1.6)) [24].

In this study, the researcher found that family factors played an important role in youths' utilization of RH services. For instance, adolescents who weren't co-resided with both their parents were higher their odds to use RH services than those who live together. This finding is against the study in Gonder town where adolescents living with both parents together use VCT service more likely than their counter parts. This could be due to relatively high parental monitoring in our setting. In addition to this, even though majority of the respondents in this study were living with both their parents, the families' habit of communication on sexual and reproductive issues were quite low (36.2%).

Adolescents' high risk perception towards HIV/AIDS render them to seek and utilize RH service more likely than those who didn't perceive. This finding is shared by studies in Madawalabu University and Gonder town [13, 11].

Different research findings revealed that discussion on sexual and reproductive health matters with sexual partner and peers increase the chance of service utilization [10-12, 25]. Same wise in this study, adolescents who had discuss SRH issues with their sexual partners and peers were found two times more likely to use RH services than those who didn't discuss.

7. Strength and limitation of the study

7.1. Strength

- By default, the research title was on adolescents reproductive health services, which the government has less achieved compared to other health services, makes this pioneer study valuable in the area. Because it could play its own role to scale up the service utilization.

7.2. Limitation

As a limitation this research had possess four major limitations.

- As the study design was cross-sectional, it cannot indicate the direction of causal relationships.
- It is difficult to rely on the adolescents' distance estimation as it could not be accurate.
- Because the questionnaire incorporates adolescents' private matter including their sexuality, some sort of social-desirability bias may not be eliminated.
- Even though the researcher tried to develop the questionnaire by triangulating the John Cleland's Illustrative questionnaire for interview-survey with young people's and the reviewed literature in such a way of addressing the research objectives, there might be issues of reliability as it wasn't standardized.

8. Conclusion

- Even though 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 were low.
- Voluntary counseling and testing (for HIV) was the most frequently service that the adolescents used and on the contrary, STI diagnosis and treatment was the least.
- Co-residence with both parents, discussion with sexual partner and peers, risk perception of oneself towards the acquisition of HIV/AIDS was among the factors associated with use and non-use of RH services.

9. Recommendations

- As the primary victims from serious reproductive health related problems are adolescents themselves, they should try to confront certain barriers against service usage including negative social norms and their own attitudes.
- Considering the bio-physical and psychological changes of adolescents', letting them free to discuss on sexual and reproductive health matters is highly important and anticipated from every family.
- Since majority of adolescents at this age invest most of their time at school, schools can be an excellent means to advance adolescents' knowledge, attitude and exposure towards RH services. Hence, the school's administration should endeavor to create conducive environment that helps the adolescents to discuss on their issues and experience those services.
- Amhara National Regional State Health Bureau (through North Shoa Zone Health office), still needs to reforms the existing and establish new comprehensive freestanding or integrated adolescent friendly-services with trained provider in a convenient manner because attempting to achieve prolific outcome require to consider adolescents' need which is dynamic, confidential and flexible by nature.
- Federal minister of Health should also consider this low reproductive health service utilization to the area while planning and undertaking interventions to scale up service utilization.
- More rigorous prospective studies should be conducted to single out the most pertinent factor(s) behind this low service utilization as the output enable planners to design and modify service delivery approaches in the town.

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Annexes

Annex I. Information sheet

Title of Research: Reproductive health service utilization and associated factors among adolescents age 15-19 in Debre Birhan Town, Central Ethiopia, 2016.

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Background Information: High level utilization of reproductive health services is an important component in preventing adolescents from different sexual and reproductive health problems. Local evidence about adolescents' reproductive health knowledge, services utilization and associated factors are relevant to design age-appropriate programs, corrective interventions and strategies. Therefore, this study is aimed to investigate the level of reproductive health services utilization and associated factors among adolescents who live in Debre Birhan town, Ethiopia. The study will be conducted in 682 adolescents from 5 randomly selected kebeles by administering pre-tested structured questionnaire.

Annex II: Consent form in English language

Consent form

Questionnaire code _____

My name is Kenen Getaneh. I am attending my MSc. in Maternity and Reproductive health nursing at Addis Ababa University. I brought these questions to you in order to find out conditions regarding to reproductive health service utilization and associated factors among adolescents of age 15-19 in Debre Birhan town. The questionnaire will take about 20-30 minutes to fill. The purpose of this study is to get more information on factors contributing to reproductive health service utilization of adolescents that can be used to design appropriate intervention so as to address reproductive health service need of adolescents. Therefore, your honest and genuine participation by responding to the questions prepared is highly appreciated and helpful to attain the objective of the study. Your name will not be written on this form and no individual response will be reported to anybody. Hence, your answers are completely confidential. You do not have to answer any question that you don't want to answer and you may refuse to answer all of the questions.

Would you willing to answer?

Yes ☐ then put your signature below and proceed to the next page

By signing this document, I am giving consent to fill the research questionnaire. I understand that I will be part of the research study that is looking into the reproductive health service utilization and its association factors in Debre Birhan town. I also informed that the participation would be entirely voluntary and that am free to withdraw from the study.

Participant's signature _____ Date _____

Data collector's signature _____ Date _____

No ☐ please stop here.

Thank You!

Annex III Consent form in Amharic language

የፍቃደኝነት መረጋገጫ ቅፅ

የመጠይቁ መለያ ቁጥር፤ _____

እኔ ከነዓን ጌታነህ እባላለሁ። በአዲስ አበባ ዩኒቨርሲቲ የማስፊት ዲግሪ ተማሪ ስሆን በአሁኑ ወቅት በዚህ ከተማ ውስጥ እድሜያቸው ከ15-19 ዓመት በሆኑ ወጣቶች የስነ-ተዋልዶ ጤና አጠቃቀም ዙሪያ ጥናት ለማድረግ መረጃ እያሰበሰብኩ ነው። ለዚህም ያግዘኝ ዘንድ በጉዳዩ ዙሪያ የሚያተኩሩ የተወሰኑ ጥያቄዎች ከስር አካተቻለሁ። መጠይቁን ሞልቶ ለማጠናቀቅ ከ 20 እስከ 30 ደቂቃ ሊወስድ ይችላል።

የጥናቱ ዓላማ፤ በደብረ ብርሀን ከተማ ውስጥ የሚኖሩና እድሜያቸው ከ15-19 ዓመት የሆኑ ወጣቶችን የስነ-ተዋልዶ ጤና አጠቃቀም ደረጃ እንዲሁም ከስነ-ተዋልዶ ጤና አጠቃቀም ጋር ተያያዥነት ያላቸው ሁኔታዎች ስለመለዩት ይሆናል።

የጥናቱ ሚስጥራዊነት፤ በጥናቱ ላይ ሊካተቱ የቻሉት ምክንያት የተሳታዎች አመራረጥ ሂደት በእድል ላይ መሰረት ያደረገ በመሆኑ ብቻ ነው። እርሶ የሚሰጡት ማንኛውም መረጃ ሚስጥራዊነት የተጠበቀ ስለሆነ በመጠይቁ ላይ ማንነትዎ የሚገልፅ ስምም ይሁን አድራሻዎን እንዲገልፁ አይጠየቁም። ከዚህም በተጨማሪ የእርሶን ምላሾች ቤተሰብዎም ሆነ መረጃ ሰብሳቢው እንዲያዩት አይደረግም።

የጥናቱ ጥቅምና ጉዳት፤ በዚህ ጥናት ላይ በመሳተፍዎም ሆነ መጠይቁን በመመለስዎ የተዘጋጀ ክፍያ የለም። ነገር ግን የደብረ ብርሀን ወጣቶችን የስነ-ተዋልዶ ጤና አጠቃቀም በተመለከተ ያለንን ግንዛቤ ለማሳደግና የወጣቶችን የስነ-ተዋልዶ ጤና አጠቃቀምን ለማሳደግ የሚሰሩ ስራወች በመረጃ ላይ ተመስርተው እንዲሰሩ ግብአት ይሆናል። እናም የእርሶ ተሳትፎ ሰዓትዎን ከመሻማት ባለፈ ምንም አይነት ጉዳት አያደርስበትም።

የተሳታፊ መብት፤ የእርሶ በዚህ ጥናት ላይ መሳተፍ በፍላጎትዎ ላይ የተመሰረተ ነው። መጠይቁን ያለመሙላት እና የጥናቱ አካል ያለመሆን መብትዎ የተጠበቀ ነው።

መጠይቁን ለመሙላት ፍቃደኛ ነዎት?

አዎ ☐ እባክዎን መስማማትዎን በፊርማ አረጋግጦልኩ ወደ ቀጣዩ ገፅ ይለፉ

ስምምነትን ማስታወቅ፤ ከዚህ በላይ የተፃፈው መረጃ ተነቦልኝ ወይም አንብቤው በደብረ ብርሀን ከተማ ውስጥ የሚኖሩና እድሜያቸው ከ15-19 ዓመት የሆኑ ወጣቶችን የስነ-ተዋልዶ ጤና አጠቃቀም ደረጃ ለማወቅ በሚደረገው ጥናት ውስጥ ተሳታፊ መሆኔን በመረዳት የተዘጋጀውን መጠይቅ ለመሙላት ተስማምቻለሁ። በመጨረሻም የጥናቱ ተሳታፊ መሆኔን የምገልፀው ጥናቱ ማቋረጥ እንደምችል ተነግሮኝ ነው።

የተሳታፊ ፊርማ _____ ቀን _____

የመጠይቁ ሰብሳቢ ፊርማ _____ ቀን _____

አይደለሁም ☐

አመሰግናለሁ!

Annex IV. Questionnaire in English language

GENERAL INSTRUCTIONS: The questionnaire has four parts, including questions regarding to socio-demographic and socio-economic characteristics, individual's trends related with sexual and reproductive health, service accessibility and reproductive health service utilization pattern. Please read the instructions and questions carefully before proceeding to answering them.

Part I: Questions assessing the Socio-demographic and socio-economic characteristics of respondents

Instructions: Please circle the number in front of the option you choose. If you are asked to write a response or if your answer is not listed among alternatives, please do in the blank space provided. If there is an arrow in front of your choice, skip to the indicated question.

Q. no.	Questions	Responses	Skip to
101	What is your gender?	1. Male 2. female	
102	How old are you?	_____	
103	What is the religion you follow?	1. Orthodox Christian 2. Muslim 3. Protestant 4. Other specify _____	
104	What is your ethnic group?	1. Amhara 2. Oromo 3. Tigre 4. Gurage 5. Other specify_____	
105	Marital status?	1. Single 2. Married 3. Divorced 4. Separated	

106	Are you currently enrolled at school?	1. Yes 2. No
107	In which group of schooling that your educational status categorized?	1. No formal education at all 2. Primary education (1-8) 3. Secondary education (9-12) 4. Above secondary education
108	In which group of schooling that your mother's educational status categorized?	1. No formal education at all 2. Primary education (1-8) 3. Secondary education (9-12) 4. Above secondary education
109	Now I have some questions about your family. Does your family have a habit of discussion on sexual and reproductive health (RH) issues with you?	1. Yes 2. No
110	Are you usually living with your mother and father together?	1. Yes —————→ Q. no 112 2. No
111	If No, with whom do you usually live?	1. With my mother only 2. With my father only 3. With relatives 4. With friends 5. Alone 6. Other specify _____
112	How much income do you think your family gain per month? [specify in Birr] _____	

Part II: Questions assessing personal characteristics regarding to sexual and reproductive health

Instructions: Here below are some questions regarding to your personal experience regarding to sexual and reproductive health. Please circle the number in front of the option you choose. If you are asked to write a response or if your answer is not listed among alternatives, please do in the blank space provided. If there is an arrow in front of your choice, skip to the indicated question.

Q. no.	Questions	Responses	Skip to
201	Please put '√' mark inside the 'YES' box if you knew the indicated Reproductive Health services and service delivery point (provider) and mark 'NO' otherwise.	<u>Service</u> - Sexual health education and prevention information for young people, single adults, and couples, where confidentiality and privacy are assured. YES ☐ NO ☐ - Sexuality counseling for the client's sexual health concerns or needs, and desired sexuality, reproductive or contraceptive preferences. YES ☐ NO ☐ - Identification and referral for victims of sexual and other forms of violence. YES ☐ NO ☐ - Voluntary counseling, testing, treatment and follow-up for STIs, including HIV. YES ☐ NO ☐ - Diagnosis, screening, treatment and follow-up for reproductive cancers, and associated infertility. YES ☐ NO ☐	

6. Antenatal, intra-natal and post-natal care for the pregnant women.

YES ☐ NO ☐

7. Safe abortion to the full extent of the law. YES ☐ NO ☐

8. Post-abortion care, including provision of contraceptive information, counseling and methods. YES ☐ NO ☐

Service providers

1. Hospitals. YES ☐ NO ☐

2. Health centers. YES ☐ NO ☐

3. Clinics (NGO and private).
YES ☐ NO ☐

4. Health posts. YES ☐ NO ☐

5. Pharmacies.
YES ☐ NO ☐

6. Youth friendly health service clubs.
YES ☐ NO ☐

7. Health extension workers.
YES ☐ NO ☐

202	Have you ever had a girl/boyfriend? [By girl/boy friend, I mean someone to whom you were sexually or emotionally attracted and whom you 'dated' (use local terms to specify going out together unaccompanied by other person)]	1. Yes 2. No	→Q. no. 204
------------	---	-----------------	----------------

203	How many girl/boyfriend have you had?	_____	
204	Have you ever had sexual intercourse? [not only with girl/boyfriend]	1. Yes 2. No	Q. no. →206
205	From the below listed SRH issues, did you discuss on at least two issues with your sexual partner within the past 12 months? [SRH issues: Condom, STI/HIV/AIDS, Abstinence, unwanted pregnancy, Contraception]	1. Yes 2. No	
206	Did you discuss on at least two of the above mentioned issues with your peer within the past 12 months?	1. Yes 2. No	
207	Did you discuss on at least two of the above mentioned issues with your health workers within the past 12 months?	1. Yes 2. No	
208	Based on prior risky behaviors, Do you perceive yourself as risk for acquiring HIV/AIDS?	1. Yes 2. No	
209	Did you exposed to mass media, which aimed to deliver information and	1. Yes 2. No	Q. no 301

education on at least two
SRH issues listed below,
within the past 12
months? [SRH issues:
Condom, STI/HIV/AIDS,
Abstinence, unwanted
pregnancy, Contraception]

- | | | |
|------------|---|---|
| 210 | Which mass media did you exposed for? | 1. Radio
2. Television
3. Magazine
4. Newspaper
5. Pamphlet
6. Other specify _____ |
| 211 | Did you use alcohol, khat or cigarette in the past 12 months? | 1. Yes
2. No _____ |
| 212 | If YES, to what frequency? | 1. More frequent than daily
2. Daily
3. Weekly
4. Monthly
5. Less frequent than monthly
6. Other specified _____ |
-

Part III: Questions assessing service accessibility

Instructions: Dear respondent, afterwards there are some questions regarding to accessibility of RH service delivery points. Please circle the number in front of the option you choose. If you are asked to write a response or if your answer is not listed among alternatives, please do in the blank space provided.

Q. no.	Questions	Responses	Skip to
301	What is the nearby RH service delivery point (service provider) to your home?	1. Hospitals 2. Health centers 3. Clinics (NGO and private) 4. Health posts 5. Youth friendly health service clubs 6. Health extension worker 7. Other specify_____	
302	How far the above mentioned nearby RH service delivery point from your home? [specify in km]	_____	
303	How much it takes to walk from your home to the nearby RH service delivery point? [specify in minute]	_____	

Part IV: Questions assessing Reproductive Health service utilization

Instructions: Questions below are regarding to your service usage status. Please circle the number in front of the option you choose. If you are asked to write a response or if your answer is not listed among alternatives, please do in the blank space provided. If there is an arrow in front of your choice, skip to the indicated question.

Q. no.	Questions	Responses	Skip to
401	Have you ever use any RH service in life?	1. Yes 2. No—————→	You are finished here, thank you!

402	Have you received any information and education service regarding to SRH issues from health worker working in any of RH service delivery points in the past 12 months?	1. Yes 2. No → Q. no 404
403	If YES, what type of information and education you received? [you can encircle more than one response]	1. Information and education related to sexual health 2. Information and education related to Contraception 3. Information and education related to SIT diagnosis, and treatment 4. Information and education related to VCT 5. Information and education related to safe abortion 6. Information and education related to Antenatal, Intranatal and Postnatal care 7. Other specify_____
404	Have you use modern contraceptive service in the last 12 months?	1. Yes 2. No → Q. no 406
405	If YES, what type of method do you use? [methods other than male condom are filled by female respondents' only]	1. Male condom 2. Pill 3. Injectable 4. Implant 5. IUCD

		6. Female condom
		7. Other specify _____
406	Have you ever used VCT service?	1. Yes 2. No
407	Have you ever used STI diagnosis and treatment service?	1. Yes 2. No

THANK YOU!

Annex V. Questionnaire in Amharic language

የመጠይቅ ቅፅ

አጠቃላይ መመሪያ: መጠይቁ በአራት ክፍሎች ተከፍሏል። እነዚህም ማህበረሰባዊ ሁኔታዎችን፣ ከስነ-ተዋልዶ ጤና ጋር የተያያዙ ግላዊ ሁኔታዎችን፣ የአገልግሎት ተደራሽነትን እና የስነ-ተዋልዶ ጤና ግልጋሎት ተጠቃሚነትን የሚመለከቱ ጥያቄዎች የተካተቱበት ነው። እባክዎን እያንዳንዱን መመሪያና ጥያቄ በሚገባ አንብበዉ መልስዎን እንዲያስቀምጡልኝ በአክብሮት እጠይቃለሁ።

ክፍል 1: ማህበራዊ ሁኔታዎችን የሚመለከቱ ጥያቄዎች

መመሪያ: ከተዘረዘሩት አማራጮች መካከል መልስዎን የያዘዉን ቁጥር ያክብቡ። የእርስዎ ምላሽ ከተዘረዘሩት መካከል ከሌለ እና መልስዎን በፁሁፍ እንዲያስቀምጡ የሚያዝ ከሆነ በተጠቀሰዉ ባዶ ቦታ መልስዎን ያስቀምጡ። ከመረጡት ምላሽ ፊት ለፊት የቀሰት ምልክት ካለ ወደ ተጠቀሰዉ የጥያቄ ቁጥር ይለፉ።

የጥያቄ ቁጥር	ጥያቄ	ምላሽ	ይለፉ
101	ፆታ?	1. ወንድ 2. ሴት	
102	እድሜ?	_____	
103	ሀይማኖት?	1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ሌላ ካለ ይጠቀስ _____	
104	ብሄር?	1. አማራ 2. ኦሮሞ 3. ትግሬ 4. ጉራጌ 5. ሌላ ካለ ይጠቀስ _____	
105	የጋብቻ ሁኔታ?	1. ያላገባ/ች 2. ያገባ/ች 3. የፈታ/ች 4. የተለያዩ ቦታ የሚኖር/የምትኖር	

106	በአሁኑ ሰዓት በትምህርት ላይ ነህ/ሽ?	1. አዎ 2. አይደለሁም	
107	ያንተ/ያንች የትምህርት ደረጃ በየትኛው ምድብ ውስጥ የሚጠቃለል ነው?	1. መደበኛ ትምህርት ያልተማረ/ች 2. የመጀመሪያ ደረጃ ትምህርት (1-8) 3. የሁለተኛ ደረጃ ትምህርት (9-12) 4. ከሁለተኛ ደረጃ ትምህርት በላይ	
108	የእናትህ/ሽ የትምህርት ደረጃ በየትኛው ምድብ ውስጥ የሚጠቃለል ነው?	1. መደበኛ ትምህርት ያልተማረ/ች 2. የመጀመሪያ ደረጃ ትምህርት (1-8) 3. የሁለተኛ ደረጃ ትምህርት (9-12) 4. ከሁለተኛ ደረጃ ትምህርት በላይ	
109	ከዚህ በታች ቤተሰብህን/ሽን የሚመለከቱ የተወሰኑ ጥያቄዎች አሉ፡ : ቤተሰብህ/ሽ ወሲብና የስነ-ተዋልዶ ጤናን በተመለከቱ ጉዳዮች ላይ ካነተ/ካንቺ ጋር የመወያየት ልምድ አላቸው?	1. አዎ፣ አለ 2. አይ፤ የለም	
110	ብዙ ጊዜ ከእናትና ከአባትህ/ሽ ጋር በአንድ ላይ ነው የምትኖረው/ረው?	1. አዎ—————→ 2. አይደለም	የጥያቄ ቁጥር 112
111	መልስህ/ሽ ‘አይደለም’ ከሆነ፤ ከማን ጋር ብዙ ጊዜ የምትኖረው/ረው?	1. ከእናቴ ጋር ብቻ 2. ከአባቴ ጋር ብቻ 3. ከዘመዶቼ ጋር 4. ከጓደኞቼ ጋር 5. ብቻዬን 6. ሌላ ካለ ይጠቀስ_____	
112	ቤተሰብህ/ሽ በወር ምን ያክል ገቢ ያገኛሉ ብለህ/ሽ ታስባለህ/ሽ? [ግምትህን በብር አስቀምጥ/ጭ]	_____	

ክፍል 2፡ ከስነ-ተዋልዶ ጤና ጋር ተያያዥነት ያላቸው ግላዊ ሁኔታዎችን የሚመለከቱ ጥያቄዎች

መመሪያ፡ ከተዘረዘሩት አማራጮች መካከል መልስዎን የያዘውን ቁጥር ያክብቡ። የእርስዎ ምላሽ ከተዘረዘሩት መካከል ከሌለ ወይም ጥያቄውን በፁሁፍ እንዲያስቀምጡ የሚያዝ ከሆነ በተጠቀሰው ባዶ ቦታ መልስዎን ያስቀምጡ። ከመረጡት ምላሽ ፊት ለፊት የቀሰት ምልክት ካለ ወደ ተጠቀሰው የጥያቄ ቁጥር ይለፉ።

የጥያቄ ቁጥር	ጥያቄ	ምላሽ	ይለፉ
201	የሚቀጠሉት አማራጮች አንተ/ች በስነ-ተዋልዶ ጤና አገልግሎቶች ያለህን/ሽን ግንዛቤ ለመለካት የተዘጋጁ ናቸው። እባክህን/ሽን ከተዘረዘሩት የስነ-ተዋልዶ ጤና አገልግሎቶች እና አገልግሎቱን ከሚሰጡ አቅራቢዎች መካከል የምታወቃቸውን/የምታወቁያቸውን ብቻ በመለየት በተቀመጠው የ 'አዎ' ሳጥን ውስጥ የማታወቃቸውን/ቂያቸውን ከሆኑ ደግሞ የ'አይ' ሳጥን ውስጥ የ'✓' ምልክት አድርግ/ጊ።	<u>የስነ-ተዋልዶ ጤና አገልግሎቶች</u> 1. ሚስጥራዊ እና ግላዊ በሆነ መልኩ ለወጣቶች እንዲሁም ለጥንዶች የሚሰጥ ጤናማ ወሲብን የተመለከቱ የጤና መረጃዎችና ትምህርቶች። አዎ ☐ አይ ☐ 2. በወሲባዊ ጤንነት ጉዳዮች እና በወሊድ መቆጣጠሪያ ዘዴ አማራጮች ላይ የማማከር አገልጋሎት። አዎ ☐ አይ ☐ 3. ወሲባዊ ወይም ፆታን መሰረት ያደረገ የመብት መገፈፍ እና ጉዳት የደረሰባቸው በደላኞች መመረመርና ጉዳያቸውን ለሚመለከተው ክፍል ማስተላለፍ፡ : አዎ ☐ አይ ☐ 4. በፍቃደኝነት ላይ በመመስረት በግብረ-ስጋ ግንኙነት የሚተላለፉ በሽታዎች (ኤች.አይ.ቪ ኤድስንም ይጨምራል) መመርመር፤ ህክምናና ክትትል መሰጠት። አዎ ☐ አይ ☐	

		5. የመራቢያ አካላት ካንሰር እና ተያይዞ የሚመጣ መካንነት መመርመርና ህክምና መስጠት። አዎ ☐ አይ ☐ 6. ላረገዙ ሴቶች የቅድመ ወሊድ፣ ወሊድ እና ድህረ ወሊድ አገልግሎቶች መስጠት። አዎ ☐ አይ ☐ 7. በህግ በተፈቀደ አግባብ የፅንሰ ማቋረጥ አገልግሎት መስጠት። አዎ ☐ አይ ☐ 8. ከፅንሰ ማቋረጥ በኋላ የሚሰጡ አገልግሎቶችን (የወሊድ መከላከያ ዘዴንም ይጨምራል) መስጠት። አዎ ☐ አይ ☐ <u>አገልግሎት አቅራቢዎች</u> 1. ሆስፒታል. አዎ ☐ አይ ☐ 2. ጤና ጣቢያ. አዎ ☐ አይ ☐ 3. ክሊኒክ (የግልና መንግስታዊ ያልሆነ). አዎ ☐ አይ ☐ 4. ጤና ኬላ. አዎ ☐ አይ ☐ 5. መድሀኒት ቤቶች. አዎ ☐ አይ ☐ 6. የወጣቶች የአቻ ለአቻ የጤና አጠባበቅ ክበቦች. አዎ ☐ አይ ☐ 7. የጤና ኤክስቴንሽን ሰራተኞች. አዎ ☐ አይ ☐	
202	የወንድ/የሴት ጓደኛ ኖሮህ/ሽ ያዉቃል? [የወንድ/የሴት ጓደኛ ማለት፣ በወሲባዊ ወይም ስሜታዊ ፍላጎት የሳበችህ/ሽ እና አብራህ/ሮሽ የምታሳልፉ፤ ከሌላ ሰው ጋር	1. አዎ 2. አይ →	የጥያቄ ቁጥር 204

	ተመሳሳይ ግንኙነት የሌላት ሴት/ወንድ ማለት ነው።]		
203	እስካሁን ድረስ ስንት የወንድ/የሴት ጓደኛ አለህ/ሽ?	_____	
204	ወሲብ አድርገህ/ሽ ታዉቃለህ/ታዉቂያለሽ? [ከወንድ/ከሴት ጓደኛ ጋር ብቻ ማለት አይደለም]	1. አዎ 2. አይ _____→	የጥያቄ ቁጥር 206
205	ከታች ከተዘረዘሩት ወሲባዊና የስነ-ተዋልዶ ጤና ጉዳዮች መካከል ቢያንስ በሁለቱ ላይ ከወሲብ ጓደኛህ/ሽ ጋር ባለፉት 12 ወራት ተወያይታችሁ ታዉቃላችሁ? [ስለ፤ ከንዶም፤ ኤች.አይ.ቪ ኤድስን ጨምሮ በልቅ የግብረ-ስጋ ግንኙነት ስለሚተላለፉ በሽታዎች፤ መታቀብ፤ ያልተፈለገ እርግዝና፤ የወሊድ መከላከያ ዘዴዎች]	1. አዎ 2. አይ፤ ተወያይተን አናዉቅም	
206	በጥያቄ ቁጥር 205 ከተጠቀሱት ጉዳዮች ቢያንስ በሁለቱ ዙሪያ ከጓደኞችህ/ሽ ጋር ባለፉት 12 ወራት ተወያይታችሁ ታዉቃላችሁ?]	1. አዎ 2. አይ፤ ተወያይተን አናዉቅም	
207	ባለፉት 12 ወራት ከነዚህ (በጥያቄ ቁጥር 205 ከተጠቀሱት ጉዳዮች) ቢያንስ በሁለቱ ዙሪያ ከህክምና ባለሙያ ጋር ተወያይተህ/ሽ ታዉቃለህ/ሽ?	1. አዎ 2. አይ፤ ተወያይተን አላዉቅም	
208	እስከ አሁን ከነበሩህ/ሽ አጋላጭ ባህሪያት በመነሳት፤ ለኤች.አይ.ቪ ኤድስ ተጋላጭ እሆናለሁ ብለህ/ሽ ታስባለህ/ሽ?	1. አዎ አስባለሁ 2. አይ አላስብም	

209	በለፉት 12 ወራት ውስጥ ከታች ከተዘረዘሩት ወሲባዊና የስነ-ተዋልዶ ጤና ጉዳዮች መካከል ቢያንስ በሁለቱ ላይ መሰረት ያደረገ መረጃና ትምህርት በመገናኛ ብዙሀን ሲነገር ሰምተህ/ሽ ወይም አንብበህ/ሽ ታዉቃለህ/ሽ? [ስለ፤ ከንዶም፤ ኤች.አይ.ቪ ኤድስን ጨምሮ በልቅ የግብረ-ስጋ ግንኙነት ስለሚተላለፉ በሽታዎች፤ መታቀብ፤ ያልተፈለገ እርግዝና፤ የወሊድ መከላከያ ዘዴዎች]	1. አዎ 2. አይ _____ →	የጥያቄ ቁጥር 211
210	መረጃውን ወይንም ትምህርቱን ከየትኛው የመገናኛ ብዙሀን አገኘኸው/ሽዉ? [ከአንድ በላይ አማራጮችን መምረጥ ይቻላል]	1. ሬዲዮ 2. ቴሌቪዥን 3. ጋዜጣ 4. መፅሄት 5. በራሪ ወረቀት 6. ሌላ ካለ ይጠቀስ _____	
211	በለፉት 12 ወራት ውስጥ አልኮል፣ ጫት ወይም ሲጋራ ተጠቅመህ ታዉቃለህ/ሽ?	1. አዎ 2. አይ ተጠቅሜ አላዉቅም _____ →	የጥያቄ ቁጥር 301
212	ከተጠቀምከክ/ሽ፣ በምን ያክል ድግግሞሽ?	1. በቀን ከአንድ ጊዜ በላይ 2. በየቀኑ 3. በየሳምንቱ 4. በየወሩ 5. ከወር በበለጠ ጊዜ 6. ሌላ ካለ ይጠቀስ _____	

ክፍል 3: የአገልግሎት ተደራሽነትን የሚመለከቱ ጥያቄዎች

መመሪያ: ከዚህ በታች ያሉት ግምትዎን መሰረት አድርገው የሚመልሷቸው የአገልግሎት ተደራሽነትን ጥያቄዎች ናቸው። ከተዘረዘሩት አማራጮች መካከል መልስዎን የያዘውን ቁጥር ያክብቡ። ጥያቄዉ መልስዎን በፁሁፍ እንዲያስቀምጡ የሚያዝ ከሆነ በተጠቀሰው ባዶ ቦታ ያስቀምጡ። ከመረጡት ምላሽ ፊት ለፊት የቀስት ምልክት ካለ ወደ ተጠቀሰው የጥያቄ ቁጥር ይለፉ።

የጥያቄ ቁጥር	ጥያቄ	ምላሽ	ይለፉ
301	በመኖሪያ ቤትህ አቅራቢያ የሚገኘው/በቀላሉ ልታገኘው የምትችለው የስነ-ተዋልዶ ጤና አገልግሎት ሰጪ የትኛው ነው?	1. ሆስፒታል 2. ጤና ጣቢያ 3. ክሊኒክ (የግልና መንግስታዊ ያልሆነ) 4. ጤና ኬላ 5. መድሀኒት ቤቶች 6. የወጣቶች የአቻ ለአቻ የጤና አጠባበቅ ክበቦች 7. የጤና ኤክስቴንደን ሰራተኞች 8. ሌላ ካለ ይጠቀስ_____	
302	ከላይ የገለፅከው/ሽው የስነ-ተዋልዶ አገልግሎት ሰጪ ከቤትህ/ሽ ምን ያክል ይርቃል? [በኪሎ ሜትር ይገለፅ]	_____	
303	በእግር ለመጓዝ ምን ያክል ጊዜ ይፈጃል? [በደቂቃ ይገለፅ]	_____	

ክፍል 4: የስነ-ተዋልዶ ጤና ግልጋሎት ተጠቃሚነትን የሚመለከቱ ጥያቄዎች

መመሪያ: ይህ የመጠይቁ የመጨረሻ ክፍል ሲሆን ጥያቄዎቹ የእርሶን የስነ-ተዋልዶ ጤና ግልጋሎት ተጠቃሚነት የሚመለከቱ ናቸው። ከተዘረዘሩት አማራጮች መካከል መልስዎን የያዘውን ቁጥር ያክብቡ። የእርስዎ ምላሽ ከተዘረዘሩት መካከል ከሌለ በተጠቀሰው ባዶ ቦታ መልስዎን ያስቀምጡ። ከመረጡት ምላሽ ፊት ለፊት የቀስት ምልክት ካለ ወደ ተጠቀሰው የጥያቄ ቁጥር ይለፉ።

የጥያቄ ቁጥር	ጥያቄ	ምላሽ	ይለፉ
401	የስነ-ተዋልዶ ጤና አገልግሎቶችን ተጠቅመህ/ሽ ታወቃለህ/ሽ?	1. አዎ፣ ተጠቅሜ አወቃለሁ 2. አይ፣ ተጠቅሜ አላወቅም →	እዚህ ጋር ይቁሙ። መጠይቁን ጨርሰዋል አመሰግናለሁ።
402	ባለፉት 12 ወራት ውስጥ በየትኛውም የአገልግሎት መስጫ ውስጥ በሚሰራ የጤና ባለሙያ ወሲብንና የስነ-ተዋልዶ ጤናን በተመለከተ የመረጃና የትምህርት አገልግሎት በማግኘት ተጠቅመህ/ሽ/ሽል?	1. አዎ፣ አገልግሎቱን ተጠቅሜያለሁ 2. አይ፣ አገልግሎቱን አልተጠቀምኩም →	የጥያቄ ቁጥር 404
403	ከተጠቀምክ/ሽ በምን ላይ ያተኮረ የምክርና የመረጃ አገልግሎት ነበር? [ከአንድ በላይ አማራጮችን መምረጥ ይቻላል]	1. በወሲባዊ ጤንነት ዙሪያ 2. በወሊድ መቆጣጠሪያ ዘዴዎች ላይ 3. በአባላዘር በሽታዎችና ህክምናቸው ዙሪያ 4. በፍቃደኝነት ላይ የተመሰረተ የኤች.አይ.ቪ ኤድስ የምክርና የምርመራ አገልግሎትን በተመለከተ 5. ፅንሰ ማቋረጥን በተመለከተ 6. በቅድመ ወሊድ፣ ወሊድ እና ድህረ ወሊድን በተመለከቱ ጉዳዮች ዙሪያ 7. ሌላ ካለ ይጠቀስ_____	
404	ባለፉት 12 ወራት ውስጥ የወሊድ መቆጣጠሪያ ዘዴ ተጠቅመህ/ሽ ነበር?	1. አዎ፣ ተመቅሜ ነበር 2. አይ፣ አልተጠቀምኩም →	ጥያቄ ቁጥር 406

405	ከተጠቀምክ/ሽ ምን አይነት የመከላከያ ዘዴ ነበር? [ከአማራጮቹ መካከል 'የወንድ ኮንዶም' ከሚለው በቀር በሌሎች የሚሞሉ ናቸው]	1. የወንድ ኮንዶም 2. የወሊድ መቆጣጠሪያ እንክብል 3. በመርፌ የሚሰጥ የወሊድ መቆጣጠሪያ 4. በክንድ ቆዳ ስር የሚቀመጥ 5. በማህጸን ውስጥ የሚቀመጥ 6. የሴት ኮንዶም 7. ሌላ ካለ ይጠቀስ_____	
406	በፍቃደኝነት ላይ የተመሰረተ የኤች.አይ.ቪ ኤድስ የምክርና ምርመራ አገልግሎት ተጠቅመህ/ሽ ታወቃለህ/ሽ?	1. አዎ፣ ተመቅሜ አወቃለሁ 2. አይ፣ ተመቅሜ አላወቅም	
407	የአባላዘር በሽታዎች የምርመራና ህክምና አገልግሎት ተጠቅመህ/ሽ ታወቃለህ/ሽ?	1. አዎ፣ ተመቅሜ አወቃለሁ 2. አይ፣ ተመቅሜ አላወቅም	

ክልብ አመሰግናለሁ!

Annex VI: Declaration

I, the undersigned, declare that this is my original work and has never been done in this or any other University and that all the source materials used for this thesis have been duly acknowledged.

Name: Kenean Getaneh

Signature: _____

Date: _____

The research project has been submitted as the original work of the student with my approval as a university advisor.

Name: Mesfin Abebe (BSc., MSc./RH, Assistant Professor and PhD Associate)

Signature: _____

Date: _____