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Assessment of knowledge on Reproductive Health and Associated Demographic and Socio-economic Factors among Adolescent Students attending Secondary School in Holata town, Ethiopia.

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Abstract:

Background: *Reproductive health refers to state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity, in all matters related to the reproductive system and to its functions and process.*

Several reproductive health challenges confront adolescents (10-19 years) globally and are more pervasive in developing countries where services and facilities are absent. The global burden of sexual and reproductive health conditions can be expressed in absolute numbers: 60-80 million infertile couples; 120-201 million couples with unmet need for contraception; 4 million newborn deaths, 8 million life-threatening maternal morbidities; 529,000 maternal deaths, including 68, 000 from unsafe abortions. With 104 births per 1,000 women aged 15-19, Ethiopia's high adolescent birth rate was likely associated with the low use of modern contraceptives.

Objective*: To assess the level of knowledge on reproductive health and associated demographic and socio-economic factors among adolescent students attending secondary schools in Holata town, Oromia special zone surrounding Finfinnee, of Oromia National Regional State, Ethiopia.*

Methods*: School based cross-sectional study was conducted among secondary school regular students for 2019/2020 academic year in Holata town from randomly selected classes of two schools using self-administered questionnaire. Multistage sampling technique was implemented and data were collected from 368 adolescents aged 15-19. SPSS version 20 package statistical software was used to enter and analyze the data. Binary logistic regression analysis was carried out to identify significant associations between independent and dependent variables.*

Result: *The mean age of the respondents was 17.4 (+/-1.262 years). Nearly 53% of them knew about RH. The major discovery in this study was inadequate knowledge on RH among adolescents. This makes adolescent more vulnerable to reproductive health problem, as testified by those, who have failed to continue with secondary school due to early pregnancy. Age (OR = 3.324, 95% CI: 1.972-5.603), sex (OR = 1.47, 95% CI: 1.303-1.720), Marital status of parents (OR=1.826, 95%CI: 1.199-2.781), ever attending school (OR=1.308,95%CI:0.777-2.203), mother education status (OR=1.722,95%CI:0.823-3.603), participation in school RH club (OR=1.457,95%CI:0.949-2.239) and health institution as means of access to information (AOR = 4.778,95%CI:1.382 ,16.517) were associated with reproductive health knowledge.*

Conclusion: *Reproductive health knowledge is low among adolescents in Holata town secondary schools. Factors like age, sex, and parents' marital status, participation in school RH club, health institution and friends as means of access to information about RH were the determinant of the knowledge of RH of adolescents.*

Recommendations*: Awareness creation through giving reproductive health education and increasing mindfulness for students on all reproductive health components, problems and prevention method. Additionally, counseling and guidance services by allocating trained person has a great importance and hence need to be given due attention along with establishing different clubs in schools that promote sexual and reproductive health issues were some of the recommendations suggested.*

Key words: *Reproductive health, knowledge and Adolescent.*

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List of Abbreviations/Acronyms

AIDS: Acquired Immunodeficiency Syndrome

ARH: Adolescent Reproductive Health

CSA: Central Statistical Agency

EDHS: Ethiopian Demographic Health Survey

FDRE: Federal Democratic Republic of Ethiopia

FMOH: Federal Ministry of Health

FGD: Focus Group Discussion

HIV: Human Immune Virus

ICDR: Institute of Curriculum Development and Research

ICPD: International conference on population and development

MoWCYA: - Ministry of Women, Children and Youth Affair

RH: Reproductive health

SPSS: Statistical Package for the Social Sciences

SRH: Sexual and reproductive health

SSA: Sub-Saharan Africa

STDS: Sexually Transmitted Diseases

STIs: Sexually Transmitted Infections

UNAIDS: United Nations Joint Program on HIV/AIDS

UNDP: United Nations Development Program

UNFPA: United Nations Population Fund

UNESCO: United Nations Educational Scientific and Cultural organization

UNICEF: United Nations Children's Fund

WHO: World Health Organization

YFRHS: Youth friendly reproductive health service

CHAPTER ONE

1.1 INTRODUCTION:

Reproductive health (RH) is defined as a state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity, in all matters related to the reproductive system and to its functions and process. It addresses the human sexuality and reproductive processes, functions and system at all stages of life and implies that people are able to have a responsible, satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide it, when and how often to do so [1]. Reproductive health is an important aspect of health, as it impinges on quality of life, especially for women [2].

Adolescence is characterized by significant physiological, biological and social changes that put them for high risk sexual and reproductive health problems. This has partially been because of adolescents were considered to be relatively healthy, without a heavy "burden of disease" [3].

Globally, Adolescents account for 1.2 billion people which comprise 20% of the world's total population, in which about 85% live in developing countries and in sub-Saharan Africa 1 in 4 Africans is an adolescent [4]. The estimated total population of the 42 African countries that lie south of Sahara is 610 million of which approximately 20 % (120 million) are adolescents aged 10-19 years [5]. Several countries in sub-Saharan Africa (SSA) including Ethiopia have large and increasing adolescent populations that exceed those from other parts of the world [6,7]. Since adolescent classification is mostly universal, adolescents in Ethiopia were estimated to be 19.3% of the total population [7]. Some studies have shown that, in Ethiopia number of adolescents were estimated to be one third of the total population and their number is expected to grow from 20.3 million in 2000 to 25 million in 2010 [8, 9]. The fact that they have a large and significant share of the population, it is important to address their problem.

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 [10]. According to the World Health Organization, the main health issues among adolescents include early pregnancy, childbirth, HIV/AIDS, depression, violence, alcohol and drug abuse, intentional injuries, malnutrition, obesity, and tobacco use [11]. Thus, worldwide the lives of millions of adolescents are at risk

because they do not have the information, skills, health services and support need to go through sexual development during adolescence and postpone sexual intercourse until they are physically and socially mature and able to make well informed responsible decisions [12].

Published studies from some countries in Africa suggest that there were many factors adolescents' involvement in reproductive health programs and make the service utilization low. Lack of information from formal sources was cited as one of the main problems. Other reasons for low reproductive health knowledge such as; service inaccessibility, cultural influence, lack of knowledge about the service provided (where, what, when), feelings of discomfort, fear of being seen by parents and embarrassment while seeking reproductive health care services [9].

There is a great diversity of challenges faced by young people in regard to their reproductive health, and the issues of critical importance to them vary greatly depending on their cultural and geographical backgrounds. These issues include sexual development and sexuality including puberty, forced early marriage, lack of opportunities, unwanted pregnancy, early child bearing, the spread of HIV/AIDS and other STIs and female genital mutilation [14].

The 2016 Ethiopian Demographic and Health Survey figured out the knowledge of contraceptive methods to be almost universal in Ethiopia, with 99% of currently married women and men age 15-49 knowing at least one method of contraception, but knowledge of contraceptive method among adolescent 15-19 age group was lower, which is 98.2% compared with other age groups, this suggests that there is a gap in addressing adolescents sexual and reproductive health issues which in turn affect their health and productivity quietly negatively [15]. In Ethiopia youth's sexual and reproductive health concerns have increasingly been on national agendas, this concern has been driven by the high prevalence of HIV/AIDS, STI and unsafe abortion among young people [16].

Therefore, the reproductive health problems of young people in Ethiopia are multifaceted and interrelated in which child bearing begins at an early age covered 45% of the total births in the country occur among adolescent girls and young women. Sexual violence and commercial sex work have also become common phenomenon among young girls. As a result, adolescents have become primary victims of HIV /AIDS crisis that has spread throughout the country evidenced by a large proportion of new HIV infection which is occurring in young people under 25 years old in

the country. In general young people are at risk of reproductive health problems, which are aggravated by the overall poor socioeconomic environment and harmful traditional practices [17].

Furthermore, Federal Ministry of Health of Ethiopia (FMOH) integrated reproductive health issues in the health extension package so, that they can be addressed at the community level, youth centers and schools. In addition to the government other local and international non-governmental organizations like Packard foundation, Marie stops international/Ethiopia, and family guidance association of Ethiopia are working to avail YFRHS in both urban and rural areas of Ethiopia [18].

A study conducted in Thailand showed that the knowledge of reproductive health issues of youths is very limited; only about 20% of the respondents have knowledge of reproductive and sexual health which indicates they wanted more reproductive and sexual health education and services. The study also presented that knowledge of RH by marital status married youth have up to six times higher compared to unmarried youth [19]. Another study conducted in Ethiopia, Wolaita Sodo University revealed, knowledge of University students on reproductive and sexual rights was limited, which was only 54.5%, and participation in RH clubs, discussion on RH issues, and utilization of RH services were found to have significant and independent effect on knowledge of reproductive and sexual rights. In the study also around two third of the respondents did not accept that a married woman has the right to limit the number of her children according to her desire without her husband's consent [20].

More young people in institutions like schools are getting sexually active and most lack the necessary reproductive health information to practice safe sexual practices. So, it is important to have information regarding the level of knowledge related to reproductive health among adolescents so that appropriate interventions can be planned. Therefore, knowledge regarding reproductive health is very essential to reduce the maternal, infant mortality, unsafe abortion and unintended pregnancy.

In line with this ,the investigation was conducted to assess the knowledge of reproductive health and its demographic and socio-economic associated factors, particularly HIV/AIDS and sexual conduct among youths in the examination zone, so particular consideration will be paid, by policymakers and program managers, will advise decisions regarding reproductive health needs of teenagers and preventive aspect of STIs with particular accentuation given to HIV/AIDS to address those issues associated with the problem based on the investigation results.

1.2 Statement of the problem

Globally several RH challenges confront adolescents and are more universal in developing countries where services and facilities are absent [21]. Adolescents are facing serious health risks especially with the emerging issues of unplanned and unwanted pregnancy of adolescent girls and the HIV/AIDS problem.

According to the World Health Organization (WHO) about one half of all HIV infections worldwide occur among people aged 25 years and understand 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 [22].

In Africa about one quarter of the unsafe abortions are among teenagers (15-19) which is higher than any region [23]. Most abortions are secret and unmarried young women are more likely to resort to clandestine abortions by unskilled providers [24]. In Africa, teenage births and Adolescent birth rates per 1,000 women aged 15 to 19 ranges from a lower 70 in Ghana to highest 190 in Mali [25].

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 [26].

According to the Ethiopian Demographic Health Survey (EDHS) 2016, nearly one in three 32% of births in Ethiopia were unintended [15]. With 104 births per 1,000 women aged 15-19, Ethiopia's high adolescent birthrate was likely associated with the low use of modern contraceptives. Only 12.4% of youth aged 15-24 were using a modern contraceptive method, and 29 percent of sexually experienced women aged 15-24 had an unmet need for contraception [27]. In African including Ethiopia, the most common reasons for unintended pregnancy was mainly associated with contraceptive failure, not using modern family planning, women being single in marital status, having long distance to the nearest health facility, having five and more number of

pregnancies, partner disapproval to use modern family planning and partner poor awareness on modern family planning [28].

The above mentioned decimating issues of adolescents' can be supported by RH knowledge either straightforwardly or by implication. As clearly the more promptly the knowledge is acquired, the less the issues will be challenging. But studies conducted in Nekemte town, Addis Ababa, Jimma towns as well as Mizan Tepi University [29-32] showed that the Reproductive health Knowledge among adolescent populations were quite low. This low knowledge on RH, whatever the explanation could be, are taken as the major factor that makes the problem of adolescents more complicated.

Despite the fact that specific factors were raised as explanations behind low knowledge of RH, which in turn influence the adolescents' reproductive health in certain territories of the country, other associated factors needs to be examined at regions where no earlier examinations have been conducted on the issue. Consequently, the reasoning behind this study was to evaluate the knowledge of reproductive health and associated demographic and socio-economic factors among adolescents going to secondary schools in Holata town to provide evidence based data and suggestions for conceivable future interventions.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of this study was to assess the level of knowledge on reproductive health and associated demographic and socio-economic factors among adolescent students attending secondary schools in Holata town, Oromia special zone surrounding Finfinnee, of Oromia National Regional State, Ethiopia.

1.3.2 Specific Objectives

More specifically, this study tried:-

- To assess the level of knowledge of HIV/AIDS and common STIs among adolescent students attending secondary school in Holata town.
- To assess knowledge on pregnancy, contraceptive use and abortion among adolescent students attending secondary school in Holata town.
- To determine sources from which adolescent students get information about reproductive health.

- To identify the demographic factors that affect the knowledge of reproductive health among adolescent students and,
- To find out the socio-economic factors associated with the knowledge of reproductive health among adolescent students.

1.4 Research Questions

The core issues of the proposed study are physical changes in the adolescents, sexual behavior, abortion, contraceptive use, and knowledge related to HIV/AIDS, STIs, and RH information. In order to answer the above-mentioned specific objectives of the study, an attempt was made to answer the following guiding research questions:

1. What do students know about pregnancy, contraceptive method and abortion?
2. Do adolescent students know about HIV/AIDS and common STIs?
3. From where do the adolescent students get information about reproductive health?
4. What are the demographic and socio-economic factors associated with the knowledge on reproductive health among adolescent students?

1.5 Rationale of the study

As "age-group" interventions specific to a particular setting are needed to address the diverse needs and contexts of adolescents' lives, studying their knowledge and their associated factors is highly relevant to design appropriate program interventions and strategies in the local context [40, 41].

1.6 Significance of the Study

In Ethiopia, there are limited researches conducted on the knowledge of RH and other related issues. Reproductive health problems like abortion, risky sexual practice, unwanted pregnancy, STIs or sexually transmitted diseases (STDs) including HIV AIDS and sexual violence are common among the population in general and students in particular. Therefore, this assessment is believed to give the current situations of RH related issues of the students in the school in the study area, which may help concerned bodies to take actions based on the findings. As well, the study may provide baseline information for further researches that could be conducted in similar issues. The result of this study will also help fill the knowledge (information) gaps regarding RH among adolescents and other related issues in the study area. Additionally, the recommendation forwarded in this study will help health care planners and other stakeholders through providing up to date information regarding the issue.

Moreover, this study attempted to provide evidence based findings so that concerned government bodies and policy makers use them to consider the situation and to design an appropriate intervention strategy.

1.7. Scope of the Study

Geographically, the study was conducted in Holata town, Oromia special zone surrounding Finfinnee, of Oromia National regional state. The research was specifically conducted in two selected secondary schools namely Holata secondary school and Burqa Harbu secondary school. Conceptually, the study was restricted to assessing the level of knowledge on reproductive health and other reproductive health issues; specifically, it focused on contraceptive use, HIV/AIDS and STD, and the biological and physical changes associated, unintended pregnancy and abortion, opposite sex relationship (boyfriend or girlfriend).

Generally, this study was delimited to assessing the level of knowledge on reproductive health and its Demographic and Socio-economic associated factors among adolescent students attending secondary schools in Holata town students in two secondary schools. As RH encompasses wide issues of concern from menarche to menopause, the study focuses on immediate sexual and reproductive health issues of school girls and boys. Such issues include, contraception, unwanted pregnancy, abortion and STIs including HIV/AIDS. It is worth noting that the study, thus, does not attempt to address other components of reproductive health, such as female genital mutilation, early marriage, sexual violence, and other pregnancy related issues such as fistula and maternal mortality.

1.8 Limitations of the study

- Since the study has dealt, at some point with very personal and sensitive issues like sexual behavior, obtaining the real responses among especially unmarried adolescent people is difficult due to cultural influence. Therefore, social desirability bias might decrease the quality of data to obtain in-depth information about sensitive issue.
- Qualitative way of data collection was also not used due to covid-19 pandemic disease and this might have not enabled the study to exhaust all possible responses.

Since, all research requires methodological and ethical precautions on the part of researchers, but the sensitivity of a title generally encourages particular care to be taken during the different stages of the research, from the formulation of the subject to publication of the results, via gathering

data. Some of the participants were worried that may ask for their partners and report them individually. Therefore, to overcome the problem the researcher tried to get help from mediators (Holata education office) who can facilitate the contact with the respondent to educate and understand them on important of this study. Finally guaranteed the respondent with confidentiality of the data and respect their views on RH.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1 Introduction:

This section presents literatures reviewed on knowledge of reproductive health among adolescents globally, regionally in Africa and also in Ethiopia focusing on the analysis of demographic, economic, social and cultural factors that are likely to influence the knowledge of reproductive health.

Therefore, this chapter provides relevant materials concerning adolescents' reproductive health based on existing literature. It depicts the general view of adolescent reproductive health worldwide followed by the discussion to Africa, sub-Saharan African countries and then East Africa and Ethiopia in particular. This chapter contains information obtained from literature on supportive environment for adolescent to get knowledge on reproductive health, the importance of adolescent reproductive health, and associated demographic and socio-economic factors that affect the knowledge of adolescents' on reproductive health at national level.

2.2 Adolescent

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 [33]. The two overlapping age groups combined in the age category "young people" covering the age range 10-24 years constitute 1.8 billion and represent 27 percent of the world population [34]. Adolescent and young people aged 10-24 make up an estimated 33 % of the population in Eastern and Southern Africa, this population of 158 million is expected to grow to 281 million by 2050 [35].

While the adolescent classification is mostly universal, different continents or nations adopt different age ranges for youth. The definition of youth is also influenced by the constant changes in demographic, economic, and socio cultural circumstances. In the African Youth Charter, youth are people 15 to 35 years. The national youth policy of Ethiopia adopts the age of 15-29 years for youth [36]. The population of Ethiopia is estimated to be 105.2 million, of which 32.3% (33.9 million) are adolescents and youth with age range of 10-24 years [37].

In developing countries including Ethiopia, most of the adolescents are sexually active. Sexual activity at an early age is also defined as being associated with several serious risks and health complications [38].

A growing number of countries have implemented or are scaling up sexuality education program. Effective sexuality education is important because of the impact of cultural values and religious beliefs on all individuals, and especially on young people, in their understanding of these issues and in managing relationships with their parents, teachers, peers and the community [39]. Adolescent sexual behavior is important not only because of the possible reproductive outcomes, but because risky sexual behavior is associated with unintended pregnancy, early marriage, sexually transmitted infections such as HIV/AIDS [40].

2.3 Reproductive Health

The term 'reproductive health' is coined by Peters and Wolper (1995) that explains it as complete attainment of well-being in terms of mental, physical, and social conditions. Scarce knowledge or lack of awareness in reproductive health enhances the chance of vulnerability for adolescents to engage in unintended pregnancies, STD's, Abortion, unmet need of adolescent, STI's, and HIV [41].

2.4 Challenges that Adolescent Face on RH Issues

Worldwide the lives of millions of adolescents are at risk because they do not have the information, skills, health services and support they need to go through sexual development during adolescence and postpone sexual intercourse until they are physically and socially mature and able to make well informed responsible decisions [12].

There is a great diversity of challenges faced by young people in regard to their reproductive health, and the issues of critical importance to them vary greatly depending on their cultural and geographical backgrounds. These issues include sexual development and sexuality including puberty, forced early marriage, lack of opportunities, unwanted pregnancy, unsafe abortion, early child bearing, the spread of HIV/AIDS and other sexually transmissible infections (STIs), and female genital mutilation [14].

In many countries, the highest increase in STIs incidence is among adolescents. Half of the 333 million new STIs each year are among people under 25 years of age in which Africa is not an exceptional where 65% of all new HIV/AIDS infections are in young people [42].

Ethiopia is one of the developing African countries where HIV/AIDS is fueling and striking its population of all age including adolescents. The prevalence of the disease among adult population is thought to be 6.6 % while an estimated 2.2 million people are infected with the virus. As is the case elsewhere in Africa, transmission is almost exclusively through heterosexual contact [43].

2.5 Adolescent Knowledge about Reproductive Health issues

Knowledge of RH is an important prerequisite to gaining access to and eventually adopting SHR services among adolescents [28, 44].Young people are rarely provided with adequate knowledge about their own development, especially in regard to sexuality, the changing human relationships which take place during adolescence. They need to develop their capacity to communicate and make plans and decisions during a time of life in which their own autonomy is increasing [45].

A study conducted in Thailand showed that the knowledge of reproductive health issues of youths is very limited; only about 20% of the respondents have knowledge of reproductive and sexual health which indicates they wanted more reproductive and sexual health education and services. This study also showed marital status have up to six times higher in married compared to unmarried youth [46].

A study on exploration of knowledge, attitudes and behaviors of young multiethnic Muslim the most commonly recognized contraceptive methods in order of most cited were condoms 98.9%, birth control pills 97.8%, withdrawal 81.7%,diaphragm 75.5%, female condom 69.1%, intrauterine device 62.3%, abstinence during fertile times 58.4%, emergency birth control pills 57.7% and cervical cap (50.8%). Respondents identified magazines 19.2%, friends 18.3% and teachers 18.3% as their most common sources of information about sexual and reproductive health issues. Only 5.6% of the respondents acquired information about sexual intercourse from their mothers. The availability of contraceptives to unmarried youth received slightly higher agreement responses, where 31% (n=122) indicated that they agreed and 52% (n=317) strongly agreed that contraceptives should be easily available for unmarried couples [47].

One study conducted in Nigeria found that 64% of youths perceived their mothers as lacking sufficient knowledge, while 87% thought fathers lacked knowledge. In identifying other barriers to communication, this study found that 62.3% thought that their parents are too preoccupied to talk about sex, while 59% believed their parents would argue if they were to talk about sex. In

addition, 30% thought their mother would think they were interested in experimenting with sex if they were to talk about it, whilst 69% believed their father would get this impression [48].

Another study on knowledge, practices, and attitudes of reproductive health issues among female undergraduate students in KwaZulu-Natal of South Africa, all the students had heard about sexual and reproductive health issues before the interview. Their first source of information were radio 50%, television 46.7%, Newspaper 33.3%, teachers 25%, parents 21.7%, health workers 13.3% and youth club 11.7%. About 14% of the respondents had negative attitude towards the importance of SRH communication. More than 60% of the students agree with the statement that communication on SRH delays sex [49].

A base-line survey on ARH among adolescents in government high schools of Addis Ababa revealed that students were given choices to define what is meant by RH and they stated RH is family planning 70.0%, access to health information and services 53.0%, the right to choose when and with whom to have sex 42.0%, STDs /HIV/AIDS issues 42.0% and safe mother hood 32.0%. In this study, adolescents preferred to obtain RH information from health professionals 34.0%, school teachers 14.0%, media 14.0%, and school clubs 12.0% as their first choices [50].

Subsequently, various investigates appeared as, larger part of adolescents actually doesn't have full admittance to data and instruction on such issues, as a result they don’t have the exact knowledge of RH. Even among adolescents, females are less knowledgeable than males on sexual and reproductive matters [51].

However, in Ethiopia Hirut’s research has shown that despite lack of RH and HIV/AIDS-related services, the awareness level of youth (10-24) around Hawasa and Shashemene is very high [52]. Contrary to this finding, the EDHS report of 2016 reads that knowledge of AIDS is widespread in Ethiopia with 20% of women aged 15-49 and 38% of men age 15-49 have comprehensive knowledge about the modes of HIV transmission and prevention. In addition, 69% of women and 81% of men identified limiting sexual intercourse to one uninfected partner with no other partners can reduce the risk of HIV knowledge of condoms for preventing AIDS virus is much less common, particularly among women [15].

2.5.1 Adolescents' Knowledge and Practice of modern Contraceptive

Relatively few adolescent women are currently using contraceptives. Analysis of data from health surveys show consistently high level of knowledge about contraceptive methods among

adolescents in developing countries but relatively low level of contraceptive use [53]. In sub Saharan Africa, the proportion of women aged 15-19 who reported that they were using family planning methods ranged from 2% in Niger, Rwanda, and Senegal to 23% in Cameroon [54]. In India, only 7.1% of married women aged 15-19 were using contraceptives [55].

According to Ethiopia Mini Demographic and Health Survey report of 2019, modern contraceptive prevalence rate (CPR) among married women increases from 37% among women aged 15-19 to 52% among women aged 20-24, and then declines steadily to 18% among women age 45-49. Urban women are much more likely than their rural counterparts to use any method of contraception (50% versus 38%) [27].

An investigation directed to evaluate the determinants of contraceptive use among urban youths or adolescents in Ethiopia, detailed that there is a huge inconsistency in knowledge and actual practice of contraception. In this study the most widely 90% known contraceptive method among sexually active male respondents was condom while pill was the most 87% widely known among females. However, only 15% of males and 39% of females had used condom and contraceptives respectively [56]. Similarly, it was found that nearly two thirds of young respondents 69.3% males and 63.9% of females in Harar reported to have known, at least, one contraceptive method while only about one fourth 27% males and 22.6%females, reported having ever used a method [57].

In one of the survey conducted in northwest Ethiopia, only 25% of sexually active females used modern contraceptive at the time of study [58]. Most adolescents mentioned, fear of side effects, and believe that pregnancy could not occur particularly at first coital encounter; partner's opposition, and desire to have children to be the most important reasons for not using modern contraceptives [56, 59].

2.5.2 Unintended Pregnancy and Abortion

As a result of inadequacy or lack of sexuality and reproductive health education, sixteen million adolescent girls become mothers worldwide every year, many of whom suffer the consequences of unplanned pregnancy [60]. There were 16 million births to adolescent mothers aged 15- 19 years old in 2008, which represents 11% of all births globally and majority of these births almost 95% occurred in low and middle income countries. Unplanned birth for unmarried adolescent and young women result in dropout of school, rejection from family and community and in some case forced to marry and live in Physical harm [61].

In some sub-Saharan African countries, the proportion of women who give birth before the age of 15 years has ranged from 0.3% to 12%. In Latin America, birth in adolescent group age 10-14 years represented less than 3% of all births among adolescents [62]. Adolescent aged 15-19 years old are more vulnerable to unintended pregnancy than older women. Similarly, unmarried women are at high risk of unintended pregnancy than ever married women [63]. Lack of access to contraceptive methods, reproductive health education and service and due to socio-cultural factors contributed to the increase of unintended pregnancy among adolescent [64].

Sex associated problems of unwanted pregnancy has become the major concern for both developed and developing countries. An unwanted pregnancy may lead to induced abortion, in which in the case of an experienced or ashamed adolescent is likely to take place later in pregnancy. It involves greater risk of life, health and future fertility. If the procedure is illegal it probably be performed under unsafe conditions, increasing the risk even more.

Forty percent (40%) of all unsafe abortions among adolescents occur in developing countries and in sub-Saharan Africa nearly five million unsafe abortions were occurred every year [65]. While the global trend has decreased, the number of abortions in sub-Saharan Africa has increased, and almost all are performed in unsafe conditions [66]. Similarly, in Ethiopia, according to the DHS 2005 Ethiopia, 54% of the pregnancies to girls under age 15 are unwanted compared to 37% of unwanted pregnancies for age 20-24 [67].

2.5.3 Knowledge of Sexually Transmitted Infections (STI's) among adolescents

The World Health Organization reports that the highest rate of STIs occur among 20 -24 years old, followed by adolescents ages 15 -19.Young girls are at even higher risk, largely due to earlier on sets of sexual activity .In the developed world, two –thirds of reported STIs occur among men and women under the age of 25. In developing countries the proportion is even higher. For instance, about one half of all HIV infections occur among men and women of 24 years and younger [68, 69].

Worldwide, about 500,000 young people (15-24 years) are infected with STDs and this increases their risk to HIV infection. Sexually transmitted diseases (STDs) are enormously costly to society in terms of both of human pain and suffering and of health care expenditures. Among their consequences, STDs are potent cofactors in the sexual transmission of HIV. The AIDS is emerging as the most serious public health and development challenge ever affect sub-Saharan Africa, which

currently bears the heaviest toll of HIV infection, accounting for 63% of the global total. According to UNAIDS (2000), in Africa countries young people between 15 & 24 account for 66 % of all new infections acquired mainly through heterosexual transmission aggravated by risk behaviors [70,71].

According to Save the Children USA report of research done on high school adolescents, the most frequently reported STI symptoms by the students were genital ulcers, pain during urination, genital discharge, and itching. This shows that despite the recorded improvements and irrespective of their exposure to the school interventions, youths' knowledge of STI symptoms are not comprehensive, with about one third of all survey respondents unable to identify a single STI symptom. Furthermore, some of the most important signs and symptoms of STIs including genital rash and swelling in the genital area were rarely identified [72].

In three African countries (Ethiopia, Niger and Zimbabwe), less 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 [73]. This study mentioning Ethiopia's figure on STI treatment seeking habit has similarity with the domestic finding that was conducted in Mekelle town (diagnosis and treatment of STI = 15%) [74].

2.5.3.1 Knowledge of HIV/ AIDS among adolescent

Every day, 5000 young people aged 15-24 years become infected with HIV; almost 2 million new infections each year globally. More than 10 million of the estimated 40 million people living with HIV are young people [75].

Sub-Sahara Africa is home to almost two-thirds (61%) of all youth living with HIV (3.28 million), 76 percent of them female. Despite the high numbers of young people living with HIV, there still remains insufficient attention directed towards preventing future transmission of HIV among this population group [76].

Most studies in Ethiopia and elsewhere in the world indicate that young people are engaged in sexual activity at a very early stage of their age. In the study conducted in Ethiopia revealed that

the first age at which sexual intercourse was practiced in the study young people was ranged from 13-17 years old with the mean age of 15.56 years [77].

In Ethiopia, effective knowledge of HIV/AIDS is contingent on knowledge of ways to avoid contracting the virus. Despite that AIDS awareness is relatively high among adolescents in Ethiopia, one in four young women and more than one in ten young men have not heard of AIDS or know whether it could be avoided. Nearly a third of young women and a sixth of young men did not know a specific way to avoid the infection [78].

Knowledge to accurately understand the risks of HIV and how to prevent exposure is a precondition to risk reduction. According to UNAIDS 2007 study, many young people lack basic knowledge about HIV prevention with only 40% of males and 38% of females aged 15–24 with accurate and comprehensive knowledge about HIV transmission and prevention. In line with this, more than 70% of young men know that condoms can protect against HIV exposure, while only 55% of young women cite condom use as an effective prevention strategy [79].

2.6 Factors associated with Reproductive Health Knowledge

2.6.1 Socio-demographic and Socio-economic Factors

Various local and international studies have shown that demographic and socio-economic characteristics of adolescents such as sex, age, living condition, residence, and education, income, participation in RH club, source of information were reported to have close relationship with RH knowledge and healthcare-seeking behaviors [80].

In a study conducted in Addis Ababa to assess knowledge and utilization of youth friendly health service among adolescents (15-19 years old) in Addis Ababa, three hundred ninety eight (52%) of the adolescents had knowledge about reproductive health. In the bivariate analysis females were more likely to be knowledgeable than their male counterparts. Adolescents who ever attended formal education were more likely to be knowledgeable than those who did not. Respondents living with both parents and single parent were more likely to be knowledgeable than those living alone. Respondent's RH knowledge was more likely to be higher among those who have television, radio and having access to magazine/newsletter as a source of information. Adolescents who reported of discussed RH issues with parents were two times more likely to be knowledgeable than those who did not. In the multi variate analysis sex, age and having radio as a means to communication were found to have statistically significant association with knowledge.

Being females was significantly associated with knowledge. Late adolescents (18-19 years old) were more likely to be knowledgeable than the younger once (15-17years old). Adolescents who had radio as a means of communication were more probably knowledgeable than those who did not [30].

Another study conducted in Shire town, Tigray, Northern Ethiopia, to assess Knowledge on reproductive and sexual rights and associated factors among youths, its bivariate logistic regression analysis, sex of participants, age of participants, educational level of participants, occupational status of participants, monthly income, parental educational level, received information on RH issues, participated in RH clubs, ever discussion on RH issues, and started sexual intercourse were significantly associated with reproductive health knowledge. In multivariate logistic regression analysis, educational level, have monthly income, received information on RH issues, participated in RH clubs and started sexual intercourse were found to be significantly associated with reproductive health knowledge.

On other hand, participants who attended grade1-6 were around 80 % less likely knowledgeable as compared with those who attended diploma and above and those who attended grade 7-12 were also 51% less likely knowledgeable than those who attended diploma and above. Participants who had their own monthly income were 57% times more likely knowledgeable than those who had no their own monthly income and Participants who received information on RH issues were 85% times more likely knowledgeable than did not received information on sexual and reproductive health. Participants who participated in RH clubs were 62% time more likely knowledgeable on reproductive and sexual rights than those who did not participated and those who have started sexual intercourse were also 74% times more likely knowledgeable as compared to those who did not started sexual intercourse in the life time [81].

2.6.2 Source of Information on Reproductive Health

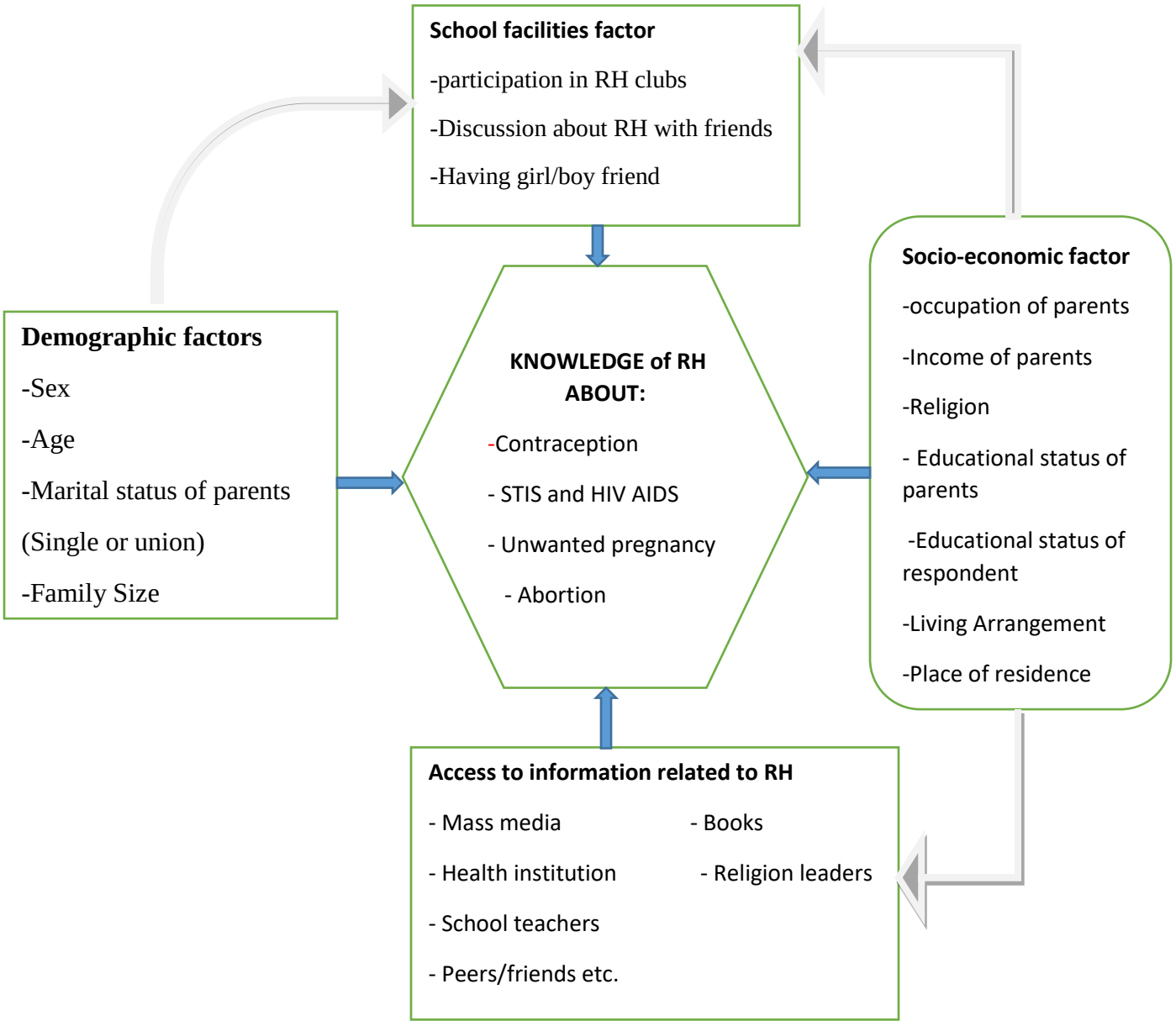
The common sources of information vary from issue to issue. For most students, radio, television, magazines, friends, health facilities, parents and schools are the major source of information [38]. Media content need to be sensitive and relevant to adolescents and young people to be successful in encouraging them to adopt or modify behaviors. A well thought out media program can affect major changes in attitudes and behavior. Therefore, programs geared toward addressing youth reproductive health should consider media exposure as a crucial component of success [40].

The item aimed to know sources from which adolescents get information on reproductive health. Almost half of the participants mentioned teachers as their source of information indicating that school is the place where adolescents spend most of their time under care of their teachers. Teachers can play a great role in adolescents behavior change because adolescents trust and learn from them through discussion, imitating and modeling, therefore if teachers will play their role effectively in educating adolescents on RH most of them will be knowledgeable and have good RH as stated by Helleve *et al.* [82].

2.7 Conceptual framework

Many literatures discussed revealed that, there are demographic and socio-economic factors that affect knowledge of reproductive health among adolescents. By reviewing different literatures demographic factors like sex, age, marital status and family size , socio-economic factors like occupation of parents, family income, educational status of parents, place of residence of students etc ,school facilities factor like participation in RH club, discussion about RH with friends are considered as the factors that affect adolescents reproductive health knowledge. For example independent variables like age of the students will influence knowledge of contraception, abortion etc, as well as independent variables will influence each other. Socio-economic factor like income of parents may influence students access to information. Hence, the following conceptual framework will try to summarize the factors that determine adolescent reproductive health knowledge and to analyze the association between dependent and independent variables.

Figure 1.conceptual framework



Source: Developed by the researcher

-**Place of residence:** is the place where respondent/Student lives.i.e urban/semi-urban or rural.

-Living Arrangement: is the arrangement with whom the students they live, of the parents.

CHAPTER THREE

3. METHODOLOGY

This chapter presents methodological approaches used to carry out this research. It discussed in detail the methods and materials used to guide actions throughout the research such as the study area, the research design, research participants, the sampling technique and sample size, the data gathering process and data collection tools. In addition, the chapter presents the data analysis methods, quality assurance and the ethical considerations.

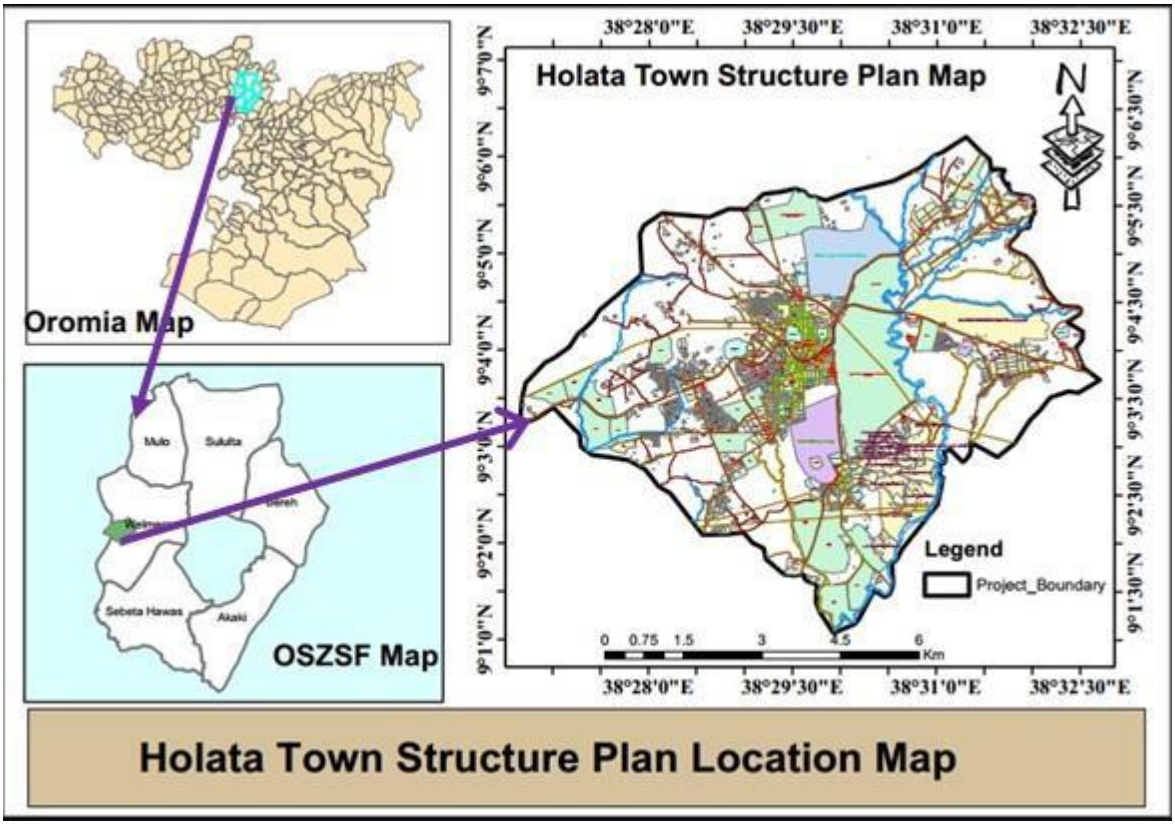
3.1. Study area

This study was conducted among adolescent students in secondary school of Holata town, Oromia Special Zone Surrounding Finfinne, of Oromia Regional National state, Western Ethiopia. Oromia Special Zone Surrounding Finfinne is one of Oromia zone which surrounding the capital of Ethiopia, Addis Ababa in all direction. The town Holata Gennet came into existence with the construction of the Addis Ababa - Addis Alem road, and houses in the latter town were dismantled and brought to this new settlement.

Holata is the largest of three towns in Walmara woreda and one of the town of Oromia Special Zone Surrounding Finfinne situated on an area of 6,185 hectares and located 29km to the west of Addis Ababa along Ambo road segment and The astronomical location of Holata town is $9^0$1’00“ _ $9^0$7’00“N latitude and $38^0$28’00“ _ $38^0$32’30“E longitude and 2391 meters above sea level, and is considered to be “dega” by its climate [83].

According to 2007 Population and Housing Census of CSA the total population of the town was 34,701 of whom 17,099were men and 17,602were women. The number of households in 2007 was 9,467 and the average family size of the town in 2007 was 3.7 [84]. There are two secondary schools in the town namely Holata high school (9-12 grade) and Burqa Harbuu high school (9-11 grade).

Figure 2: Location Map of study area (Holata Town).



Source: Oromia Urban Plan Institute, 2018

3.2. Study design:

A cross-sectional community based study was conducted to assess the level of knowledge of reproductive health and Demographic and Socio-economic associated factors among adolescents attending secondary school of Holata town.

3.3 Source population and **data**

Source of population for the study was all adolescents (15-19 years old) attending their secondary school in both school of Holata town during the study period and the major source of data were primary sources, collected from survey of students in Holata town high school through questionnaire.

3.4 Study population

The study population was selected among adolescents aged 15-19 years those attending secondary school in both school of Holata town during the study period.

3.5 Selection Criteria of study population

3.5.1 Inclusion criteria

Adolescents who are in the age group of 15-19 years who lived in the area for at least 6 months and who gave verbal consent were included in the study.

3.5.2 Exclusion criteria

Adolescents below the age of 15 years and above 19 years old and those who are critically ill and non-volunteer during the survey were excluded from the survey.

3.6 Sample size and Sampling procedure

3.6.1 Sample size determination

Sample size determination is the act of choosing the number of observations or replicates to include in a statistical sample. The sample size is an important feature of any empirical study in which the goal is to make inferences about a population from a sample. The allocation of a given sample of size **n** to different stratum was done in proportion to their sizes. Yamane 1967, suggested simplified formula for calculation of sample size from a population which is an alternative to Cochran's formula when we have finite population and if the population size is known. According to Yamane, for a 95% confidence level and e = 5% degree of precision, size of the sample should be determined by;

$$n=\frac{N}{1+Ne\text{^}2}+5\%\text{Non-response}$$

Where, N is the Total population size and e is the Margin of error (MoE), e = 0.05 based on the research condition.

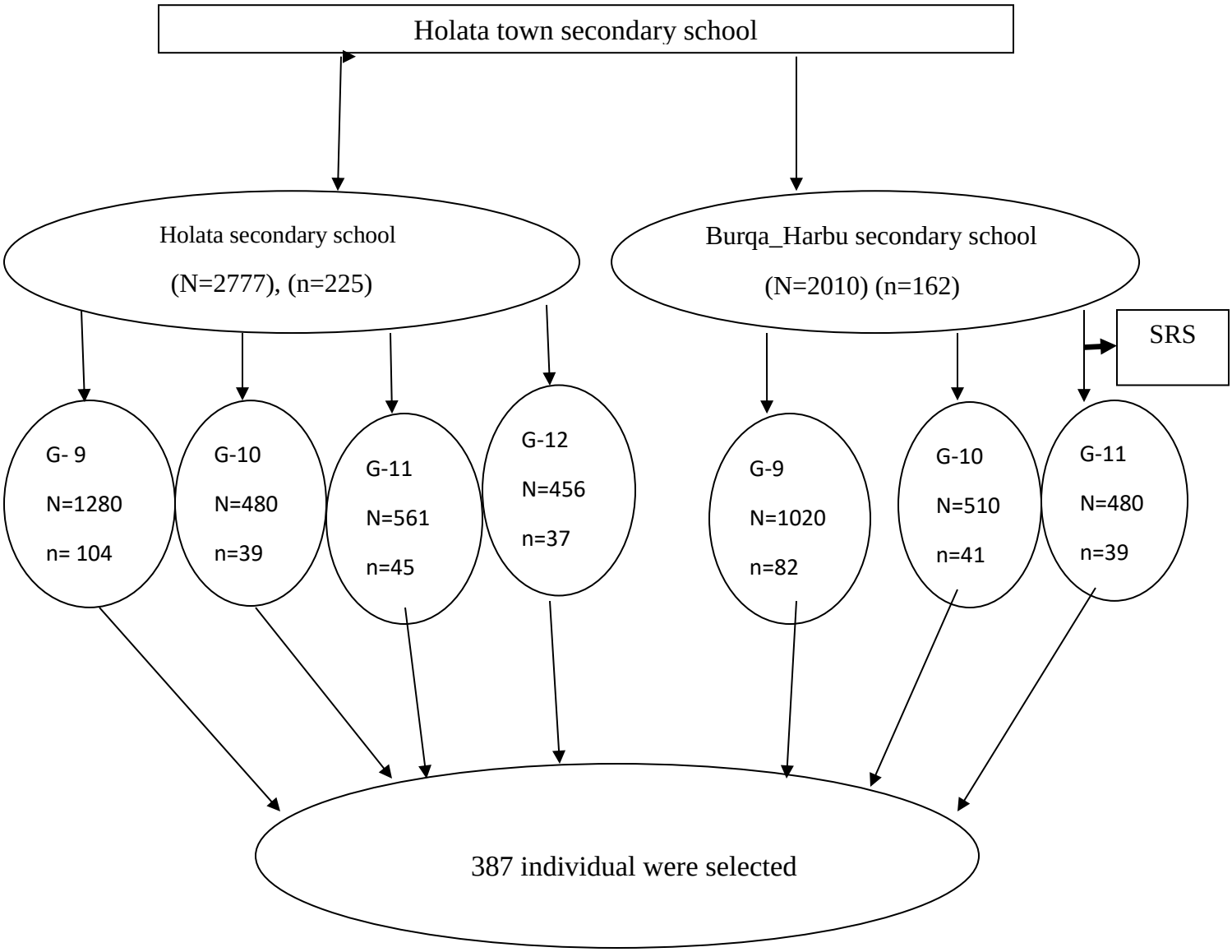
Therefore Sample size n, N=2777 +2010 =4787

$$n=\frac{4787}{1+4787\ (0.05)\text{^}2}=\frac{4787}{1+11.9675}=\frac{4787}{12.9675}=369+5\%*369=369+18=\underline{387}$$

3.6.2 Sampling Technique or procedure

Multi-stage sampling was used to come up with the required sample size of both study sites. The selection of study participants was from both Schools namely, Holata high school (incorporated grade 9, 10, 11 and 12) and Burqa Harbuu School (consists of grade 9, 10 and 11). The sample size was proportionally allocated to both schools and also to each grade. The sampling frame was also prepared from the already existing students' registration book (roster) in the respective schools' record office. The sections were selected randomly from each grades. Thus, from Holata high School, 4 sections from grade 9, 2 sections from grade 10 ,3 section from grade 11and finally 2 sections from grade 12 and From Burqa Harbu high school, 4 sections from grade 9, 2 sections from grade 10 ,2 section from grade 11 Was randomly selected by simple random sampling (lottery method). The study participants that belong to age (15-19 years old) were purposively selected from the prepared sampling frame (their identification number) in each selected sections by computer using random number generator by computer.

Figure 3: Schematic diagram of sampling procedure.



3.7 Methods of Data Collection

3.7.1 Questionnaire

Structured questionnaire was prepared by reviewing previously done studies on the topic of interest, pretested and utilized to assess variables which affect RH knowledge among the adolescent. After review of relevant literatures and previous studies questions that can satisfy the objectives of the study were adopted especially from a standard questionnaire of illustrative questionnaire for interview-surveys with young People. Data was collected using self-administered questionnaires with closed ended questions. It has three parts namely; demographic and socio-economic characteristics of the study subjects and their parents, knowledge of reproductive health including contraceptive use, unintended pregnancy, abortion, STIs/HIV /AIDS and questions related to sexual behavior. Questions were originally be developed in English and translated to local language Afaan Oromo and then back to English by another person who is fluent speaker of both languages to ensure validity. The first draft of the questionnaire was prepared and submitted the advisor for valuable comments before developing its final version.

3.8. Pretest:

It was carried out on similar setting on young people having similar socio-demographic characteristics by considering 5 % of the total sample size and appropriate modifications was made after discussing with the supervisors and data collectors such as skipping patterns and some other corrections to have the final version before starting the actual data collection process.

3.9. Study variables:

3.9.1. Independent variables:

Demographic and socio-economic characteristics of the respondents such as age, religion, ethnicity, educational, occupational status, living arrangement, place of residence, income and parental characteristics such as educational, place of residence and occupational status and associated factor like participation in RH club in school, source of information About RH, Discussion about RH with friends and having girl/boyfriends.

3.9.2. Dependent variables:

Reproductive health knowledge of adolescents (contraceptive use, unintended pregnancy, abortion and STI'S/HIV AIDS knowledge).

3.10. Data management (processing) and analysis

Data management: After data collection, each questionnaire was coded separately and data were cleaned. Coding of different variables were also carried out before analysis especially by using computer software SPSS program version 20.0

Data analysis:

Descriptive analysis of the variables was done after checking the distribution of the data. Continuous variables was expressed as mean ± standard deviation. Categorical variables were expressed as number (percentage). Cross-tabulation with frequencies and percentage of each variable was performed to explore the relationship between the dependent variable and independent variables. The mean scores were then calculated using computer SPSS software program version 20, For those questions to know the knowledge status of the study Subjects about use of contraceptive, unintended pregnancy, STI's/HIV /AIDS and other related RH issues when considered. Contingency tables were also used to see the association between the explanatory and outcome variables. Bivariate logistic regression were used to select associated independent variables for multiple logistic regression. Multivariable logistic regression model fit to predict the association between knowledge of RH and their determinants or predictors. Odds ratio with 95% confidence interval and logistic regression were employ to describe the strength of association between the selected study variables by controlling for the effect of possible confounders.

All statistical analysis were set a P value of <5% level of significance (i.e. $p < 0.05$). The results was reported as Odds Ratio and (95% CI). In addition to the narratives appropriate tables and diagram was used to present findings.

Logistic Regression Models

Logistic regression is the type of regression we used for a response variable (Y) that follows a binomial distribution. The central mathematical concept that underlies logistic regression is the logit—the natural logarithm of an odds ratio. Logistic regression is used when the dependent variable is two alternative or dichotomous and is well suited for describing and testing hypotheses about relationships between a categorical outcome variable and one or more categorical or continuous predictor variables. The model uses a maximum probability estimation to estimate parameters and the likelihood that the sample came from a population with those parameters is computed. Maximum likelihood approaches try to find estimates of parameters that make the data actually observed "most likely."

A Logistic Regression Model is to model the conditional probability of Y=1 given explanatory variables $X_1,\ldots,X_r$ as a logit function of a linear combination of $X_1,\ldots,X_r$,

$$P(Y=1 \mid X_1,\cdots,X_r)=\frac{\exp(\alpha+\beta_1 X_1+\cdots+\beta_r X_r)}{1+\exp(\alpha+\beta_1 X_1+\cdots+\beta_r X_r)}$$

Equivalently, a Logistic Regression Model is to model the logarithm of the conditional odds of Y=1 given explanatory variables $X_1,\ldots,X_r$ as a linear function of $X_1,\ldots,X_r$,

I.e.

$$Log[odds(Y=1 \mid X_1,\cdots,X_r)]=\alpha+\beta_1 X_1+\cdots+\beta_r X_r$$

OR

Logit(Y) = natural log (odds) = ln $(\frac{P}{1-P})$ $=\alpha+\beta 1X1+\beta 2X2+\cdots\beta rXr.$

Where P is the probability of the outcome of interest or "event,"α is the *Y* intercept, β is the regression coefficient, and *exp* = 2.71828 is the base of the scheme of natural logarithms, .*X* can be categorical or continuous, but *Y* is always categorical.

Logistic Regression Model allows one to obtain marginal (crude) odds ratio to study association of an explanatory variable, X, with a binary response variable, Y, where X can be either a qualitative explanatory variable or a quantitative explanatory variable.

Logistic Regression Assumptions:

1. The model is correctly specified, i.e.
   - ❖ The true conditional probabilities are a logistic function of the independent variables;
   - ❖ The response (Y) is NOT normally distributed.
   - ❖ The model must produce predicted/fitted probabilities that are between 0 and 1
   - ❖ The independent variables are measured without error.

2. The cases are independent.
3. The independent variables are not linear combinations of each other.
   - ❖ Perfect multicollinearity makes estimation impossible,
   - ❖ While strong multicollinearity makes estimates imprecise.

3.11 Operational definitions

Adolescent(s): These are young people who are in the age group between 15-19 years in this Study.

Parent: mother and father, guardians considered as mother and father

Reproductive Health: A state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and its functions and processes [1].

Knowledge of RH: A summary index was developed to categorize respondents as knowledgeable or not knowledgeable. The adolescents were asked questions which covered their outlooks about contraception, unwanted Pregnancy, Abortion, HIV/AIDS and Other STI's. The investigator were developed an index which summarize adolescents' knowledge about the issues that assigned a score of **1** for each **''Yes''** response and **0** for **''No''** response. Those respondents who respond correct answer was categorized as knowledgeable while those didn't answer correct answer were labeled as not-knowledgeable.

3.12. Ethical Considerations

The study was carried out after getting permission from the ethical review committee of Addis Ababa University. A letter of support which indicates the objective of the study were written to Holata town administration and Holata town education office. The purpose and importance of the study was explained to the participants.

Data were collected after fully informed verbal assent was obtained and confidentiality of the information was also maintained by omitting their names and personal identification or privacy. Without permission no data collector tried to go through with eligible adolescent. Data collectors approached the adolescent by extending their greetings and introducing themselves. After introduction, they continued explaining the purpose & other information of their visit by reading the information sheet to the eligible study unit.

CHAPTER FOUR: RESULTS OF THE STUDY

4.1 Demographic and Socio-Economic Characteristics of the Respondent and Knowledge of Students about Reproductive Health Issues

4.1.1 Demographic and Socio-Economic Characteristics of the Respondent

A total of 387 adolescent students aged 15 –19 years residing in Holata town and attending secondary school had participated in the study. Out of 387 secondary school students completed the questionnaire, 19 responses were excluded for gross incompleteness and inconsistency. Therefore, analysis was made based on 368 questionnaires. Thus response rate was about 99.7% by considering 5% non-response. From 368 study subjects, 215(58.4%) were from Holata secondary school and 153(41.6%) were from Burqa Harbu secondary school that together constitute 234 (63.6%) males and 134 (36.4%) females. . of the respondents, 279 (75%) were in the age range of 17-19 years while 92 (25%) were in 15-16 years of age with a mean age of 17.4 (+/-1.262 SD years). Most of the students were from grade nine 180 (48.9%) and grade eleven 78 (21.2%) followed by grade 10 74 (20.1%) and grade 12 36 (9.8%).

More than half of the respondents 196 (53.3%) were orthodox Christian followers, followed by protestant 136 (37%), while Waaqeffata and Muslim account for 24 (6.5%) and 12 (3.3%) respectively. The predominant ethnic group among the respondents in the study were the Oromo compromising 320 (87%) followed by Amhara 24 (6.5%). Is found that 216 (58.7%) of the respondents were living with family in urban areas and 104 (28.3%) of respondents were living in urban areas in rental houses and about 48 (13%) were living with family in rural areas and attend school by travelling long distances e daily. The majority of the respondents' parents 212(57.6%) were living together (in union) and 156(42.4%) respondents' parents were living alone.

The mean (average) family size of respondents was 4.32 (+/-1.957 SD) without mother and father of the respondents. Out of the 368 respondents, 229(62.2%) were currently living with both parents, i.e., with their father and mother together followed by those living with their mother accounting for 54(14.7%) and 24(6.5%) living alone by hiring dormitory, 18(4.9%) living with either sister or brother, 13(3.3%) respondents were living with their boy/girlfriends. Also 151 (41%) of respondents' fathers and 178 (48.3%) of respondents' mothers were civil servants and housewives respectively, whereas 117(31.8%) of the fathers and 86(23.4%) of the mothers of the respondents were farmers and civil servants or government employer respectively, by their

occupation. On the other hand, majority of the respondents/students 324(88%) have no own income while about 44(12%) respondents do have own income. Of the respondents those who have own income, more than three fourth 33 (75%) earn 50-250 Birr per month, 11(25%) earn 300-600 Birr monthly. Similarly, the educational background of respondents' parents revealed that majority 320(87%) of their fathers and 272 (73.9%) of their mothers could be considered as literate as shown in table1.

Table 1: Distribution of the Demographic and Socio-economic Characteristics of Students attending their Education in Holata Secondary School and Burqa_Harbu Secondary School, June 2020.

Variables	Category	Frequency	Percentage
School	Holata	215	58.4
	Burka Harbu	153	41.6
Grade	9	180	48.9
	10	74	20.1
	11	78	21.2
	12	36	9.8
Sex	Male	234	63.6
	Female	134	36.4
Age	15-16	92	25
	17-19	276	75
Religion	Orthodox	196	53.3
	Protestant	136	37
	Waaqefata	24	6.5
	Muslim	12	3.3
Ethnicity	Oromo	320	87
	Amhara	24	6.5
	Gurage	12	3.3
	Others	12	3.3
Living with	Both parents	229	62.2
	Single parents	60	16.3
	Sister/Brother	18	4.9
	Relatives	12	3.3
	Friends or peers	6	1.6
	Boy/Girlfriend	13	3.5
	Alone	24	6.5
	Others	6	1.6
Ever attended school	Yes	296	80.4
	No	72	19.6
Have own income	Yes	44	12
	No	324	88
Marital status of parents	In union	212	57.6

	Single	156	42.4
Current respondent Residence	Urban with family	216	58.7
	Urban house rent	104	28.3
	Coming from rural daily	48	13
Fathers educational status	Literate	320	87
	Illiterate	48	13
Mothers' educational status	Literate	272	73.9
	Illiterate	96	26.1
Father's occupation	Government employer	151	41
	Farmer	117	31.8
	Private business owner	37	10.1
	Employed in private sector	32	8.7
	Daily laborer	12	3.3
	NGO employer	12	3.3
	Others	7	1.9
Mother's occupation	Government employer	86	23.4
	House wife	178	48.3
	Private business owner	43	11.7
	Employed in private sector	43	11.7
	Daily laborer	12	3.3
	Maid servant	6	1.6
know your family monthly income	Yes	36	9.8
	No	332	90.2
Family size	≤3	123	33.4
	4-6	206	56
	≥7	39	10.6
	Mean family size	4.32	
Parent current residence	Urban	148	40.2
	Rural	145	39.4
	Semi-urban	75	20.4

Source: Own survey, 2020

4.1.2 Knowledge of basic concepts of Reproductive Health among adolescent students in Holata town secondary school

The study assessed the knowledge of students and related areas on selected RH issues of importance, including contraception, STIs/HIV/AIDS, unwanted pregnancy, abortion and assessed knowledge of reproductive health. Participants who appropriately answered all important questions were considered as knowledgeable about issues related topic.

The reproductive health knowledge of respondents was derived from a summary score of respondents based on the correct answers they provided for reproductive health related questions that was modeled.

Thus, respondents were asked whether they know what RH means and the response was that a little more than half of respondents 193 (53%) acknowledged that they know about RH and about 173 (47%) respondents answered they did not know RH issues. From the respondents who gave multiple answers, some noted RH as family planning 87 (24%) while others mentioned access to health information and services 95 (26.1%), the right to choose when and with whom to have sexual intercourse 91 (25%), STI'S/HIV/AIDS 89 (24.4%) and maternal and child health 85 (23.3%).

On the other hand, the study result revealed that 73 (19.8%) of the respondents were ever discussed about RH issues with either of their parents and about 208 (56.5%) discussed about RH issues with their friends. Regarding participation in school RH club, about 130 (35.3%) of the students responded that they participated in school RH club and in response to the question "have you ever used RH services", about 79 (21.5%) answered yes as shown below in Table 2.

Table 2: Distribution of respondents by the knowledge of some basic concepts of reproductive health in Holata town secondary school, June 2020.

Variables	Variable's attributes	Frequency	percentage
Know what RH means	Yes	193	53
	No	173	47
Family planning (n= 193)	Yes	87	24
	No	106	29

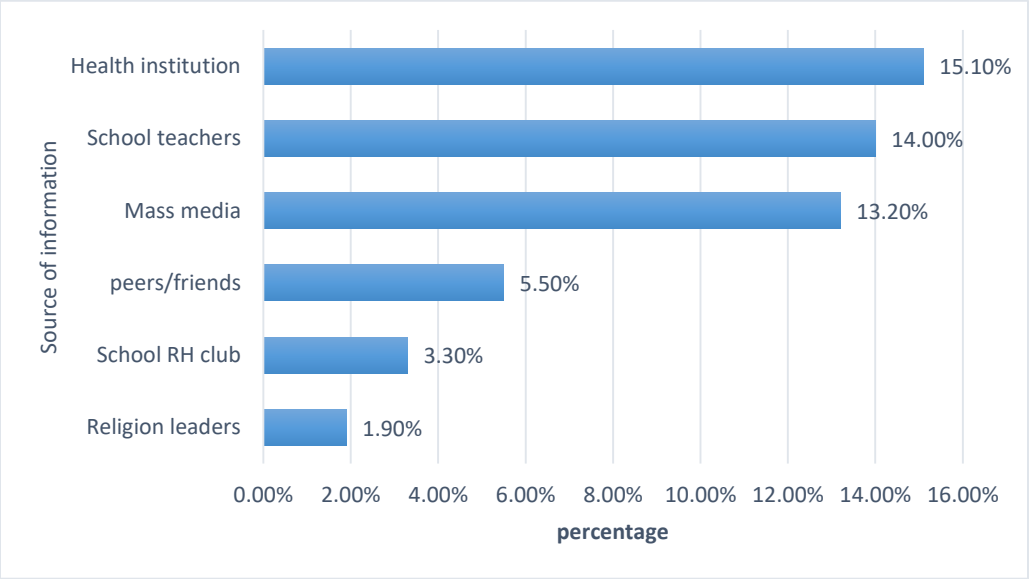
Access to health information and services (n=193)	Yes	95	26.1
	No	98	26.9
The right to choose with whom to have a sex (n=193)	Yes	91	25.0
	No	102	28.0
Is RH about STI'S/HIV/AIDS? (n=193)	Yes	89	24.4
	No	104	28.6
Is RH about maternal & child health? (n=193)	Yes	85	23.3
	No	108	29.7
Ever received information on RH (n=368)	Yes	258	70.1
	No	110	29.9
Discussed about RH issues with parents (n=368)	Yes	73	19.8
	No	295	80.2
Discussed about RH issues with friends (n=368)	Yes	208	56.5
	No	160	43.5
participated in school RH club (n=368)	Yes	130	35.3
	No	238	64.7
Ever used RH services (n=368)	Yes	79	21.5
	No	289	78.5

Source: Own survey, 2020

Primary source of information about reproductive health

Of the total respondents, 193 (53%) have received information on RH, mostly from health institution 55 (15.1%) followed by school teachers 51 (14.0%), mass media 48 (13.2%), peers/friends 20 (5.5%), school RH club 12 (3.3%) and while nearly 7 (1.9%) mentioned religion leaders as their source of information (Figure 4).

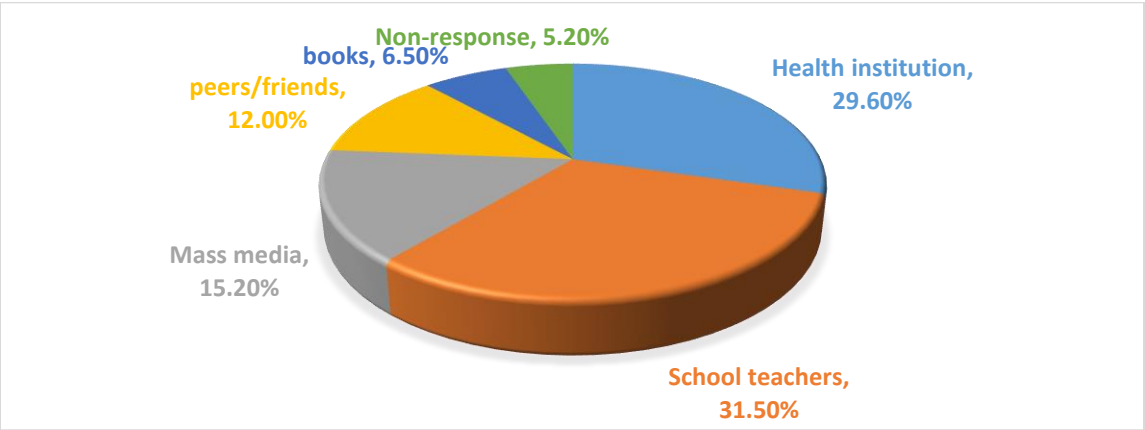
Figure 4. Distribution of most frequently mentioned source of information for RH issues among adolescent students (n=193) in Holata secondary school, June 2020



Source: Own survey, 2020

Respondents were additionally asked where they feel safe to get data regarding RH and 116 (31.5%) reacted their inclination to be teachers, health professionals 109 (29.6%), broad communications 56 (15.2%), companions or companions 44 (12%) and books 24 (6.5%) as demonstrated beneath in Figure 5.

Figure 5: Distribution of respondents by preference to sources of information on RH issues (n=349) in Holata secondary school, 2020.



Source: Own survey, 2020

Knowledge towards selected Reproductive Health issues

Knowledge on Pregnancies

Because of the inquiry "do you know what pregnancy means", Majority of adolescent students 74.7 % (n=361) affirmed that they think about pregnancy. Of total respondents the majority 38.3% (n=141) of the students reacted that a woman could get pregnant since beginning of puberty till menopause followed by the age at which pregnancy could happen was referenced as " after puberty " represent 91 (24.7%), pregnant could happens "before 10 years" old enough 13 (3.5%); in any case, of the all-out adolescents 30 (8.2%) reacted didn't have a clue about the age at which pregnancy could happen.

Larger part 182 (49.4%) out of (n=275) reacted the probably an ideal opportunity for a lady to get pregnant seven days before her period, 77 (20.9%) out of (n=275) reacted ladies get pregnant just after her monthly cycle finished. On the opposite of complete respondents 116 (31.5%) didn't have the foggiest idea when ladies can get pregnant more probable after she has sexual relations. Studies were additionally requested the chance from being pregnant after one demonstration of sex and 97 (26.3%) of them settled upon, while 22 (6%) didn't and 156 (42.4%) were reacts as she may get or may not get pregnant. (Table 3)

On the other hand, the study found that 201 (54.6%) out of 275 respondent were heard or knowledgeable about unwanted pregnancy. In the same line 219 (59.5%) of them out of 275 did know how to avoid unwanted pregnancy. Similarly the respondents were also asked ways to avoid unwanted pregnancy and mentioned different ways of avoid unwanted pregnancy include oral contraceptives 137 (37.2%), injection form 131 (35.6%), condoms 183 (49.7%), Norplant 139 (37.8%), IUDS 141 (38.3%), sterilization 106 (28.8%), abstinence 116 (31.5%), withdrawal method 74 (20.1%),safe period 101 (27.4%) and washing genitalia after sexual intercourse 176 (47.8%).(Table 4)

Table 3: Distribution of respondents by knowledge of pregnancy at both Holata and Burqa Harbu high schools in Holata town, June 2020.

Variables	Variables attributes	Frequency	Percentage
Know what pregnancy means (n= 361)	Yes	275	74.7
	No	86	23.4
Know at what stage(age) women get pregnant (n=275)	Less 10 years old	13	3.5
	since the onset of puberty till menopause	141	38.3
	After puberty	91	24.7
	don't know	30	8.2
Girl can get pregnant after having one sexual intercourse (n=275)	Agree	97	26.3
	Disagree	22	6.0
	She may get or not	156	42.4
Women can more likely get pregnant a week before her menstrual cycle (n=275)	Yes	182	49.4
	No	93	25.3
Women can more likely get pregnant during her menstrual cycle (n=275)	Yes	48	13.0
	No	227	61.7
Women can more likely get pregnant right after her menstrual cycle ended (n=275)	Yes	77	20.9
	No	198	53.8
Women can more likely get pregnant in the middle of her menstrual cycle (n=246)	Yes	71	19.3
	No	204	55.4
Don't know	-	116	31.5

Source: Own survey, 2020

Table 4: Distribution of respondents by knowledge of unwanted pregnancy in Holata and Burka Harbu secondary schools at Holata town, June 2020.

Variables	Category	Frequency	percentage
Know about unwanted pregnancy (n=275)	Yes	201	54.6
	No	74	20.1
Know ways to avoid unwanted pregnancy(n=275)	Yes	219	59.5
	No	56	15.2
Oral contraceptive (n=219)	Yes	137	37.2
	No	82	22.3
Injectable (n=219)	Yes	131	35.6
	No	88	23.9
Using condom (n=219)	Yes	183	49.7
	No	36	9.8
Norplant (n=219)	Yes	139	37.8
	No	80	21.7
IUCDS (n=219)	Yes	141	38.3
	No	78	21.2
Sterilization (n=219)	Yes	106	28.8
	No	113	30.7
Periodic abstinence (n=219)	Yes	116	31.5
	No	103	28.0
Withdrawal (n=219)	Yes	74	20.1
	No	145	39.4
Safe period (n=219)	Yes	101	27.4
	No	118	32.1
Washing genital after sexual intercourse (n=219)	Yes	43	11.7
	No	176	47.8
Knowledgeable	-	144	39.0
Not-knowledgeable	-	85	20.5

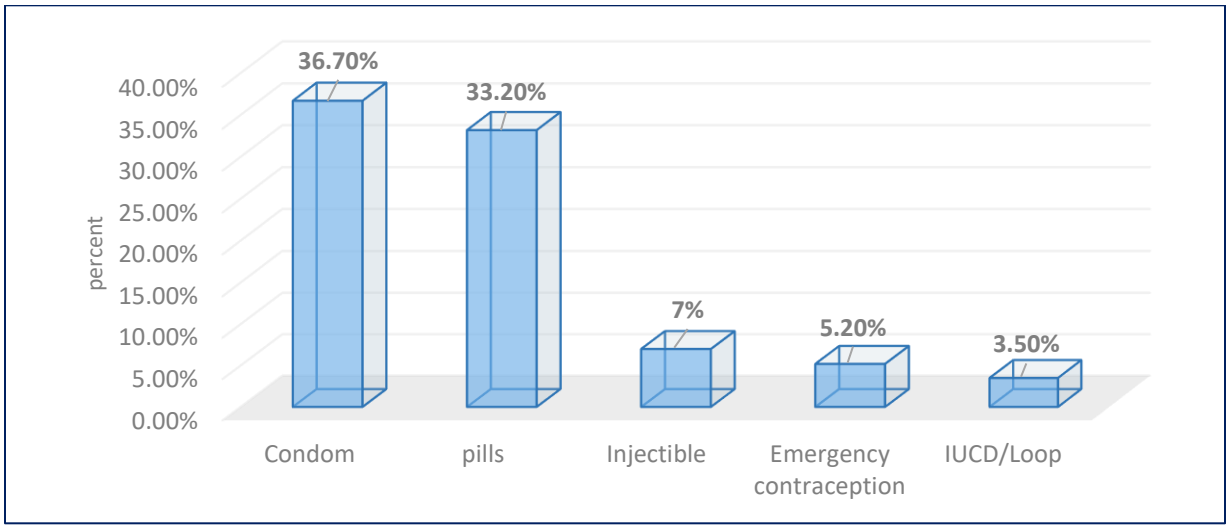
Source: Own survey, 2020

*** Multiple response questions most respondents gave more than one answer.*

Knowledge of Students about Modern Contraceptives

A respondents who does not know about contraception is not expected to use any type of contraceptive methods. Hence, during the interview, respondents were asked whether they had knew ways or methods they could use to delay or avoid pregnancy. If the respondents had heard of such methods, they were further asked to name these methods. Of all of the participants, two hundred forty one (65.5%) of the respondents knew contraception methods used by adolescent. Students were also asked the question "which contraceptive methods do you know" and responded among contraception options for adolescent, condom 135 (36.7%) was the most commonly known followed by pills 122 (33.2%),injectable 26 (7.1%), emergency contraception 19 (5.2%) and IUCD/loop 13 (3.5%) as shown in Figure 6. Summary score was calculated for knowledge of modern contraceptive method based on 10 contraceptive method knowledge related questions and other RH related issues among adolescents .The mean knowledge for contraceptive method was found to be knowledgeable 17.1 %, while majority of respondent found to be not knowledgeable about contraceptive method accounting for 48.4%.

Figure 6: Distribution of respondents by the knowledge of contraception methods of students attending their education at both Holata and Burqa Harbu secondary schools, Holata town, June 2020.



Source: Own survey, 2020

*** Multiple response questions most respondents gave more than one answer.*

Knowledge of Students on Abortion

The study also tried to assess one of the reproductive health component on abortion knowledge and respondents were asked what abortion means and majority of respondents 239 (64.9%) replies that they know what abortion mean and respondents were asked the definition of abortion and out of total respondents only 55 (14.9%) replied the correct definition of abortion which means the termination of pregnancy with less than 28 weeks from last normal menstrual cycle (LNMC); whereas majority of participants 184 (50%) of respondents did not reply correctly. With this regard, respondents were also asked level of knowledge on abortion and responded 38(10.3%) have adequate knowledge, 47(12.8%) inadequate knowledge, 86(23.3%) moderate knowledge, 68(18.5%) low knowledge and 123(33.4%) have no any knowledge on abortion at all.

Table 5: Distribution of respondents by the knowledge of Abortion of students attending their education at both Holata and Burqa Harbu secondary schools, Holata town, June 2020.

Variables(knowledge)	Category or attributes	Frequency	percentage
Know abortion mean (362)	Yes	239	64.9
	No	123	33.4
What does abortion mean (n=239)	Termination of pregnancy <20 weeks from LNMC	135	36.7
	Termination of pregnancy <24 weeks from LNMC	49	13.3
	Termination of pregnancy <28 weeks from LNMC	55	14.9
Level of knowledge related abortion (n=362)	Adequate knowledge	38	10.3
	Inadequate knowledge	47	12.8
	Moderate knowledge	86	23.3
	Low knowledge	68	18.5
	No knowledge	123	33.4
Ever used abortion service (n=239)	Yes	12	3.3
	No	227	61.6

Source: Own survey, 2020

Knowledge of Students on sexually transmitted infection (STI'S) and HIV/AIDS

Concerning to sexually transmitted infections of the respondents, more than half 275 (74.7%) out of 368 adolescents knew infection (diseases) that a person could acquire through sexual intercourse, where HIV 195 (53%) was reported by most of the respondents as the most known type of STI, followed by syphilis 49 (13.3%) and Gonorrhea 25 (6.8%). The main symptoms of these STIS identified by the respondents also include burning pain on urination 212 (57.6%), genital discharge 152 (41.3%), genital itching sensation 131(35.6%), genital ulcers/sores 103 (28%),lower abdominal pain 107 (29.1%) and swelling in the groin area 91 (24.7%).On the other hand, students were also asked possibility to prevent sexually transmitted infections and of the total respondents , 245 (66.6%) students responded as, there were mechanisms through which STIs could be avoided/prevented. Using condom was the major means to prevent oneself from acquiring such infections 271 (73.6%) followed by remaining faithful to partner 258 (70.1%), Abstaining from sexual intercourse 252(68.5%),avoiding common share of sharp materials 228 (61.9%) and practicing safe injection 182 (49.4%).

Out of the total respondents, 362 (98.4%) have heard about HIV/AIDS and 338 (91.9 %) have mentioned correctly that HIV is causative agent of AIDS. In the same line respondents were also asked major symptoms of HIV/AIDS and out of 362 respondents identified the major signs and symptoms of AIDS include becoming thin 277 (75.3%), weight loss 275 (74.8%), cough 183 (49.7%), fever 165 (44.9%), diarrhea 153 (41.6%), and the remaining respondents don't know the symptoms of HIV/AIDS account for 18 (4.9%) as stated in Table 6.

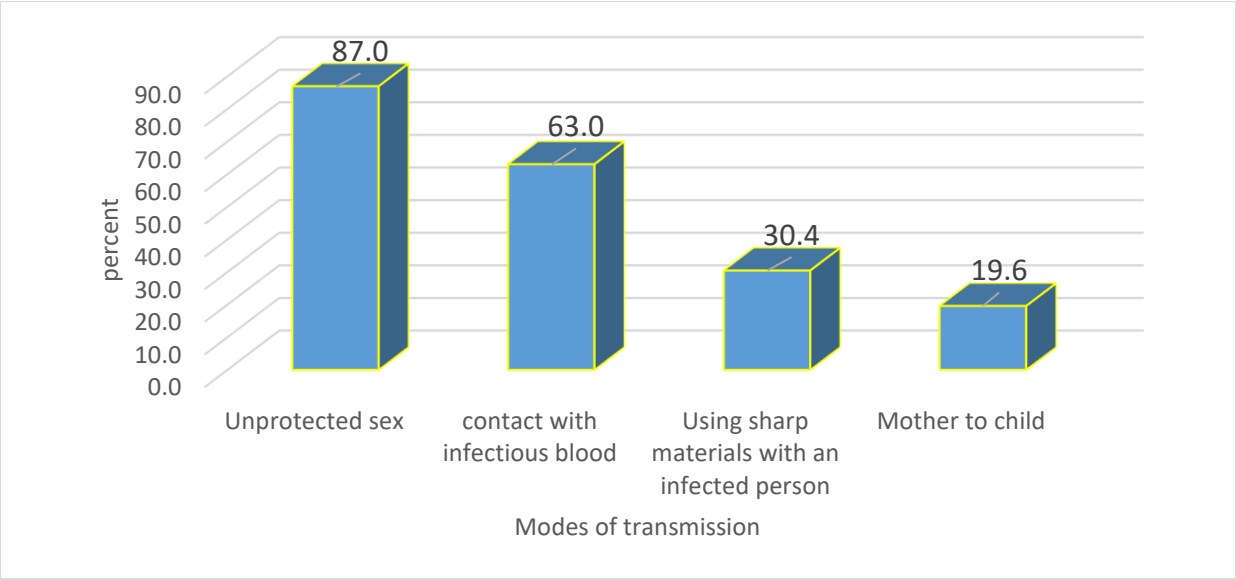
Table 6: Distribution of respondents by the knowledge of STI of students attending their education at both Holata and Burqa Harbu secondary schools, Holata town, June 2020.

Variable	Category or Attributes	Frequency	Percentage
Know about STIs (n=368)	Yes	275	74.7
	No	93	25.3
Knowledge on Types of STI (n=275)	Syphilis	49	13.3
	Gonorrhea	25	6.8
	Chancroid	6	1.6
	HIV/AIDS	195	53
main symptoms of STIS Genital discharge (n=275)	Yes	152	41.3
	No	123	33.4
Burning pain (n=275)	Yes	212	57.6
	No	63	17.1
Genital ulcers/sores (n=275)	Yes	103	28.0
	No	172	46.7
Genital itching sensation (n= 275)	Yes	131	35.6
	No	144	39.1
Lower abdominal pain (n=275)	Yes	107	29.1
	No	168	45.6
Swelling in groin area (n=275)	Yes	91	24.7
	No	184	50.0
Know any way to prevent STIS (n=275)	Yes	245	66.6
	No	30	8.1
What are ways you know to prevent STIS (n=275)	Abstaining from sex	252	68.5
	Faithful to one partner	258	70.1
	Using condom	271	73.6
	Practicing safe injection	182	49.4
	Avoiding common sharp instruments	228	61.9
Ever heard of HIV /AIDS (n=368)	Yes	362	98.4
	No	6	1.6
Know causative agent of AIDS (n=362)	Virus	338	91.9
	Bacteria	24	6.5
Major symptom of HIV/AIDS (n=362)	Fever	165	44.9
	Weight loss	275	74.8
	Diarrhea	153	41.6
	Cough	183	49.7
	Become thin	277	75.3
	I don’t know	18	4.9

Source: Own survey, 2020

Majority of the respondents frequently mentioned mode of STI and HIV/AIDS transmission as having unprotected sex by 320 (87%), while contact with infected blood was reported by 232 (63%) followed by through sharing sharp materials 112(30.4%) respondents and mother to child 72 (19.6%).

Figure 7: Distribution of respondents by the knowledge of modes of transmission of STIs and HIV/AIDS among students attending their education at both Holata and Burqa Harbu secondary schools, Holata town, June 2020.



Source: Own survey, 2020

4.2 Demographic and socio-economic Factors associated with RH Knowledge

Logistic regression was used to construct models. So, in order to understand the associated demographic and socio-economic factors related to knowledge of reproductive health, a logistic regression analysis was employed. In each model, the outcome variable (knowledge of RH) was regressed upon a primary 'exposure of interest'. The exposure variables were age, sex, parent education level, participants' parents' marital status, religion, ethnicity, participant's family size, respondent living arrangement, income of participants, parent occupation, respondent family current place residence and respondent current place of residence. Among the demographic factors sex ,age ,marital status of respondent parent and among socio economic factors mothers educational status, students ever attended school, participation in school RH club and respondent source of information about RH were found to have statistically significant ($p<0.05$) association

with knowledge on reproductive health. However, respondents' religion, ethnicity, family size, educational status of father, family income, living arrangement of respondents, current family place of residence ,students current residence ,having income and parents occupation did not have statistically significant($p>0.05$) association with reproductive health knowledge.

Binary logistic regression analysis was carried out and were resulted in mother's educational status and respondents having discussion about RH with parents were found to have significant association with adolescents' contraceptive method knowledge. Respondents, whose mother had bachelor degree were found to be 3.1 times more knowledgeable about contraceptive method than respondents with illiterate mothers [OR =3.085, 95% CI (1.573, 6.050)] and respondents that discussed about RH with their parents were found to be 1.589 times more knowledgeable about contraceptive method than respondents who didn't discuss about RH with their parents [OR=1.589, 95% CI (0.93, 2.695].

In the same line participant's mother educational status were found to have significant association with adolescent knowledge on pregnancy. Respondents whose educational status of their mother grade (1-8), were found to be 11.93 times more likely knowledgeable as compared to respondent whose their mother educational status was illiterate [OR=11.93, 95% CI (4.198,33.908)],respondents whose their mother educational status grade 9-10, were found to be 8.16 times more knowledgeable as compared to respondent whose their mother educational status was illiterate on pregnancy[OR=8.160 ,95% CI (2.909 ,22.889)] as well as respondents whose their mother educational status belongs to only read and write were found to be 6.8 times more knowledgeable than respondent whose their mother educational status was illiterate about pregnancy [OR=6.8 ,95% CI (2.679 ,17.258)].

On the other hand, participants who participated in RH clubs were 3.034 times more likely knowledgeable on Abortion than those who did not participated in school RH club [OR=3.034, 95% CI (1.920 ,4.793)]. Similarly, the study discovered that students who's their parents marital status was in union or living together were 2.061 times more likely knowledgeable about abortion than students those their family living alone or single [OR=2.061 95% CI (1.296 ,3.279)]. Adolescents whose their mothers education level grade 11-12 were found to be 3.875 times more likely knowledgeable [OR=3.875, 95% CI(1.625 ,9.242)], grade 9-10 were found to be 4.09 times more knowledgeable [OR=4.09 ,95% CI (1.726 ,9.693)],grade 1-8 were found to be 5.439 times

more likely knowledgeable [OR=5.439 ,95% CI (2.253 ,13.126)] and those whose their mothers education level only read and write were found to be 3.1 times more likely knowledgeable [OR=3.1, 95% CI (1.474 ,6.520)] about abortion than students whose their mother educational status were categorized as illiterate.

The study also tried to assess the associated demographic and socio economic factors with some concepts of reproductive health knowledge issues. Thus, male adolescents were found to be 1.467 times more likely knowledgeable than their female counterparts for RH [OR=1.467, 95% CI (1.303, 1.720)]. Adolescents whose age ranges from 17-19 years were about 3 times more likely knowledgeable about RH than whose age ranges from 15-16 years [OR=3.324 95% CI (1.972, 5.603)]. Reproductive health knowledge of participants were higher among students whose their family marital status were in union than their counter parts [OR=1.826 ,95% CI (1.199 ,2.781)] as well as respondents those who have ever attended school were found to be 1.308 times more likely knowledgeable than respondents didn't ever attended school[OR=1.308 ,95% CI (0.777 ,2.203)]. Similarly Participants who participated in RH clubs were 1.457 times more likely knowledgeable on reproductive health than those who did not participated in the school RH club [OR: 1.457, 95% CI (0.949 , 2.239)]. Students whose mothers had attended secondary (9-10) and grade 11-12, and above schools namely diploma or TVET, were 1.333[OR = 1.333; 95% CI (0.622, 2.858], 1.083 [OR=1.083, 95% CI (0.437, 2.684)] and 1.722 [OR = 1.722; 95% CI (0.823, 3.603)] times more likely to be knowledgeable than students whose mothers could not able to read and write or illiterate respectively. Another socio-economic factor that influence knowledge of adolescent reproductive health was source information, which is statistically significance at $p<0.05$. participants those got information about RH issues from health institution were found to be 4.778 times more likely knowledgeable than respondents didn't received information on reproductive health issues [OR=4.778 ,95% CI (1.382 , 16.577)].

Table 7: Results of binary logistic regression analysis on knowledge of contraceptive method by selected associated demographic and socio economic characteristics among adolescent attending their secondary school at both Holata and Burqa Harbu secondary schools, Holata town, June 2020.

Associated factors(characteristics)	Contraceptive method knowledge		Odd ratio (OR), 95% CI	P-value
Mothers education	Yes	No		
1-8	37	6	2.591 (1.126 ,5.960)	0.01
Bachelor degree	67	17	3.885 (1.573 ,6.050)	0.001
Ever discussed about RH with parents				
Yes	43	30	1.589 (0.93 ,2.695)	0.03
No	198	97	1.00	

Table 8: Results of binary logistic regression analysis on knowledge of pregnancy by selected associated demographic and socio economic characteristics among adolescent attending their secondary school at both Holata and Burqa Harbu secondary schools, Holata town, June 2020.

Associated factors(characteristics	Knowledge on pregnancy		Odd ratio (OR), 95% CI	P-value
	Yes	No		
Mother education status				
No education	60	36	1.00	
Read and write	19	20	6.8 (2.679 ,17.258)	0.000
Grade 1-8	25	18	11.93 (4.198 ,33.904)	0.000
Grade 9-10	36	6	8.160 (2.909 ,22.889)	0.000
Grade 11-12	25	19	1.889 (0.568 ,6.281)	0.300

Source: Own survey, 2020

Table 9: Results of binary logistic regression analysis on knowledge of Abortion by selected associated demographic and socio economic characteristics among adolescent attending their secondary school at both Holata and Burqa Harbu secondary schools, Holata town, June 2020.

Associated factors(characteristics)	Knowledge on Abortion		Odd ratio (OR) 95% CI	P-value (P<0.05)
	Yes	No		
Parents' marital status				
In union	131	81	2.061 (1.296 ,3.279)	0.002
Single(live alone)	120	36	1	
Mothers' educational status				
No education	60	36	1	-
Read and write	19	20	3.1 (1.474 ,6.520)	0.003
Grade 1-8	24	19	5.439 (2.253 ,13.126)	0.000
Grade 9-10	24	18	4.09 (1.726 ,9.693)	0.001
Grade 11-12	25	22	3.875 (1.625 ,9.242)	0.002
Fathers' educational status				
No education	36	12	1	
Read and write	36	26	2.648 (1.174 ,5.974)	0.019
Grade 9-10	85	42	11.611 (3.796 ,35.514)	0.000

Source: Own survey, 2020

Table 10: Results of Binary logistic regression analysis of some basic concepts of RH knowledge by selected demographic & socio-economic characteristics among adolescents attending their secondary school at both Holata and Burqa Harbu secondary schools, Holata town, June 2020.

Associated factors(characteristics)	Do you know what RH means		Odd ratio (OR) 95% CI	P-value (P<0.05)
	Yes	**No**		
Sex				
Male	140	94	1.467 (1.303 ,1.720)	0.042
Female	55	79	1	
Age				
15-16	68	24	1	
17-19	127	149	3.324 (1.972 ,5.603)	0.000
Parents' Marital status				
In union	99	113	1.826 (1.199 ,2.781)	0.045
Single	96	60	1	
Have you attended school				
Yes	153	143	1.308 (0.777 ,2.203)	0.031
No	42	30	1	
Mothers' educational status			1	
Illiterate	60	36	1.333(0.622 ,2.858)	
Grade 9-10	24	18	1.083(0.437 ,2.684)	
Grade 11-12	25	17	1.722(0.823 ,3.603)	
Bachelor Degree	62	12		
Participated in school RH club				
Yes	61	69	1.457 (0.949 ,2.239)	0.045
No	134	104	1	
Source of RH information				
Health institution	61	12	4.778(1.382 ,16.517)	0.013
Peers	12	19	1.583(0.413 ,6.065)	0.000

Source: Own survey, 2020

CHAPTER FIVE

5. DISCUSSION

This study intended to assess the knowledge of reproductive health and associated demographic and socio-economic factors including contraception, STIs/HIV/AIDS, unwanted pregnancy and abortion among adolescent students attending secondary school in Holata town. It also tried to identify some demographic and socio-economic factors associated with the knowledge of adolescent reproductive health. It is found out that, of the total 368 respondents, 193 (53%) of the respondents were well-informed about reproductive health and about 173 (47%) respondents answered they did not know about some concepts of reproductive health issues. This finding is lower than the study done in East Gojjam zone, Amhara regional state, northwest Ethiopia, 2012 in which 67% of the adolescents were knowledgeable about reproductive health issues [85].

Participants were also given multiple choices to define what is meant by RH and answered what RH means as family planning 87 (24%), access to health information and services 95 (26.1%), right to choose when and with whom to have sexual intercourse 91 (25%), STI'S/HIV/AIDS 89 (24.4%) and maternal and child health 85 (23.3%).

These findings are found to be lower in terms of knowledge about RH, when compared to a base line survey on ARH among adolescents in government high schools of Addis Ababa revealed that, they stated RH is family planning 70.0%, access to health information and services 53.0%, the right to choose when and with whom to have sex 42.0%, STDs /HIV/AIDS issues 42.0% and safe mother hood 32.0% [50].

Furthermore, this study also found that only 258 (70.1%) of the respondents have received information on RH, mostly from health institution 55 (15.1%) followed by school teachers 51 (14%), those mentioned mass media 48 (13.2%), received from peers/friends 20(5.5%), from RH in school club 12 (3.3%) and while nearly 7(1.9%) mentioned religion leaders as their source of information. Similarly, 31.5% of the respondents claimed to have preference and be comfortable to get information on reproductive health from school teachers followed by health professionals 29.6%.

This finding are again found to be lower when compared with the preference of adolescents in high schools in Addis Ababa in their chronological order of first choices.

This implies that school teachers and health professionals' need to be as primary source of information to improve the knowledge of adolescents on reproductive health [50].

Knowledge of adolescent about contraception

In this study, the mean knowledge for contraceptive method was found to be knowledgeable 17.3 % while majority of respondent found to be not knowledgeable about contraceptive method accounting for 48.2%. On other hand adolescents who have used modern contraceptives condom 135 (36.7%) was the most commonly known followed by pills 122 (33.2%), injectable 26 (7.1%), emergency contraception 19 (5.2%) and IUCD/loop 13 (3.5%). This finding is much lower when compared to one previous study conducted among adolescents of Addis Ababa ,2016 and reported that pills 577 (83.4%) followed by condom 561 (81.2%), injectable 463 (67.5%), IUCD 367 (53%) [30].

In the same line the study also tried to assess the demographic and socio-economic factors associated with knowledge of adolescent about contraceptive method, thus Respondents mother those who have bachelor degree were found to be 3.1 times more knowledgeable about contraceptive method than illiterate mothers [OR =3.085, 95% CI (1.573, 6.050)] and respondents those discussed about RH with their parents were found to be 1.589 times more knowledgeable about contraceptive method than respondents who didn't discussed about RH with their parents [OR=1.589, 95% CI (0.93, 2.695].

Knowledge of adolescent about Abortion

The study revealed that 239 (64.9%) of the respondents replied that they know what abortion mean and respondents were asked the definition of abortion and out of total respondents only 55 (14.9%) replied the correct definition of abortion which means the termination of pregnancy with less than 28 weeks from last normal menstrual cycle (LNMC); whereas majority of participants 184 (50%) of respondents did not reply correctly. When the finding Compared to the study conducted in East Gojjam zone, Amhara, Ethiopia, cross sectional study,2015 the majority of respondents (82.8%) replied the correct definition of abortion which means the termination of pregnancy with less than 28 weeks; whereas 17.2% of respondents did not reply correctly or said 'I do not know' [86].

On the other hand, from the result of logistic regression, knowledge of adolescent on abortion was significantly associated with students parent marital status, students mother educational status and

students father educational status in which adolescents parent live in union where two times more knowledgeable than their counterparts and knowledge about abortion was three times ,five times ,four times ,three times as high among students their mother educational status were read and write, primary school grade (1-8),secondary school grade (9-10) ,preparatory school grade (11-12) respectively, higher than among students mother with no education(illiterate).

On the other hand, students in which their fathers' education status is secondary school (9-12) were eleven times more likely knowledgeable than illiterate father.

Knowledge of adolescent about (STI'S) and HIV/AIDS

This study found out that more than half 275 (74.7%) out of 368 adolescents knew infection (diseases) that a person could acquire through sexual intercourse, where HIV 195 (53%) was reported by most of the respondents as the most known type of STI, followed by syphilis 49 (13.3%) and Gonorrhea 25 (6.8%). As far as the symptoms of these infection are pain on urination, genital discharge, genital itching sensation genital ulcers, lower abdominal pain and swelling in groin area were found to be the main symptoms stated. As well as, majority of the participants frequently mentioned mode of STI and HIV/AIDS transmission was having unprotected sex by 320 (87%).Other studies carried out in Addis Ababa, have also shown nearly the same proportion of understanding of these signs and symptoms of STIs [87].

Considering the knowledge of students about HIV/AIDS, majority of the students 362 (98.4%) have heard about HIV/AIDS and 338 (91.8 %) have mentioned correctly that HIV is the causative agent of AIDS, which was considerably higher than the finding of a study done at Iran which showed that nearly all (95%) of the adolescent respondents had heard about STIs and HIV/AIDS [88]. Similarly, the finding of this study is lower when this finding compared with a study conducted in Ghana which showed that all the respondent 323 (99.7%) had heard about HIV/AIDS, 177 (54.6%) knew the causative agent of AIDS and majority of the participants 312 (96.3%) were able to correctly identify one or more modes of HIV transmission [89].

Majority of the study subjects 245 (66.6%) know the possible ways of STIs/HIV/AIDS prevention, which include using condom was the major means to prevent oneself from acquiring such infections 271 (73.6%) followed by remaining faithful to partner 258 (70.1%), Abstaining from sexual intercourse 252 (68.5%), avoiding common share of sharp materials 228 (61.9%) and

practicing safe injection 182 (49.4%). Different studies have also shown that there is an encouraging awareness of STIs and HIV/AIDS among adolescents in the country. For example the study conducted in Addis Ababa revealed that five hundred eighty seven (84.9%) adolescents stated using condom as method of prevention of STIs/AIDS, while abstinence was mentioned by 504 (73%) of the respondents followed by being faithful to one's partner 477(69%) [30]. On the other hand the study conducted in Nekemte town shows that (95.9%) know the possible ways of STIs/HIV/AIDS prevention, which include abstinence (97.8%), faithfulness (94.5%), avoiding common share of sharp instruments (94.2%), and use of condom (86.2%) [29].

The difference in knowledge of students about the knowledge of RH may be attributable to time gabs between the different studies and expansion of awareness creating programs and increased coverage of technologies.

5.1 Strengths of the study

This study has tried to assess the level of knowledge of reproductive health together with associated demographic and socio-economic factors among adolescent students in Holata secondary school and it has identified the level of their knowledge on RH especially knowledge on contraceptive, abortion, pregnancy, STIs and HIV /AIDs. Similarly as it was community-based study, the representative samples were included in the study by moving from house to house with insignificant non-response rate. The questionnaire was adopted from standard previous studies like Illustrative Questionnaire for Interview Surveys with Young People questionnaire and other relevant studies and on similar settings and necessary modifications were made to minimize the difficulty during data collection.

CHAPTER SIX

6. CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion:

Generally, this study revealed that reproductive health knowledge were low among adolescents in Holata secondary school as shown from the findings. As such, 47% of the respondent didn't know what RH means and only few students knew correctly the components of RH and this could lead to the development of risky sexual and reproductive behavior. On the other hand parent-adolescent communication on sexual matters was very poor which is accounted for only 19.8%. More than half of the students 56.5% have experience of discussion on reproductive issue with friends. Health institution, school teachers and mass media were found to be the primary sources of information for adolescent about reproductive health. Majority of the respondents 65.5% knew at least one type of contraceptive method but overall knowledge for modern contraceptive method were found to be very low. Almost more than half 74.7% of the respondents were knew at least one sexually transmitted infection (STI) that person can acquire through sexual intercourse, and HIV was reported by the respondents as the most known type of STI, followed by syphilis. Of the respondents almost all of the respondents 98.4% have heard about HIV/AIDS and 91.9% of the respondent mentioned that the correct causative agent of AIDS. Majority of the respondents also identified the main symptoms of HIV/AIDS, mode of transmission and know the mechanism through which HIV/AIDS were prevented. Demographic factors like sex, age, marital status of parents and socio-economic factors like the status of mothers' education, participation in school RH club, students ever attended school and source of information about RH are influencing the knowledge of RH of adolescents in the study area.

6.2 Recommendations

Knowledge of reproductive health is low as shown from the findings, most of the respondent didn't know RH components, reproductive health problems and didn't mention prevention methods. Therefore, awareness creation through giving health education and increasing mindfulness for students on all reproductive health components, problems and prevention method rather than just focusing on only HIV/AIDS. Since health professionals and school teachers were found to be the major source of RH information for students, they should be given frequent seminars and workshops concerning RH, so that they may provide the required information to adolescents. Education bureau collaboration especially with health bureaus and youth and women bureaus should provide accessible, friendly and affordable RH education service to adolescents on contraception, pregnancy, STIs, and abortion knowledge which were found to be very poor among adolescents. Additionally, schools should establish different clubs that promote sexual and reproductive health issues and designing means of increasing parents-young people communication on sexuality from early adolescence to overcome RH problems. Providing counseling and guidance services by allocating trained person is of a paramount importance and need to be given due attention form the schools and concerned governmental bodies as well. Adolescents should seek for information on RH as much as they can be in a position of avoiding RH problems and a comprehensive adolescents' sexuality and reproductive health education is a crucial weapon in prevention of problems using school settings. Encourage regular mini-media programs on RH issues to reach more audience and promote active participation of students in activities such as dramas, poetry, and song. Encourage adolescent by involving broad range of actors: parents, teachers, families, community leaders who have responsibility for educating young people and provide information about RH establishing monitoring and evaluation system to measure implementation of national RH policies and programs.

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Appendix-1:Self-administered Questionnaire.

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The aim of this questionnaire is to gather information on adolescent level of knowledge of reproductive health issues among Holata town high school students. In fact, i should make it clear that the questionnaire explores a lot of very personal matters but at the same time i should note that the information obtained from you through this questionnaire is very essential to the successful completion of the study. Therefore, i request you to kindly fill this questionnaire as accurately and carefully as possible.

The information you provide is strictly confidential, so to assure this you are not expected to write your name in any of the questionnaire pages, your responses will not be given to anyone else and no reports of the study will ever identify you and if a report of results is published, only information about the total group will appear. The information you provide will be useful in improving reproductive health knowledge for adolescents in Ethiopia. The questionnaire/interview will take about 20-30 minutes to fill. If you have any questions you may contact Dejene Diriba on **0947457437** or using the email address: **jirraajira123456@ gmail.com**. Since interview is voluntary, only volunteer adolescents will participate. To indicate your response please encircle or put "√" mark or write your answer on the space provided for the questions that require written responses.

Are you willing to participate in this study? Yes [ ] No [ ] ⟶ please stop here.

Organization of the Questionnaire

This questionnaire has four parts. Part one consists of questions related to area identification. The second part deals with demographic characteristics. The third part deals with socio-economic characteristics. The fourth and the last part deal with the Knowledge on important concepts of reproductive health including that of STIs and HIV *I* AIDS.

Thank you for your cooperation.

Participant's signature_____ Date_____

Data collector's signature_____ Date _____

Section one: Area Identification

001. Questionnaire identification number: ——————

002. Name of Town: Holata

003. Name of high school:———————————————

004. Grade and section: _____

Section Two: Demographic characteristics			
S.No	Questions.	Alternative choices for response.	Code
01	Sex of respondent?	1. Male 2. Female	
02	What is your age in Completed years?	_____Years.	
03	What is your religion?	1. orthodox 2. Muslim 3. catholic 4. protestant 5.Waaqeffata 6. others,(specify-------)	
04	What is your ethnicity?	1. Oromo 2. Amhara 3. Gurage 4. Tigre 5.Silte 6. Others, (specify-----)	

05	Marital status of your parents	1.In union 2.Single	
06	Family size (without mother and father)	_____ (in numbers)	
07	Have you ever attended School?	1.yes 2.No ⟶ **Skip to Q.08**	

Section Three: Socio-economic characteristics			
08	Respondent/Students Grade?	1.Grade 9 2.Grade 10 3.Grade 11 4.Grade 12	
09	With whom do you live now?	1. With Father & mother 2. With Father only 3. With Mother only 4. With sister or brother 5. With Relatives 6. With Friends or peers. 7. With Boy/ Girl friend 8. Alone (hiring dormitory) 9. Others, (specify) ----------	
10	Do you have your own income?	1. Yes 2. No ⟶ **Skip to Q.12**	
11	If yes, **Q.10** What is your monthly Income?	_____ In Birr.	

12	What is the educational Status of your mother?	1. Illiterate 2. Read and write 3. Grade 1 -8 4. Grade 9 -10 5. Grade 11 -12 6. Diploma or Tvet (level I-IV) 7.Bachelor degree, Masters & above	
13	What is your mother's occupation?	1. Daily laborer 2. Government employee 3. Farmer 4.House Wife 5. Employed in private sector 6. private business Owner 7. NGO employee 8. Maid servant 9. Others, (specify) ----------	
14	What is the educational status of your father?	1. Illiterate 2. Read and write 3. Grade 1 -8 4. Grade 9 -10 5. Grade 11 -12 6. Diploma or Tvet (level I-IV) 7.Bachelor degree 8.Masters & above	

15	What is your father's occupation?	1. Daily laborer 2. Government employee 3. Farmer 4. Employed in private sector 5.private business Owner 6. NGO employee 7. Others, (specify) ----------	
16	Family income per/month(Ethiopian birr)	1. _____ 2. I don't know	
17	Current family place of residence	1.Urban 2.Rural 3. Semi-Urban	
18	Students' current residence	1. Urban with family 2. Urban house rent 3. Coming from rural daily 4. Others, (specify) ----------	

Section Four: Knowledge on some important concepts of reproductive health.

19	Do you know what RH means?	1 .Yes 2 .No ⟶ **Skip to Q .28**	
20	If yes, **Q.19** What do you think is RH about?	Yes No 1. Family planning 1 2	

	(*Multiple answers possible*)	2. Access to health information And services. 1 2 3. The right to choose when and with whom to have sex. 1 2 4. STIs /HIV/AIDS. 1 2 5. Maternal &Child health 1 2 6. Others, (specify)--------	
21	Have you ever received information on RH?	1 .Yes 2 .No ⟶ **Skip to Q. 23**	
22	If yes, **Q.21** from where did you mostly get the information on RH?	1. Parents 2. Health institutions 3. Religious leaders 4. Peers 5. Mass media (radio, TV, magazine etc.…) 6. School teachers 7. Books 8. RH club in school. 9. Others, (specify) ----------	
23	Where do you feel comfortable to get information on RH?	1. Parents 2. Health Institution 3. Religions leaders 4. Peers 5. School teachers 6. Mass Media (radio, TV,magazine) 7.Books 8.RH clubs in school	

		8. Others, (specify) --------	
24	Have you ever discussed about RH with your parents?	1 .Yes 2 .No	
25	Have you ever discussed about RH with your Friends?	1 .Yes 2 .No	
26	Have you ever participated in School RH club?	1 .Yes 2 .No	
27	Have you ever used RH services?	1 .Yes 2 .No	
28	Do you know what pregnancy means?	1 .Yes 2 .No ⟶ **Skip to Q. 35**	
29	If yes, **Q.28** at what age can a woman get pregnant?	1. Less than 10 years old 2. Since the onset of puberty till menopause 3. After puberty 4. I don't know	
30	When do you think is more likely for a woman to get pregnant if she has sexual relations? (*Multiple answers possible*)	**Yes** **No** 1 .A week before her menstrual cycle 1 2 2. During her menstrual cycle. 1 2 3. Right after menstrual cycle ended. 1 2 4 .In the middle of her menstrual cycle. 1 2 5 .The same throughout the menstrual cycle. 1 2 6. Others, (specify)------- 7. I do not know	
31	A girl or woman can get Pregnant after having one sexual intercourse?	1. Agree 2. Disagree 3 .She may get or may not get pregnant.	
32	Have you ever heard about unwanted pregnancy?	1.Yes 2.No	
33	Do you know any ways to avoid unwanted pregnancy?	1. Yes 2. No ⟶ **skip to Q 35**	

34	If yes, **Q.33** what are the ways to avoid unwanted pregnancy? (*Multiple answers possible*)	**Yes** **No** 1. Oral contraceptive 1 2 2. Injectable. 1 2 3. Using condoms 1 2 4. Norplant 1 2 5. IUDS. 1 2 6. Sterilization 1 2 7. Abstinence 1 2 8. Withdrawal 1 2 9. Safe period 1 2 10. Washing the genital after intercourse. 1 2 11. Others, (specify)----------	
35	Do you know what Abortion means?	1. Yes 2. No ⟶ **skip to Q .37**	
36	If yes, **Q.35** what does abortion mean?	1.Termination of pregnancy < 20 weeks from last normal menstrual cycle (LNMP) 2.Termination of pregnancy < 24 weeks LNMP 3.Termination of pregnancy < 28 weeks LNMP 4. I don't know	
37	Knowledge related to abortion?	1. Adequate knowledge 2.Inadequate knowledge 3.Moderate knowledge 4.low knowledge 5.No knowledge	
38	Have you ever used abortion service?	1. Yes 2. No	

39	Do you know about contraceptive method for Adolescent?	1. Yes 2. No ⟶ **skip to Q. 41**	
40	If yes, **Q.39** Which contraceptive methods do you know? (*Multiple answers possible*)	1. Pills 2. Emergency contraception 3. Condom 4. Injectable 5. Implant/Norplant 6. IUCD/Loop 7. Female/male sterilization 8. Periodic abstinence 9.withdrawals 10. Other, specify: _____	
41	Have you ever had a girl/boyfriend?	1.Yes 2.No ⟶ **skip to Q .43**	
42	If yes, **Q.41** have you ever had sexual intercourse?	1.Yes 2.No ⟶ **skip to Q. 44**	
43	If yes, **Q.42** Do you know about sexually transmitted infections?	1. Yes 2. No ⟶ **skip to Q .45**	
44	If yes, **Q.43** which diseases do you know about? (*Multiple answers possible*)	1. Syphilis 2. Gonorrhea 3. Chancroid 4. HIV/AIDS 5.Others ,specify--------	

45	What sign and symptoms of sexually transmitted infections do you know? (*Multiple answers possible*)	**Yes** **No** 1.Genital discharge 1 2 2. Burning pain. on urination 1 2 3. Genital ulcers /sores. 1 2 4. Genital itching sensation. 1 2 5. Lower abdominal pain 1 2 6. Swelling in groin area 1 2 7.Others ,Specify--------	
46	What modes of transmission of sexually transmitted infections do you know? (*Multiple answers possible*)	1. Contact with infectious blood 2. Mother to child 3. Unprotected sex 4. Using sharp materials with an infected person 5. others, Specify--------	
47	Is it possible to prevent STIs?	1. Yes 2. No ⟶ **skip to Q.49**	
48	If yes, **Q.47** what are the ways to Prevent STI? (*Multiple answers possible*)	**Yes** **No** 1.Abstaining from sex 1 2 2. Becoming faithful to one's partner 1 2 3. Using a condom 1 2 4.Practicing safe injections 1 2 5 .Avoiding common share of sharp instruments 1 2 6. Others, (specify)----------	
49	Have you ever heard of HIV/AIDS?	1. Yes 2. No ⟶ **skip to Q.51**	

50	If yes, **Q.49** what is the causative agent of AIDS?	1. Bacteria 2. Virus 3. Fungus 4. Parasite 5. Others, (specify) ---------	
51	Through which of the following ways could HIV/AIDS be transmitted? (*Multiple answers possible*)	**Yes** **No** 1. Unsafe sexual intercourse 1 2 2. Blood transfusion 1 2 3. Mother to child 1 2 4. Common use of sharp materials 1 2 5.Others (specify) ---------- 6. Don't know	
52	Which of the following are The major sign &symptoms of AIDS? (*Multiple answers possible*)	Yes No 1. Fever 1 2 2.Weight loss 1 2 3.Diarrhoea 1 2 4. Cough 1 2 5. Becoming thin 1 2 6. Others, (specify)---------- 7.Do not know	

Thank you for your cooperation!!

Appendix-2: Gaafannoo Afaan oromoo Gaaffii ofiin guuttamu

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Kaayyoon gaafannoo kana odeeffannoo gaaffiilee dandeettii/beekumsa fayyaa qaama sirna wal-hormaata fi wantoota fayyaa qaama sirna wal-hormaata waliin wal qabatan dargaggoota mana baruumsa magaala hoolota sadarkaa lamaffaa jiran gaafachuuf kan qopha'eedha. Gaaffileen qopha'an waa'ee nama dhuunfa waliin wal qabatu waan baay'ee yaa ibsuyyuu malee wanti hubatamu qabu odeeffannoon gaafannoo kana irraa argamu milka'ina qorannoo kanaaf baayyee murteessadha.kanaafuu amma danda'ama ta'etti gaafannoo kana qixa sirrii ta'ee fi of eeggannoo akka guuttan isin gaafadha.

Odeeffannoo (Yaadni) isin nuuf laattan beekumsa/hubannoo fayyaa Qaama sirna wal-hormaata guutuu biyyaatti argamu foyyeesuuf bu'uura ta'a jennee amanna.Haa ta'u iyyuu malee deebiin isin gaaffiilee keenyaaf laattan hundumtuu iccitii dhaan kan eggamu waan ta'eef yaadda'uun isin irraa hin jiru, kanaaf maqaa keessan fuula gaafannoo kamirrattu barreessun sinirraa hin eeggamu. Raawwiin qorannoo kana yoo ni maxanfama illee ta'e maqaa nama tokkon osoo hin taane yaada hirmaatoota hundaa walitti qabudhaan ta'a. Kana waan ta'eef yeroo murta'ee waliin wajjin fudhannee (yoo baa'yatee daqiiqaa 20-30) qorannoo kana irratti akka hirmaatan kabajaan isin gaafanna.gaaffii kamiyyuu gaafannoo waliin kan wal qabatu yoo qabattan qorataa waliin karaa bilbila *0947457437* yookin kara toora imeelii isaa:*jirraajira123456@gmail.com* qunnamu ni dandeessu.

Gaaffichi **fedhii** irratti kan hundaa'e waan ta'eef ,**dargaggoota fedhii qaban qofatu** irratti hirmaata.Waan ta'eefis deebii keessan itti maruun yookin mallattoo "√" kaa'uun yookin iddoo gaaffichi deebii barreessi qabutti deebii keessan iddoo kennameratti barreessun gaaffi gaafatamtaniif deebii kennitu.

Qorannicha irratti hirmaachuuf fedhii qabdaa? Eeyyeen [ ] Lakkii [ ] ⟶ Asumatti dhaabi.

Gurmaa'insa Gaafannoo

Gaafannoon kun kutaa afur(4) qaba.kutaa **1ffaan** gaaffilee iddoo addan baasan waliin wal qabata.kutaa **2ffaan** amaloota ummata waliin wal qabata.kutaa **3ffaan** waa'ee amaloota hawas-dinagdee waliin wal qabata.kutaa **4ffaan** fi inni xumuraa yaad –rime(concepts) murteessoo ta'an wantoota beekumsa fayyaa qaama sirna wal-hormaata waliin wal qabatan kan akka dhukkuboota wal qunnamtii saalan daddarbanii (STI's) fi dhukkuba HIV/AIDS waliin wal qabataniidha.

Hirmannaa kessaniif baay'ee galatoomaa.

Mallattoo hirmaataa ----------Guyyaa----------

Mallattoo Ragaa funaana----------Guyyaa----------

Kutaa tokkooffaa: koodii adda iddoon qorannoo adda itti baafaamu

001: Lakkoofsa gaafannoo: _____

002. Maqaa Magaalaa: Hoolota

003: Maqaa Mana baruumsaa: _____

004: Kutaa fi seekshinii: _____

Kutaa 2ffaa: Haala Maalummaa ummata(demographic) ibsu			
Lakk	Gaaffiilee	Filmaata addaa addaa deebii ta'uudanda'an	Koodii
01	Saala	1. Dhiira 2. Dubartii	
02	Umurii (Lakkoofsa guutuun)	Waggaa----------	
03	Amantii	1.Ortodoksii 2.Musilima 3.Katoolikii 4.Protestantii 5.Waaqeffataa 6. Kan biroo, (ibsi….)	
04	Sabummaa	1.Oromoo 2.Amaaraa 3.Guraagee 4.Tigree 5.Silxee 6. Kan biroo (ibsi…)	
05	Haallii gaa'ela maatii kee maal fakkata?	1.waliin jiraatu 2.kophaa kophaa jiraatu	
06	Baay'ina maatii keessanii meeqa (haadha fi abba osoo hin dabalatin)	----------(lakkoofsan)	
07	Yeroo hunda mana baruumsa deemte baruumsa kee ni hordofta?	1.Eeyyeen 2.Lakkii	
Kutaa 3ffaa:Haala hawaas-dinagdee(socio-economic characteristics)			
08	Kutaa meeqaffaa barachaa jirta amma?	1.kutaa 9ffaa 2.Kutaa 10ffaa 3.Kutaa 11ffaa 4.kutaa 12ffaa	

09	Yeroo ammaatti eenyuun wajjiin jiraatta?	1.Haadha fi Abbaa koo waliin 2.abbaa koo qofa waliin 3.Haadha koo qofa waliin 4.Obboleessa/Obboleetii koo waliin 5.Fira koo waliin 6.Hiriyaa koo waliin 7.jaalallee koo waliin 8.Kophaa koon jiraacha jira 9. Kan biroo waliin (ibsi…)	
10	Galii dhuunfaa ni qabdaa?	1.Eeyyee 2.lakkii ➟ Gaaffii 12 tti darbi	
11	Yoo deebiin kee "eeyyee" ta'e (**G.10**) galiin kee ji'a meeqaa?(Lakkoofsaan)	Qarshii----------	
12	Haalli sadarkaa barumsaa harmee kee maal fakkaata?	1.kan hin barannee 2.Dubbisuu fi barreessuu danda'a 3.kutaa 1-8 4.Kutaa 9-10 5.kutaa 11-12 6.Dippilooma ykn Tvet 7.Digrii jalqaba,mastersii fi sana ol	
13	Haati kee maal hojjetti?	1.Hojjattuu humna guyyaa 2.Hojjattuu mootummaa 3.Hojii qonnaa 4.haadha warraa 5.hojjattuu seektara dhuunfaa 6.daldaala dhuunfaa ishee 7.Hojjattuu dhaabbata miti mootumma(NGO) 8.Hojjattuu mana namaa dhuunfaa 9. kan biro (ibsi…)	
14	Haalli sadarkaa barumsaa abbaa kee maal fakkaata?	1.kan hin barannee 2.Dubbisuu fi barreessuu danda'a 3.kutaa 1-8 4.Kutaa 9-10 5.kutaa 11-12 6.Dippilooma ykn Tvet 7.Digrii jalqaba,mastersii fi sana ol	
15	Abbaan kee maal hojjeta?	1.Hojjataa humna guyyaa 2.Hojjataa mootummaa 3.hojii qonnaa 4.hojjataa seektara dhuunfaa 5.daldaala dhuunfaa isaa 6.Hojjattuu dhaabbata miti mootumma(NGO) 7. kan biroo (ibsi…)	

16	Galii maatii……ji'aan (qarshiiItiyoophiyaatii)	1.---------- 2.I don't know	
17	Yeroo amma **maatiin** kee eessa jiraatu?	1.Magaala 2.Baadiyyaa 3.wal-keessoo(Magaalaa fi baadiyya)	
18	Ati yeroo amma eessa jiraatta?	1.Maatiin waliin magaala 2.Magaala mana kiraa keessa 3.baadiyyaa irraa guyyaa guyyaan deddebi'ee 4. Kan biro (ibsi…)	
Kutaa 4ffaa: Beekumsa waa'ee Fayyaa qaama hormaataa			
19	Fayyaa Qaama sirna wal-hormaataa jechuun maal akka ta'e beektaa?	1. Eeyyee 2. Lakkii Hin beeku ⟶ **(G. 28) tti darbi**	
20	Yoo deebiin kee"Eeyyee" ta'e (**G.19**) fayyaa Qaama sirna wal- hormaataa jechuun maalii?	**Eeyyeen (1) Lakkii (2)** 1. Karoora maatii jechuu dha 1 2 2. Odeeffannoo fi tajaajila fayyaa argachuu jechuu dha 1 2 3. Mirga filanno yoom fi eenyuun wajjin walquunamtii Qaama saalaa raawwachuun danda'amu jechuu dha 1 2 4. Dhukkuboota walquunamitii saalaan namatti darban kan akka HIV/Eedsii dabalatee jechuu dha. 1 2 5. Fayyaa haadhaa fi ijoollee jeechuu dha 1 2 6. Kan biroo (ibsi…) _____	
21	Odeeffannoo waa'ee fayyaa qaama Sirna wal-hormaataa irratti argattee beektaa?	1.Eeyyeen 2.Lakkii⟶**(G.23)** tti darbi	
22	Yoo deebiin kee "Eeyyee" ta'e (**G.21**) odeeffannoo isaa eessaa argattee?	1.Maatii koo irraa 2.Buufata fayyaa 3.Abbootii amantaa irraa 4.Hiriyaa irraa 5.odeeffannoo sab-qunnamtii irraa(radiyoo,Tv,Gaazexaa fi k.k.f) 6.Barsiistoota m/b irraa 7.Kitaaba irraa 8.gumii fayyaa Qaama wal hormaata M/B irraa 9. Kan biroo (ibsi….)	

23	Odeeffannoo waa'ee fayyaa Qaama sirna wal-hormaata eessaa osoo dhageesse (argatte) sitti tola?	1.maatii koo irraa 2.Buufata fayyaa irraa 3.Abbootii amantaa irraa 4.hiriyaa irraa 5.Barsiistota M/B kootirraa 6.sab-qunnamtii(Radio,Tv,Gaazexa fi k.k.f 7.kitaabota adda addaa irraa 8.Gumii fayyaa Qaama hormaata mana baruumsa irraa 9. kan biroo (ibsi….)	
24	Waa'ee fayyaa Qaama sirna wal-hormaata maatii kee waliin mari'attee beektaa?	1.Eeyyeen 2.Lakkii	
25	Waa'ee fayyaa sirna wal hormaata hiriyaa (kan dubara/dhiira) kee waliin mari'attee beektaa?	1.Eeyyeen 2.Lakkii	
26	Gumii waa'ee fayyaa sirna wal hormaata M/B keessa jiruu irraatti ni hirmaatta?	1.Eeyyeen 2.Lakkii	
27	Tajaajila fayyaa sirna wal hormaata fayyadamtee beekta?	1.Eeyyeen 2.Lakkii	
28	Ulfaa'uu (ulfa) jechuun maal jechuu akka ta'e beekta?	1.Eeyyeen 2. Lakkii⟹**(G.35)** tti darbi	
29	Yoo deebiin kee"Eeyyee" ta'e (**G.28),** dubartootni waggaa meeqatti ulfa'uu danda'u?	1.Waggaa 10 gaditti 2.erga marsaan laguu itti dhufe irraa jalqabe amma marsan laguu dhabatutti 3.marsaa laguu erga argiten booda 4.Ani hin beeku	
30	Dubartootni erga wal qunnamtii saala raawwatanii booda irra caalman carraan ulfaa'u yoom ishee mudachuu danda'a jettee yaadda?	**1.Eeyyeen 2.Lakkii** 1. Laguu ji'a arguuf torban tokkoo dura 1 2 2. Osoo Laguu ji'a irra jirtu 1 2 3. Akka laguun ji'aa dhabbateen 1 2 4. Giddu galeessa laguu ji'aatti 1 2 5. Yeroo hundummaatti ulfaa'uu ni dandeesi 1 2 6. kan biraa ,(ibsi…) 7.Ani hin beeku	
31	Shamarran ykn dubartiin tokkoo walquunamitii saalaa si'a tokkon ulfa'uu nidande'eesi?	1. Eeyyee/Waliin gala 2. Lakki/walii hingalu 3. Ulfa'uu dandeessii ykn ulfaa'uu dhiisu dandeessi	

32	Odeeffannoo waa'ee ulfa hin barbaachisne dhageesse beektaa?	1.Eeyyeen 2.Lakkii	
33	Mala ittin ulfa hin barbaachisne ittin ittisan beekta?	1.Eeyyeen 2. Lakkii⟶**(G.35)** tti darbi	
34	Yoo deebiin kee“Eeyyee" ta'e **(G.33)**,malootni ittin ulfa hin barbaachisne dhoowwuu dandeenyu maal fa’a jette yaadda? (**deebii tokoo ol deebisuun ni danda'ama)**	**1.Eeyyeen 2.Lakkii** 1. Dawwaa karoora maatii kan liqmsamu 1 2 2. Dawwaa karoora maatii Kan lilmoon keennamu 1 2 3. Kondaamiitti fayyadamuu 1 2 4. Dawwaa ciqilee keessa awwaalamutti fayyadamuu 1 2 5. Dawwa gadameessa keessa kaa'amutti fayyadamuu 1 2 6. Ofmaseensuu/Ujjummoo hidhuu 1 2 7. Walquunamtii saalaa irraa of dhorkuu 1 2 8. Yeroo walaquunamtii saalaa raawwatan ija sanyi dhiraa qaama dhalaa alatti dhangalasuu 1 2 9. Yeeroo ulfa'uun itti hin danda'amnetti gargaramuu 1 2 10. Walquunamtii saalaa booda qaama salaa diqachuu 1 2 11. Kan biroo (ibsi…) _____	
35	“Ulfa baasuu “(Abortion) jechuun maal jeechuu akka ta’e beektaa?	1.Eeyyeen 2. Lakkii⟶**(G.37)** tti darbi	
36	Yoo deebiin kee“Eeyyee" ta'e **(G.35),**ulfa baasuu (Abortion) jechuun maal jechuudha**?**	1. erga xurii dhuma ji’a argitee torbee <20 gaditti ulfa baasuu jechuudha 2.erga xurii dhuma ji’a argitee ulfa torbee <24 gaditti ulfa baasuu jechuudha 3. erga xurii dhuma ji’a argitee ulfa torbee <28 gaditti ulfa baasuu jechuudha 4. Hin beeku	
37	Beekumsa ulfa baasuu waliin wal qabate hagam beekta ykn qubda qabda?	1.Beekumsa gahaan qaba 2.Beekumsa gahaa hin qabu 3.Homaa hin jedhu 4.beekumsa gad-aanan qaba 5.Beekumsa isa homaa hin qabu	
38	Tajaajila ulfa baasuu fayyadamtee beektaa?	1.Eeyyeen 2.Lakkii	
39	Waa’ee mala ittisa ulfaa beektaa?	1.Eeyyeen 2. Lakkii⟶**(G.41)** tti darbi	

40	Yoo deebiin kee“Eeyyee" ta'e (**G.39),** haala ittin ulfa ittisan danda'amu isa Kam beekta? ***(Deebii tokoo ol deebisuun ni Danda'ama)***	1. Qoricha karoora maatii kan liqmsamu 2.Kondomii Fayyadamuu 3. Dawwaa karoora maatii Kan lilmoon keennamu 4. Dawwaa ciqilee keessa awwaalamutti fayyadamuu (Norplant) 5. Dawwa gadameessa keessa kaa'amutti fayyadamuu (IUCD/loop) 6. Of-maseensuu/Ujjummoo hidhuu 7. Walquunamtii saalaa irraa of dhorkuu 8. Yeroo wal-qunnamtii saalaa raawwatan sanyii dhiiraa (sperm) qaama dhalaa alatti dhangalasuu. 9. Kan biro (Ibsii...)	
41	Hiriyaa(Jaalallee) dhiira/ dubaraa qabda?	1.Eeyyeen 2. Lakkii➟**(G.43)** tti darbi	
42	Yoo deebiin kee“Eeyyee" ta'e (**G.41),** Hiriyaa kee waliin wal-qunnamtii saala raawwattee beekta?	1.Eeyyeen 2. Lakkii➟**(G.44)** tti darbi	
43	Yoo deebiin kee“Eeyyee" ta'e (**G.42),** Waa’ee dhukkuboota wal-qunnamtii saalatin daddarban beekta?	1.Eeyyeen 2. Lakkii➟**(G.45)** tti darbi	
44	Yoo deebiin kee“Eeyyee" ta'e (**G.43),** waa’ee dhukkuboota wal-qunnamtii saalaatin daddarbanii isa kam beekta? ***(Deebii tokoo ol deebisuun ni Danda'ama)***	1.Fanxoo 2.cophxoo 3.chankirooyidii 4.HIV/AIDS 5. Kan biro (ibsi…)	
45	Mallattoo dhukkuboota wal-quunamtii saalaan nama irraa namatti daddarbanii maal faa beekta? ***(Deebii tokoo ol deebisuun ni Danda'ama)***	**1.Eeyyeen 2.lakkii** 1. Dhangala’aa qabaachuu 1 2 2. Fincaan nama gubuu 1 2 3. Qaamni hormaataa mada’uu 1 2 4. Qamni hormaataa nama hoksisuu 1 2 5. Garaa dhukkubbii handhuraa gadii. 1 2 6. Gudeedi nama dhitta’uu 1 2 7. Kan biroo (ibsi…)	
46	Karaalee ittin dhukkubonni wal-qunnamtii saala ittin daddarban (modes of transmission) kam faa beekta?	1. Dhiiga nama dhukkuban qabamee tokkoo nama biraa tiif keennu dhaan 2.Haadha irraa daa’imatti 3. Walquunamitii saalaa gad dhisii ta'een	

		4. Meeshaa qara qabutti nama dhukkubsata ta'e waliin wajjin fayyadamu dhaan 5. Kan biro (ibsi…)	
47	Dhukkuboota wal-qunnamtii saalatin daddarban ofirraa ittisuun ni danda'ama?	1.Eeyyeen 2. Lakkii⟶**(G.49)** tti darbi	
48	Yoo deebiin kee"Eeyyee" ta'e (**G.47),** maloota ittin dhukkuboota wal-qunnamtii saalatin daddarbanii ittisan kam faa beekta?	**1.Eeyyeen 2.lakkii** 1. Walquunamitii nafa saalaa dhisuu dhaan 1 2 2. Kadhimaa oftiif amanamuu dhaan 1 2 3. Kondamitti fayyadamuu dhaan 1 2 4. Bakka garii hin taaneetti dawwaaf jecha lilmoo dirachuu dhisuu dhaan 1 2 5. Meeshaa qara qabutti waliin gargaaramuu dhisuu dhaan 1 2 6. Kan biroo (ibsi) _____	
49	Waa'ee dhukkuba HIV/Eedsii dhageessee beektaa?	1.Eeyyeen 2. Lakkii⟶**(G.51)** tti darbi	
50	Yoo deebiin kee"Eeyyee" ta'e (**G.49),** dhukkuba Eedsii maaltu namatti fida?	1.Baakteeriyaa 2.Virasii 3.Fangasii 4.Raammoo 5. Kan biroo (ibsi…)	
51	HIV/Eedsiin karaa kamiin nama irraa namatti daddarba? ***(Deebii tokoo ol deebisuun ni Danda'ama)***	**1.Eeyyeen 2.lakkii** 1. Walquunamitii saalaa gad dhisii ta'een 1 2 2. Dhiiga nama tokkoo nama biraa tiif keennu dhaan 1 2 3. Haadha irraa daa'imattii 1 2 4. Meeshaa qara qabutti waliin wajjin fayyadamu dhaan 1 2 5. Hin beeku	
52	Mallattoo bebekkamoo dhukkuba HIV/Eedsii kan ta'an maal fa'aadha?	**1.Eeyyeen 2.lakkii** 1.Ho'ina qaama 1 2 2.Hir'ina ulfaatina qaamaa 1 2 3. Gadi-teesisuu 1 2 4. Qufaasisuu 1 2 5.Huqqachuu 1 2 6. Kan biro (ibsi….) 7.Hin beekuu	
