A STRATEGY TO ENHANCE UTILISATION OF ADOLESCENTS' SEXUAL AND REPRODUCTIVE HEALTH SERVICES IN SOUTH-EAST ETHIOPIA

by

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19 January 2026

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ABSTRACT

Adolescent sexual and reproductive health (SRH) remains a critical health challenge in low-resource settings, including Ethiopia. This study investigated service provision with respect to SRH for adolescents in south-east Ethiopia, focusing on barriers to access and strategies to enhance utilisation in the Arsi Zone. The findings informed the development of a strategy to enhance uptake of adolescent SRH services.

A sequential explanatory mixed-methods design was employed in two phases: a quantitative phase comprising surveys with adolescents and a qualitative phase comprising focus group discussions with adolescents, key informant interviews with healthcare workers, teachers, and community leaders to explore perceptions and experiences of SRH services. The research team analysed quantitative data in Statistical Package for Social Sciences (SPSS) version 30 using descriptive and multivariate statistics, while qualitative data analysed thematically.

Results showed that only 23.5% of adolescents accessed SRH services. Major barriers included lack of awareness (33.6%), financial constraints (28.9%), distance to facilities (18.3%), fear of parental reaction (17.7%), and religious or cultural taboos (13.2%). Factors that increase utilisation included discussion of SRH between adolescents and trusted adults (AOR=2.12) or did not feel fear when seeking care (AOR=2.07) were more likely to use services. Adolescents with SRH problems, such as STIs, were nearly five times more likely to seek services (AOR=4.88), while those who found service hours convenient were over three times more likely to use adolescent-friendly services (AFS) (AOR=3.19).

Adolescents perceived SRH services as essential; however, they reported significant difficulties in accessing them. The need for comprehensive SRH education, open family discussions, and supportive community involvement emerged as a key. Socio-cultural barriers such as stigma and taboos were consistently reported as limiting service use. Trusted adults were identified as critical in reducing fear and encouraging utilisation.

The findings informed the development of an alternative strategy which should improve adolescent sexual and reproductive health outcomes. Such a strategy should embrace target interventions that address key barriers to improve awareness, access, and acceptability of adolescent SRH services in Arsi Zone. The proposed strategy prioritises community participation, culturally sensitive education, expansion of AFS and multisectoral collaboration. Implementing this strategy has the potential to significantly improve SRH outcomes among adolescents in Arsi Zone.

Key terms

Adolescent; adolescent-friendly; awareness; determinants; perception, sexual and reproductive health; sequential explanatory mixed-methods; strategy; utilisation.

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DEDICATION

This thesis is dedicated to adolescents whose lives have been impacted by a lack of accessible sexual and reproductive health services. It honours those suffering from preventable diseases and those who are unheard, aiming to ensure that all young people gain knowledge, dignity, and care. Your stories and resilience inspire my commitment.

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LIST OF ABBREVIATIONS

AA HA	Accelerated Action for the Health of Adolescents
AFS	Adolescent-friendly service/s
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal care
AOR	Adjusted odds ratio
ASRH	Adolescents' sexual and reproductive health
ASRHR	Adolescents' sexual and reproductive health and rights
CBTP	Community-based training programme
CI	Confidence interval
COR	Cruds odds ratio
CSE	Comprehensive sexuality education
EPHI	Ethiopian Public Health Institute
ESA	Eastern and Southern Africa
FDRE	Federal Democratic Republic of Ethiopia
FGM/C	Female genital mutilation or cutting
GAPD	Global Abortion Policy Database
HBM	Health Belief Model
HEW	Health extension worker
HIV	Human Immunodeficiency Virus
HSTP	Health sector transformation plan
IAWG	Inter-agency working group
ICF	International classification of functioning, disability and health
IPV	Intimate partner violence
IUCD	Intrauterine contraceptive devices
KIIP	Key informant interview participants
MDG	Millennium development goal
MoH	Ministry of Health
NGO	non-governmental organisations
PNC	Postnatal care
SADC	South African development community
SDG	Sustainable development goal
SRH	Sexual and reproductive health
SPSS	Statistical Package for Social Sciences
STD	Sexually transmitted disease
STI	Sexually transmitted infection
TTP	Team training programme
UHC	Universal health coverage
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations International Children's Emergency Fund
UNISA	University of South Africa
USAID	United States Agency for International Development
VCT	Voluntary counselling and HIV testing
WASH	Water, sanitation, and hygiene
WHO	World Health Organization
YFS	Youth-friendly service

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

This chapter summarises the study on adolescents' experiences accessing sexual and reproductive health (SRH) services. It begins with an analysis on a global scale, moves to a regional focus on sub-Saharan Africa, and then narrows down to Ethiopia, including the south-east region. It will address the challenges faced by adolescents concerning SRH and emphasise the importance of tackling these issues. This discussion spans the international arena, the South African development community (SADC), and Ethiopia, with particular attention to south-east Ethiopia. Additionally, there will be an exploration of the significance of addressing these challenges, particularly in sub-Saharan Africa.

This chapter will continue to explore initiatives to enhance adolescents' use of SRH services globally, with a focus on sub-Saharan Africa, particularly Ethiopia and Southeast Ethiopia. It also provides definitions of key terms used throughout the thesis, along with the study's aims and questions. Additionally, the chapter covers the problem statement, theoretical framework, study objectives, research paradigm, and methodology. Furthermore, it discusses strategies for maintaining rigour, ethical considerations, and general research structures.

1.2 BACKGROUND AND OVERVIEW OF THE STUDY

Adolescents are not older children or younger adults; instead, they are unique stages of human development. They are diverse in culture, nationality, economy, and education. An adolescent is an individual aged 10 to 19 years, and there are 1.2 billion globally. It is a stage of significant physical, new and conflicting emotions, mental, and social growth and development, hormonal changes, sexual development, cognitive and intellectual development, and moral growth involving peers and family relationships(World Health Organization [WHO] 2021a:1). Keeping sexual and reproductive health is critical during this growth and development phase (Mazza & Botfield 2022:22). Furthermore, the WHO defines reproductive health as a state of complete physical, mental, and social well-being

in all aspects related to the reproductive system, rather than merely the absence of disease or infirmity (WHO 2017a:2).

Services for adolescents' sexual and reproductive health (ASRH) are provided for the adolescent population and include not only family planning but also prevention and treatment of sexually transmitted diseases (STDs), cervical cancer screening, infertility diagnosis and treatment, as well as maternal and newborn healthcare (WHO 2017a:1). Reaching adolescents require getting permission from their influencer or gatekeepers, such as parents and community members, school administrators, and teachers in many areas (Chandra-Mouli, Plesons, Hadi, Baig & Lang 2018:5).

In low and middle-income countries, nearly 90% of the population is adolescents (Inter-Agency Working Group [IAWG] 2022:14). Adolescents face different types of problems due to risky behaviours (Abraham, Yitbarek & Morankar 2019:1; Violita & Hadi 2019:1). As a result, they require special care, like provision of health education and reproductive health services (Violita & Hadi 2019:1). However, adolescents' reproductive health service utilisation programmes in South-East Ethiopia are still relatively low (30.1%) (Tejineh & Fekadu 2018: 144). Furthermore, a study conducted in rural Arsi Zone, Oromia, Ethiopia reported that the SRH services of adolescents were low (26.1%) (Wakjira & Habedi 2022:1).

In Ethiopia, adolescents constitute 26.1% of the total population (Ethiopian Public Health Institute [EPHI] & International Classification of Functioning, Disability and Health [ICF] 2021:20). Neverthless, the Ethiopian population reached approximately 101 million in 2020 (MoH 2021a:15).

Adolescents need different healthcare services, education, and social services. However, in many places norms and tradition affect the service they receive (WHO 2018:3). From a study done in Nepal, adolescents' sexual and reproductive health (SRH) services utilisation was only 17.2% and fear of family and society was reported as a significant factor affecting the utilisation (Pokhrel, Nepal, Mali, Baskota, Aryal, Thapa, Chaudhary & Malla 2020:4740-4743).

A study done in the plateau state of Nigeria revealed that 76.6% of sexually active adolescents are not using youth-friendly SRH services. The same study mentioned the

most frequent reasons for not using were fear of community or perceived lack of privacy and confidentiality (66.1%), followed by negative attitudes of healthcare providers (68.2%) (Envuladu, Massar & De Wit 2022:1).

Adolescents who discussed reproductive health issues with relatives/family/healthcare workers utilised SRH services better than adolescents who did not discuss SRH with relatives/family/healthcare workers (Abraham et al 2019:49). From the two studies done in southern Ethiopia, youth-friendly SRH service utilisation was as low as 39.5% and 9 to 55%, respectively (Habte, Dessu, Bogale & Lemma 2022:7; Habtu, Kaba & Mekonnen 2021:1).

Based on the studies conducted, factors that have been preventing adolescents from accessing and utilising youth-friendly SRH services include: providers in such facilities' lack of competency in providing the service, supply constraints and an unsupportive environment in the health facilities, a perceived absence of information and attitude towards SRH services among adolescents, absence of parental and social support from the community, and poor implementation and multi-sectoral engagement in the broader health system (Habtu et al 2021:4).

The improved use of SRH services by adolescents will allow them to be better protected against sexual violence, sexually transmitted infections (STIs) like Human Immunodeficiency Virus (HIV), early marriage and pregnancy, abortion, and unsafe abortion (Abdurahman, Oljira, Hailu & Mengesha 2022:1). Despite the existence of several national strategies and empirical studies, evidence regarding the utilisation of sexual and reproductive health (SRH) services in the Arsi Zone remains limited. This, particularly regarding the socio-cultural determinants shaping adolescents' access. In light of the above, the formulation of a context-specific strategy to address barriers and facilitators related to adolescents' utilisation of SRH services has become a critical priority.

1.3 STATEMENT OF THE PROBLEM

Sexually active adolescents require comprehensive SRH services to safeguard their health and prevent adverse reproductive outcomes. In Ethiopia, SRH service utilisation at youth-friendly services (YFS) was the lowest among sub-Saharan African countries in 2016, at 9-55% (Habtu et al 2021:1). This could be attributable to adolescents'

unawareness of the SRH services available to them. According to a study conducted in southern Ethiopia, community awareness of adolescents about such services was poor. The same study revealed that adolescents perceived the services as ‘bad’ when they entered the clinics and ‘good’ when they entered the church (Habtu et al 2021:10).

A systematic review and meta-analysis study by Mamo, Siyoum and Birhanu (2021:2). estimated the prevalence of teenage pregnancy in Ethiopia to be as high as 23.6%. A study done at Arba Minch town in southern Ethiopia further indicated that the prevalence of teenage pregnancy was 7.7% among high school students (Mathewos & Mekuria 2018:1). The same study further highlighted that teenage pregnancy among school-going children was due to a lack of information sharing with parents or guardians about SRH service issues (Mathewos & Mekuria 2018:7). Accordingly, this could further point to a lack of contraception available to adolescents in Ethiopia, mainly due to barriers such as poor information, education, and communication regarding the use of such services (Wondimagegne, Debelew & Koricha 2023:1). The above clearly indicates a persistent gap in contraceptive access and utilisation, especially among adolescents.

Induced abortions among adolescents in Ethiopia are estimated to have been 96,000 in 2014. This comprises 35,000 clandestine abortions (those performed outside a health facility) and 61,000 legal abortions (Gebrehiwot, Fetters, Gebreselassie, Moore, Hailemariam, Dibaba & Bankole 2018:1).

Despite promising progress and successes, more work needs to be done to enhance the reproductive health of women, girls, teenagers, youth, and people living in remote areas (MoH 2021a:1). The researcher, working in the Reproductive Health units in the Sagure Health Centre located at Digalu Tijo and Lemmu Bilbilo districts, South-East Ethiopia, had observed that unwanted pregnancies, unsafe abortion, and STDs among adolescents were high when compared with the national. This was evidenced from his regular daily work activities as well as from the reports of health facilities (Arsi Zonal Health Department [AZHD] 2022:7). Further, some community members have reported having witnessed several neonates found thrown away around the river near a high school in Lemmu Bilbilo district.

Given these persistent challenges discussed, including limited awareness, low utilisation of youth-friendly SRH services, high rates of adolescent pregnancy and unsafe abortion,

and inadequate community support, there is an urgent need for an evidence-based strategy to improve SRH services utilisation among adolescents in Southeast Ethiopia.

1.4 THEORETICAL FRAMEWORK

The theoretical framework guides data identification, synthesises findings, and elucidates results by considering established theories. Meanwhile, the conceptual framework serves as the research project's plan, incorporating the theoretical framework as one of its elements (Kivunja 2018:4).

In the 1950s, the Health Belief Model (HBM) was created by American social psychologists working with the Public Health Service to explain why people did not participate in disease prevention and detection programmes. Afterwards, the model has been used to study people's reaction to symptoms as well as their treatment behaviour, particularly in terms of compliance with prescribed medical treatments (Abraham & Sheeran 2014:2). The HBM has established a valuable theoretical framework for the identification of modifiable beliefs that are predictive of health-related behaviours (Abraham & Sheeran 2014:29). As a result, this study will utilise the HBM as its theoretical framework, since it offers a structured method of examining how adolescents' beliefs and perceptions can affect and regulate their SRH.

1.4.1 Applications of the Health Belief Model constructs

The researcher insisted on investigating adolescents' perceived vulnerabilities, gravity, advantages, and obstacles to SRH services in six districts of Arsi Zone, Ethiopia. Adolescents might be encouraged to change their behaviour if they perceive that they are in danger of suffering from SRH issues, while on the other hand, they would be less likely to adopt the change if they believe that the use of SRH services would have dire consequences for them. According to Washburn (2012:3), if persons regarded themselves as prone to a sickness, reckon that rather serious repercussions could follow the sickness, think that the available way of treating their case or the severity could be of use, and surmise that the value of the action to be taken is more than the obstacles, they are likely to do something that would lessen the danger. As a result, the strategy to be formulated will be based on this theory to improve adolescents' SRH use in the two

districts of Digalu Tijo, Lemmu Bilbilo, Tiyo, Hetosa, Lode Hetosa, and Diskis in the Arsi Zone, Ethiopia.

1.4.2 Health Belief Model concepts

The constructs of the HBM constitute a theoretically robust framework that fulfils key criteria for predicting and influencing engagement in preventive health behaviours (Anuar, Shah, Gafor, Mahmood & Ghazi 2020:207). Various studies have demonstrated the efficacy of the HBM as a framework for examining the sexual health behaviours of adolescents and young adults (Conner & Norman 2015:30-60). The HBM encompasses a range of theoretical constructs that predict individuals' likelihood of engaging in behaviours aimed at the prevention, screening, or management of various health conditions (Abraham & Sheeran 2014:2). These include:

- Perceived susceptibility: This refers to an individual's cognitive assessment regarding the likelihood or probability of contracting a specific disease.
- Perceived severity: This refers to an individual's subjective assessment of the gravity of a particular disease and its potential impact on their life.
- Perceived benefits: An individual's view of how effective new behaviours are in reducing disease risk.
- Perceived barriers: They refer to an individual's cognitive assessment of obstacles that impede behaviour change.
- Cues to action: Included are people, events, or things that provoke behavioural change.
- Self-efficacy: This refers to the cognitive construct of an individual's conviction in their ability to execute a specific task or action (Washburn 2012:1-3).

Mainly, the study will be guided by the following factors of HBM:

- **Self-efficacy** is the cognitive construct that describes an individual's conviction in their ability to perform a specific task or action.
- **Individual perception:** Focus on the Factors that affect the perception of illness, the importance of the health service to the individual, perceived susceptibility, and perceived severity (Anuar et al 2020:206). For this study, the researchers used it to

assess the adolescents' perceived susceptibility and perceived severity of SRH problems.

- **Modifying factors:** These refer to demographic variables that influence adolescents' health-seeking behaviour, perceived threat, and cues to action (Anuar et al 2020:206). This study identifies several factors that influence adolescents, including age, gender, ethnicity, socio-economic status, socio-cultural background, educational level, skills and motivation, experience, awareness, and perception.
- **The likelihood of action** focuses on the perceived benefit minus the perceived barrier to taking recommended action (Anuar et al 2020:206). The combination of these factors mainly results in behavioural change.

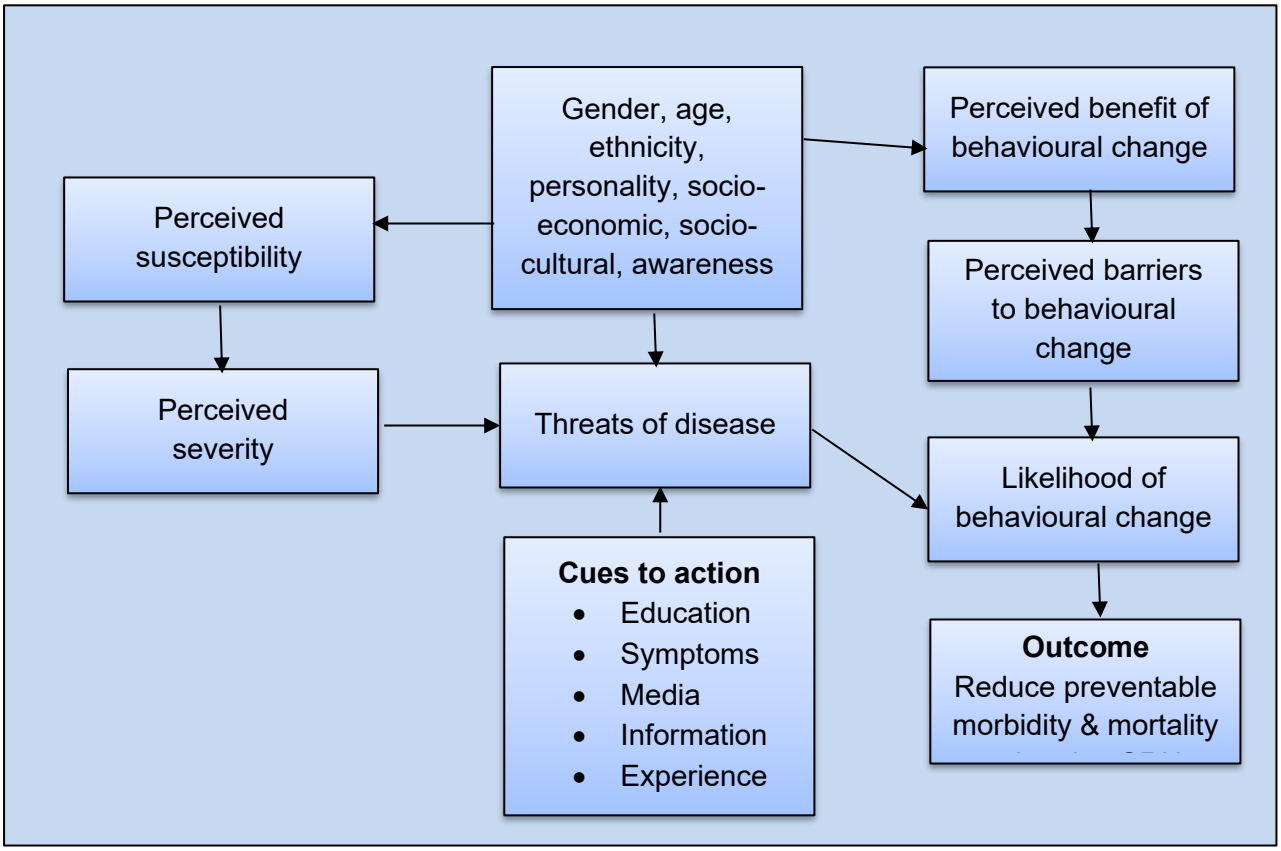

Figure 1.1 Health Belief Model

(Adapted from Washburn 2012:2)

1.5 DEFINITION OF KEY CONCEPTS

Adolescent: Adolescence, defined as the period between 10 and 19 years of age, represents the second developmental stage of the human lifespan, characterised by significant and rapid biological and psychosocial transformations. These transformations

serve as a critical foundation for achieving optimal health outcomes in adulthood (WHO 2014a:6). Adolescence is a special, formative stage of human development. This complex stage of transition from childhood to adulthood involves rapid physical growth, hormonal changes, sexual maturation, new and conflicting emotions, increased cognitive and intellectual capacities, and the development of consistent relationships with peers and families (WHO 2021a:9). Adolescents are a heterogeneous group with evolving needs. As they grow from childhood, through adolescence, to adulthood, they must be equipped with the knowledge and skills to help them use opportunities and challenges they face in the adult world (WHO 2018:2). This stage is an at-risk group of people who have a great interest in knowing and who need access to various adolescent health services and information.

High school or secondary school: According to the Ethiopian Ministry of Education (2009:21), the high school is the educational stage consisting of Grades 9-12. The average estimated age of students attending this stage is between 15 and 19.

Reproductive health: Reproductive health, according to the WHO, is "a state of complete physical, mental and social well-being in all dimensions related to the reproductive system and its functions" which is not only the absence of disease, dysfunction, or infirmity in any of the areas mentioned (Weisman 2017:2). The definition of reproductive health in adolescents in this research is a total physical, mental, and social well-being, and not just the absence of illness or health problems, in all respects connected to the reproductive system, its functioning, and processes, in the areas of Digalu Tijo, Lemmu Bilbilo, Tiyo, Hetosa, Lode Hetosa, and Diksis situated in the Arsi Zone.

Adolescents' sexual and reproductive health: SRH encompasses both the physical and emotional aspects, as well as the conditions of not being pregnant or having an abortion, not having any STIs including Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS), and not being subjected to any form of sexual violence or coercion (Abdurahman et al 2022:1). Comprehensive access to SRH is very crucial for a better quality of life for everyone so that; it is planned to be attained by 2030. However, SRH knowledge and service remain limited to low to middle-income countries (Meherali, Rehmani, Ali & Lassi 2021:1; WHO 2017a:1). Studies from Malawi revealed that communities and their leaders play many roles in adolescent SRH in their areas, but

most were unsure whether YFSs were available at health facilities (Chimatiro, Hajison & Muula 2020:5-6). In Arsi Zone, Ethiopia, a study reveals that only 43.7% of adolescents aged 15-19 are aware of the SRH services available (Tejineh & Fekadu 2018:132).

Adolescents' sexual and reproductive health and unsafe sexual practices: Unsafe sexual practice or risky sexual behaviour is engaging in sexual practices that may increase vulnerability to reproductive tract problems, such as premarital sex, multiple sexual partners, and unprotected sex (Srahbzu & Tirfeneh 2020:1-2; Thepthien & Celyn 2022:2). According to a study done in Bangkok, Thailand, 69.5% of adolescents had experienced risky sexual behaviour, 42.4% had more than one partner, 33.7% were not using a condom, and for 7.8%, their first-time sexual experience was not voluntary (Thepthien & Celyn 2022:6). Studies revealed risky sexual behaviour associated with smoking, alcohol consumption, and drug abuse (Srahbzu & Tirfeneh 2020:2). A study done at Guduru School in Ethiopia revealed that the magnitude of risky sexual behaviour reaches about 68.2% (Ducraux, Waeber & Marques-Vidal 2021:3). From the finding of a study done at Arsi University, Arsi Zone Ethiopia, 72.6% of the study participants/adolescents had immediately sexual intercourse after drinking alcohol with a non-regular partner, and 33% of them did not use a condom during sexual intercourse (Segni & Degefa 2020:3).

Unintended pregnancy and unsafe abortion among adolescents: Early pregnancies, both intended and unintended, among adolescents are an important problem. Unsafe abortion contributes to up to 20% of maternal death related to pregnancy in countries of Europe (WHO 2017a:2). In 2016, an estimated twenty-one (21) million girls aged 15-19 years in developing countries became pregnant, and 12 million of those who became pregnant gave birth. Worldwide, the complications during pregnancy and childbirth are among the significant causes of death, with 99% of maternal deaths in the 15-19 age group occurring in low and middle-income countries. Besides, each year, around 3.9 million unsafe abortions are performed on girls aged 15-19 years, which leads to maternal morbidity, mortality, and long-term health issues (WHO 2018:10). From pregnancies among adolescent aged 15-19 years in sub-Saharan Africa, nearly half of them ended in abortion (Gebrehiwot et al 2018:2). Among all adolescents who participated in a study in Kenya, 42% had an unintended pregnancy. The proportion was higher (49.4%) among 19-year-old girls living in a rural area, with only primary or no formal education, and who had never used a contraceptive, which is associated with the higher unintended

pregnancy among adolescents (Ajayi, Odunga, Oduor, Ouedraogo, Ushie & Wado 2021:1). Unintended pregnancies among adolescents in Ethiopia were 44%. In comparison, 46% of them ended in abortion, and nearly 27% of adolescents suffered from severe complications, according to a 2014 report (Gebrehiwot et al 2018:2). Unintended pregnancy among adolescents was found to be 27.1%. Non-utilisation of contraceptives was the primary reason for unintended pregnancy, in a study done in Western Ethiopia (Merga, Wirtu, Bekuma & Regasa 2021:2).

1.5.1 Operational definitions

Adolescents: In this study, adolescents will be individuals aged 15-19 years attending school in the two districts of Digalu Tijo and Lemmu Bilbilo in the Arsi Zone, Ethiopia.

Enhance: Is an improvement or betterment in some way (Kirkwood & Price 2010:56). In this study, enhance means an increase or improvement in adolescents' SRH service utilisation, both in number and service quality, across two districts, Digalu Tijo and Lemmu Bilbilo, in the Arsi Zone, Ethiopia.

Strategy: This is defined as "the determination of the basic long-term goals and objective of an enterprise, and the adoption of courses of action and the allocation of resources for carrying out these goals" (Nickols 2015:2). In this study, a plan of action or technique is to be used to achieve enhanced adolescents' SRH service utilisation at the two districts, Digalu Tijo and Lemmu Bilbilo in Arsi Zone, in Ethiopia.

Sexual and reproductive health (SRH) service utilisation: Adolescent SRH service utilisation is measured by asking subjects whether they can respond "yes" about use of any one of the services**:** SRH information education and counselling, contraceptive service, pregnancy test, pregnancy care, voluntary counselling, and testing of STI screening, diagnoses and management and safe abortion care (Abdurahman et al 2022:3). This research will assess the use of SRH service by inquiring whether adolescents have utilised any of the listed services within the six months preceding the data collection period.

1.6 PURPOSE OF THE STUDY

The purpose of the study was to investigate SRH service provision, identify barriers to adolescents' access to SRH services, and ultimately develop a strategy to enhance the utilisation of SRH services for adolescents in the Arsi Zone of South-East Ethiopia.

1.7 OBJECTIVES OF THE STUDY

This study was conducted in three phases. The objectives of the study were therefore separated into phases. A sequential explanatory mixed method was used.

Phase 1: Quantitative

- To explore and describe adolescents' awareness of SRH service utilisation in the Arsi Zone of Ethiopia.
- To identify and describe SRH services for adolescents in the Arsi Zone of Ethiopia.
- To establish and describe barriers to adolescents' access to SRH services in the Arsi Zone of Ethiopia.

Phase 2: Qualitative

- To explore adolescents' perceptions about SRH services in the Arsi Zone of Ethiopia.
- To explore and describe socio-cultural determinants of adolescents' SRH in the Arsi Zone of Ethiopia.

Phase 3: Integration of the quantitative and qualitative results

- To develop a strategy that enhances adolescents' SRH service utilisation in the Arsi Zone of Ethiopia.

1.8 RESEARCH QUESTIONS

These are the research questions which guided this research project.

Research questions Phase 1: Quantitative

- What is the extent of adolescents' awareness of SRH services in the Arsi Zone of Ethiopia?
- What are the current SRH services for adolescents in the Arsi Zone of Ethiopia?
- What are the barriers to the utilisation by adolescents of the SRH services in the Arsi Zone of Ethiopia?

Research questions Phase 2: Qualitative

- What are young people's perceptions of SRH services in Arsi Zone, Ethiopia?
- What are the socio-cultural determinants of adolescents' use of SRH services in the Arsi Zone, Ethiopia?

Phase 3: Integration of the findings of the quantitative and qualitative phases

- What strategy can enhance the utilisation of SRH services by adolescents in Ethiopia?

1.9 RESEARCH PARADIGM

A research paradigm is a structured approach or exemplar for conducting scholarly inquiry. It involves formulating a comprehensive blueprint for investigative processes. The integration of a research philosophy with a research methodology collectively establishes a research paradigm (HelpinProject 2019:1-3; Jansen 2023:1-9). It is a way of observing the world that frames the research topic and shapes how researchers think about it. A research paradigm is a set of beliefs that guides action (Abdullah Kamal 2019:4). Therefore, it is a philosophical position about the nature of reality and how we approach understanding it (Doyle, Brady & Byrne 2016:2).

There are three research philosophies: positivism, interpretivism, and pragmatism.

Positivism (objectivism): It believes that there is only a single reality that can be measured and known. This reality can be measured using the quantitative method.

Interpretivism (subjectivism/constructivism): This is the approach in which one can gain knowledge of the world. It does not rely on a single reality; it is based on multiple realities. Thus, it uses a qualitative method to reveal those realities.

Pragmatism: This is a research-focused philosophy that blends positivism and interpretivism, using quantitative and qualitative methods based on the nature of the research question (HelpinProject 2019:3-5; Jansen 2023:1-9). The pragmatists do not see the world as a single unity. Likewise, mixed-methods researchers use different approaches to collect and analyse data rather than a single approach (Creswell & Creswell 2018:39).

Therefore, the pragmatism paradigm will be chosen for this study because of the nature of the research question to be addressed. The sexual health paradigm contributes to reshaping clinical and public health understanding of what sex is (Fortenberry 2013:131). Using this framework, the researcher sought to investigate adolescents' views on SRH services in Ethiopia's Arsi Zone.

1.10 STUDY APPROACH AND DESIGN

A research design constitutes a systematically structured plan and overarching framework for conducting an empirical investigation, developed to generate methodologically sound, valid, and reliable responses to clearly defined research questions or problems (Kumar 2011:95). The selection of a research design is based on the types of research problem or issue being addressed, the researchers' personal experiences, and the audience for the study (Creswell & Creswell 2018:49). In recent studies, mixed methods of research have been chosen because of its vigour of drawing strengths from both quantitative and qualitative research and minimising limitations that would arise from both approaches (Creswell & Creswell 2018:266). This study will employ an explanatory sequential mixed-method design. This kind of design is characterised by initially gathering and analysing data during the quantitative phase, followed by the collection and analysis of qualitative data to provide further insight into the quantitative findings. This design is classified as explanatory because the initial quantitative findings are subsequently elaborated and clarified by the qualitative results. It is further characterised as sequential, given that the quantitative phase precedes and is followed

by the qualitative phase in a clearly ordered sequence (Creswell & Creswell 2018:41). Based on the findings of both steps, the researcher will develop a strategy to enhance adolescents' SRH utilisation in south-east Ethiopia. This study had three steps, as listed below.

1.10.1 Phase I: Quantitative research design

The quantitative research approach is the design that emphasises numbers and figures in the collection and analyses of data (Daniel 2016:4). This phase covered Goals I, II, and III which consisted of an investigation and explanation of adolescents' knowledge of SRH services, determining and explaining SRH services for adolescents, and identifying and explaining barriers to adolescents' access to SRH utilisation. In the quantitative phase, adolescents were surveyed using a structured, self-administered questionnaire in designated high schools across the Arsi Zone. During this phase, the researcher conducted a cross-sectional quantitative survey among high school adolescents in Arsi Zone, Ethiopia, from January to March 2023.

1.10.2 Phase II: Qualitative research design

A research design is intended to provide an appropriate framework for the study (Jilcha Sileyew 2020:2). A qualitative design focuses on data collection, assigning data to themes, analysis, and report writing. However, it originates in disciplines and flows throughout the research process (Creswell & Creswell 2018:236).

The focus of qualitative research design is on participants' perceptions, opinions, and experiences, and on how they make sense of their lives. Therefore, the attempt is to understand multiple realities (Creswell 2014:255). A qualitative approach was used in Phase II to explore adolescents' perceptions of SRH service utilisation and the socio-cultural determinants influencing it. Data were collected through focus group discussions and key informant interviews (KIIs) with adolescents, healthcare workers, teachers, and community elders. Data collection for this phase took place from April to May 2023.

The final phase entailed the systematic integration and/or linkage of data derived from the two distinct strands, as delineated by Creswell (2014:181). In this phase, the researcher synthesised and critically evaluated the evidence from both the quantitative

and qualitative strands of the study to develop an empirically substantiated, context-specific intervention strategy to improve adolescents' access to and utilisation of sexual and reproductive health (SRH) services in the Arsi Zone of Ethiopia. This phase thus directly addressed Objective 6 of the study.

1.11 RESEARCH METHODS AND MATERIALS

Study setting: The study was conducted in Arsi Zone, Oromia, Ethiopia, located 175 km southeast of Addis Ababa, the capital. The estimated population of Arsi Zone for 2022 was 3,872,030, with 50.4% male and 49.6% female, and adolescents and youth accounting for 35% (AZHD 2022:1). The study was conducted at 6 (six) randomly selected high schools in Arsi Zone. The total number of students currently attending high school in the Arsi Zone is 118,944, of which 54% are female and 46% male (AZHD 2022:1).

1.11.1 Phase 1: Quantitative approach

Study population: This is a group of individuals in the study area who possess the fundamental attribute(s) implied by the research goal or assumption (Asiamah, Mensah & Oteng-Abayie 2017:1615).

The population of a research study is more precisely defined as the complete set of units, such as individuals, organisations, events, objects, or items, that the researcher is concerned with, from which samples are selected to address the research questions (Mohamed, Al, Shah, Jusoh, Bahru & Affairs 2016:3-7). Thus, the unit of analysis can be an individual, a group, an organisation, a nation, an object, or any other entity from which researchers aim to make scientific deductions. In research, there are three categories of populations: general, target, and accessible populations.

A general population consists of individuals who possess at least one common characteristic of interest, qualifying them as members of the population (Asiamah et al 2017:1611). This study focused on adolescent high school students in the Arsi Zone of Ethiopia.

A target population is a specific group of individuals a researcher is interested in studying. This group is characterised by meeting all predefined inclusion criteria, thereby allowing the researcher to extrapolate the study's findings to this broader population (Asiamah et al 2017:1612). The quantitative phase targets adolescents aged 15-19 years attending six selected secondary schools in Arsi Zone, Ethiopia.

The accessible population is the subset of the target population that is available and willing to participate at the time of the study (Asiamah et al 2017:1613-1614). In this study, the accessible population comprised adolescents aged 15-19 years in 4 selected high schools who were willing to participate and were available during data collection in the specific zone.

1.11.1.1 Sample and sample size determination for Phase I

When it is difficult to collect data from the entire population because the population is large or geographically dispersed, we can use a sample (Umulisa 2012:20). In this study, adolescents aged 15-19 enrolled in selected schools served as the sample.

The researcher utilised the single population proportion formula to determine the study sample size.

$$n = \frac{(Z\alpha/2)^2 * P(1-P)}{d^2}$$

As,

n = the final sample size of the study
Z = standard normal variable at a 95% confidence level (1.96)
d = margin of error (0.05)
p = expected prevalence of adolescents' SRH utilisation 26.1% (Bekele, Deksisa, Abera & Megersa 2022:1). The design effect of two (2) be used, and 10% non-response added.

$$n = \frac{(1.96)2 * 0.261(1 - 0.261)}{(0.05)2}$$

n = 296*2 (design effect) = 592

n = with 10% non-response rate = 592+59 = 651

1.11.1.2 Sampling process for Phase I

It is selecting statistically representative individuals from the population of interest (Majid 2018:3). Sampling techniques are generally classified into two broad categories: probability sampling and non-probability sampling. In probability sampling, every element in the target population possesses a strictly positive (non-zero) probability of being selected for inclusion in the sample (Showkat & Parveen 2017:3). In this study, probability sampling/simple random sampling method was used to select six districts from 26 districts of Arsi Zone and six secondary schools similarly selected by the lottery method from 15 secondary schools in the selected secondary schools.

Once the sample size was computed, an adolescent was stratified by grade level (9-12). The computed sample size was allocated in proportion to each high school's number of adolescent students. The method of systematic random sampling (SRS) was used to select the individuals taking part in the study.

Table 1.1 Proportional allocation of the number of samples to each secondary school

Name of schools	Population size	Sample proportional to schools	Sample allocated to each school
Lemmu Secondary School	421	(421/6518) *651	42
Hachalu Secondary School	1352	(1352/6518) *651	135
Bilallo Secondary School	321	(321/6518) *651	32
Eteya Secondary School	2301	(2301/6518) *651	230
Huruta Secondary School	1720	(1720/6518) *651	172
Bulalla Secondary School	398	(398/6518) *651	40
Total	**6518**	**-**	**651**

1.11.1.3 Criteria for inclusion and exclusion in Phase I

Inclusion criteria for the study

- Secondary school-going teenagers aged 15-19 years old in six carefully selected districts, which are Digalu Tijo, Hetosa, Lode Hetosa, Diksis, Tiyo, and Lemmu Bilbilo in Arsi Zone, who were present during normal working hours of the day.
- Adolescents aged between 15 and 19 years old because this age group is more vulnerable to SRH problems (Central Statistical Agency 2016:227).
- Physically or mentally able adolescents were asked to complete the questionnaire.

Exclusion criteria for the study

- Adolescents who attended class during the night.
- Adolescents younger than 15 or older than 19.
- Adolescents who were either physically or mentally unwell could not participate in the questionnaire.

1.11.1.4 Development and testing of an instrument

The researcher developed a questionnaire grounded in the theoretical framework and objectives for gathering data from adolescents aged 15 to 19. A pilot study was conducted at a neighbouring high school, involving 5% (33) of the participants from the total of the six sampled secondary schools. The results of this pilot study were not included in the data but served to refine the data collection tool. Ethical approval was sought from the UNISA Health Studies Research Ethics Committee (Appendix 1), and permission for the pilot study was requested from the appropriate local authorities (Appendix 2). Adolescents provided informed consent prior to participating in the questionnaire and were fully informed about the study's purpose and the ethical principles to be observed during data collection (Appendices 10, 11 and 12). COVID-19 protocols were adhered to.

Study setting for Phase 2: Focus group discussions and KIIP were conducted with adolescents, teachers, healthcare workers, and community leaders at the six selected secondary schools, at nearby health facilities, and within the Arsi Zone.

1.11.2 Phase 2: Qualitative approach

A research design is planned to provide a proper framework for a study (Jilcha Sileyew 2020:2). Qualitative design focuses on data collection, grouping into themes, analysis, and writing. However, it originates in disciplines and flows throughout the research process (Creswell & Creswell 2018:236). According to the studies, community elders/leaders take part in advising adolescents on healthy life (Chimatiro et al 2020:7). The present research took advantage of this fact by investigating the perceptions of adolescent stakeholders (teachers, healthcare workers, and community elders), as well as the socio-cultural determinants of SRH service utilisation.

General population refers to people whose involvement in the study would not be consistent with the research's objectives, assumptions, or context (Asiamah et al 2017:1612). In the present research, every adolescent aged 15-19, teachers in the six selected secondary schools, medical practitioners at the health centres adjacent to the selected secondary schools, and community leaders participating in this case study were considered valid sources of information in Arsi Zone, Ethiopia.

Target population determination depends on participants' ability to share their best experiences to address the qualitative research goal. To determine the target population, the researchers needed to avoid general population groups that may not be able to share experiences and thoughts with sufficient clarity and depth (Asiamah et al 2017:1613). In this study, the target population comprised adolescents aged 15-19 years from six selected secondary schools, as well as the stakeholders listed above. The expectation was that these groups of adolescents could share better information because the late stage of adolescence is the age at which they become sexually active and have better information related to their SRH services. This group of stakeholders was also expected to share better information.

Accessible population comprises individuals from the target population who meet the eligibility criteria for study participation and are both willing and available to participate during the designated study period, after excluding all eligible individuals who decline participation or are unavailable. It is the final participant from whom the data are collected, or the sample drawn from; it is equivalent to the sampling frame (Asiamah et al 2017:1613-1614). In the current study, the target population comprised all school-

attending adolescents aged 15-19 years enrolled at six selected high schools, as well as stakeholders who were both willing to participate and available during the designated data collection period.

1.11.2.1 Sampling and sample size

A purposive non-probability sampling technique was used to select the study participants (Creswell & Creswell 2018:239). The researcher selected participants purposively, recognising that adolescents aged 15-19 have greater knowledge and experience regarding adolescents' SRH. A total of four teachers from six secondary schools, four healthcare workers from nearby health facilities, and four community leaders residing within the study area were purposively included in the study, with explicit consideration given to participants' sex. The focus group discussion data collection process continued until data saturation was achieved. Data saturation occurs when there are no new ideas from the group and when ideas are repetitive (Creswell & Creswell 2018:239). The study included 44 participants: 32 in the focus group discussions and 12 in the key informant interviews (KIIs). Each focus group discussion consisted of 8 participants.

1.11.2.2 Phase 2: Inclusion and exclusion criteria

Inclusion criteria

- Adolescents attending high school aged between 15-19 years old in 6 selected districts, Digalu Tijo, Hetosa, Lode Hetosa, Diksis, Tiyo, and Lemmu Bilbilo districts of Arsi Zone during regular day hours.
- The physically or mentally able adolescents were able to participate in the FGD.
- Adolescents who did not participate in the first phase.
- Adolescents who were willing to participate.
- Any teacher who had been teaching for two years at a selected high school, serving as a club leader, and who agreed to participate in the study.
- Any healthcare worker who had been working at least two years at a selected health facility on SRH service and was willing to participate.

Exclusion criteria for the study

- Adolescents attending class during the night.
- Adolescents aged less than 15 and above 19 years old.
- Adolescents who were physically or mentally ill or were unable to respond to the questionnaire.
- Adolescents who were not willing to participate in the FGD.
- Any adolescent who had engaged in Phase 1 of the study.
- Teachers who were not teaching at the selected schools or were not leading clubs.
- Healthcare workers who were not working at selected health facilities or were not providing SRH services.

1.11.2.3 Development and testing of an instrument

The investigator created the interview guide for the focus group discussion and KIIP, drawing from the literature review and the study's objectives.

Piloting tests were conducted at one high school and one health facility, both different from the selected ones but with a similar setting, to test and amend the data collection tool. The interview guide for the qualitative study was tested with eight convenient-sampled participants. The analysis was done to check the reliability and validity of the interview guide. Based on the analysis results, the researcher amended the interview guide to align with the research objective and the information required. The research had all the ethical approval during this test.

1.11.3 Data collection method(s) and procedure

Data collection is a systematic process of obtaining and quantifying information on variables of interest in a manner that enables the formulation and resolution of research questions, the empirical testing of hypotheses, and the rigorous evaluation of outcomes (Kabir 2018:201-275).

Upon obtaining ethical clearance from UNISA Health Studies Research Ethics Committee Appendix 1), permission to collect data was requested from Arsi Zone Education Office, Ethiopia (Appendix 2), and the respective administrative heads of 6 selected districts:

Digalu Tijo, Hetosa, Lode Hetosa, Diksis, Tiyo, and Lemmu Bilbilo districts of Arsi Zone, and then, the administrative heads of six selected secondary schools in Arsi, Ethiopia. The school managers were further requested to sign the information provided by the UNISA Health Studies Research Ethics Committee. The information form contained a detailed summary of the study's purpose and ethical principles to be applied. After permission was granted, a simple random sampling technique was used in the first phase, following grade-based clustering. A purposive selection method was followed for Phase 2.

1.11.3.1 Phase 1: Quantitative data collection techniques

The calculated sample size was proportionally allocated to each high school and then to different class categories. For the selected six secondary schools, adolescents who met the inclusion criteria were interviewed using a self-administered questionnaire after signing the consent-to-interview agreement (Appendices 8 and 10). For adolescents under 18, permission was requested from family/guardians (Appendices 11 and 12). The researcher assisted those who could not complete the questionnaire independently. Data collection was conducted by trained healthcare workers after a questionnaire pre-test on 5% of the sample at a site different from, but neighbouring, the study area.

1.11.3.2 Phase 2: qualitative data collection technique

As per Creswell and Creswell's (2018:239) description, the data were obtained from focus group discussions with eight participants in each group and two discussion sessions at two high schools through group discussions by writing the response and recording the idea and interview for KIIP through structured open-ended interview guides intending to explore and describe the perception and socio-cultural determinants of adolescents' SRH utilisation and how to improve SRH service utilisation at the study area.

1.11.4 Data analysis method

1.11.4.1 Phase 1: Quantitative data analysis method

Questionnaires were reviewed for completeness, coded, cleaned, and edited, after which the data were entered into SPSS version 30 for analysis. Descriptive statistics were calculated for all variables, stratified by variable type. Binary logistic regression was

employed to examine the association between independent and dependent variables and to estimate crude odds ratios (CORs) with corresponding 95% confidence intervals (CIs). Variables with p<0.25 in the bivariate analysis were included in the multivariable logistic regression model to evaluate their effect on the use of SRH services, while adjusting for potential confounding factors. Statistical significance was defined at a p-value <0.05.

1.11.4.2 Phase 2: Qualitative data analysis method

It is a process of transcription, organisation, familiarisation, coding, and categorisation into themes (Lacey & Luff 2009:20-24). In this study, an expert in Afan Oromo and English translated the Afan Oromo transcripts into English. The researcher analysed the data thematically.

1.11.5 Phase 3: Integration of the findings of quantitative and qualitative questions

Objective: To develop a strategy to enhance utilisation of adolescents' SRH services in south-east Ethiopia.

1.11.6 Purpose of the strategy

The purpose of the strategy is to enhance the adolescents' SRH utilisation and then to reduce early and risky sexual practices, unintended pregnancy, unsafe abortion, and STIs among Ethiopian adolescents.

1.11.7 Development of a strategy

The integration of findings from both Phase 1 and Phase 2 would inform the development of a strategic framework designed to enhance adolescents' utilisation of SRH services. This phase of the research entailed a rigorous analysis of the determinants identified as barriers to adolescents' uptake of SRH services, alongside a critical appraisal of existing interventions and strategies to improve SRH service utilisation within this population. The results were systematically synthesised.

Based on this comprehensive synthesis, a draft strategic framework was formulated, underpinned by a detailed, evidence-based rationale. The principal investigator obtained

a roster of SRH specialists from the relevant zonal health authority and local public university (specifically, the Arsi Zonal Health Office and Arsi University). From this roster, five experts were purposively selected according to predefined criteria related to their expertise and experience in SRH service provision and research. These experts were oriented to the objectives, design, and procedures of the study.

Subsequently, the draft strategy was circulated to the selected experts via email for expert review, feedback, and validation. Their input was used to refine and finalise the proposed strategic framework.

1.11.8 Validation of review forms

The developed strategy was reviewed and evaluated by the SRH service experts for its acceptability, applicability, clarity, relevance, effectiveness, feasibility, and sustainability. The review committee also participated in improving and revising the developed strategy.

1.12 ENSURING RIGOUR

Rigour in research is conceptualised as a systematic, precise, and sustained adherence to methodological excellence, encompassing stringent procedural discipline, meticulous attention to detail, and a consistently high level of accuracy and reliability across all stages of the research process (Burns, Gray & Grove, 2015:39). The implementation of a comprehensive and methodologically sound research design enhances the likelihood of obtaining valid and dependable findings. The reliability of a study denotes the degree of trustworthiness and stability of its data, analytical procedures, and techniques, and reflects the extent to which these elements consistently uphold the overall quality of the investigation (Polit & Beck 2018:145). In this study rigour was maintained through strict adherence to validated data collection and analysis procedures.

1.12.1 Validity and reliability for the quantitative phase

The reliability of a study is the degree of confidence in its data, their interpretation, and the methods used to ensure overall research quality (Polit & Beck 2018:145). In this quantitative phase of the research, specifically in establishing the psychometric properties, the validity and reliability of the measurement instrument are essential to

minimise potential errors arising from measurement-related limitations inherent to the study.

1.12.1.1 Validity of instrument

In quantitative research, it is imperative to adhere to standards of validity and reliability to ensure the integrity and credibility of the findings (Creswell & Creswell 2018:37). Validity of the instrument is achieved when one can draw relevant and helpful inferences from scores on the instrument (Creswell & Creswell 2018:37). The development of the questionnaire was informed by the stated objective and aligned with WHO guidelines. The evaluation process involved a comprehensive review by the overseeing supervisor and experts in family health. The questionnaire's validity was considered established if it demonstrated the ability to accurately assess the independent variables pertinent to the study.

1.12.1.2 Reliability of the instrument

Reliability is the extent to which a measurement tool yields stable, consistent results across repeated administrations. It encompasses the stability of scores over time and the consistency of the test performance and scoring procedures (Creswell & Creswell 2018:206). The questionnaire’s reliability was assessed using pilot study results, and Cronbach's alpha was calculated to confirm internal consistency to be $\geq$0.7 (Taherdoost 2016:33).

1.12.2 Trustworthiness for the qualitative phase

1.12.2.1 Credibility, dependability, conformity, and transferability

Athanasou, Di Fabio, Elias, Ferreira, Gitchel, Jansen, Malindi, McMahon, Mpofu, Nieuwenhuis et al (2012:140), citing Peräkylä, conceptualise trustworthiness as the way data are systematically collected, organised, and categorised. In contrast, Lincoln and Guba (1985), as cited by Du Plooy-Cilliers, Davis and Bezuidenhout (2014:258), define trustworthiness as comprising credibility, dependability, and confirmability.

According to Holloway (2005:290), credibility is a central criterion for assessing how accurately research findings represent the phenomenon under investigation. In the context of this study, the credibility of the findings was strengthened through purposive sampling to recruit participants with direct knowledge of adolescent SRH issues, thereby positioning them as key informants. Probing questions during the interview ensured rich, detailed responses that enhanced the accuracy and depth of finding.

To further uphold the integrity of the research, the aims and objectives of the study were clearly articulated to all participants to foster informed and authentic responses. In addition, probing techniques were employed during data collection to elicit rich, in-depth information, thereby facilitating a comprehensive and nuanced interpretation of the findings.

In addition to credibility, dependability is defined as “the consistency of results over time” (Lincoln & Guba 1985 cited in Korstjens & Moser 2018:121). To guarantee dependability, the research steps were logical, traceable, thoroughly described, and documented. Each phase of the research method, including sampling, data collection, coding, and analysis, along with its application in the field, was detailed

Ensuring confirmability involves thoroughly documenting every procedure related to data collection and analysis, thereby enabling an audit trail (a systematic record of all research steps) and allowing other researchers to replicate the study. Ghafouri and Ofoghi (2016:1917) define confirmability as the extent to which others can verify the results. Transferability is the concept that concerns the applicability of qualitative research findings to other settings or groups beyond those in which the original data were gathered (Elo, Kääriäinen, Kanste & Pölkki 2020:45). In this study, transferability was ensured by considering the context of the study's execution and the research process that was undertaken. The trustworthiness is described more in Chapter 3.

1.13 ETHICAL CONSIDERATIONS

Ethics are moral principles that govern a person’s behaviour. Doing what is morally and legally right in research is said to be research ethics (Parveen & Showkat 2017:4). Ethical issues in research are currently receiving greater attention than ever. This applies to

quantitative, qualitative, and mixed-methods research and to all stages of research (Creswell & Creswell 2018:132).

The ethical considerations that must be anticipated are extensive and permeate all phases of the research process (Creswell & Creswell 2018:142). Researchers are required to follow widely accepted ethical standards, which involve respecting the rights of research institutions, protecting participant rights, and preserving scientific integrity, as specified by the Australian Council for International Development (ACFID) and the Republic of South Africa (Australian Council for International Development {ACFID] 2017:4-5; National Department of Health (South Africa) 2015:16). To safeguard the ethical considerations pertinent to the designated study area, ethical clearance was procured from the Research Ethics Committee of the Higher Degrees Committee at the University of South Africa (UNISA) (Appendix 1). Consequently, ethical approval from the institution was obtained to conduct the study (Appendix 6). Additionally, formal consent was acquired from the Arsi Zonal Education Office to facilitate data collection from the educational institution in question (Appendix 5).

This research followed the core ethical principles of beneficence, respect for human dignity, and justice as the main framework for meeting recognised ethical research standards (Polit & Beck 2018:134). In that respect, the persons taking part in the study were safeguarded by the requirement to obtain informed written/verbal consent and the communication of the right to quit the study at any time without being maltreated, which were made to the participants and upheld (Appendices 9, 10, 11 and 12). The individuals interviewed for the research were provided with detailed information about the research aims and the significance of their participation.

Throughout the study, privacy and confidentiality were ensured, and the principle of justice was upheld in the fair selection of the study respondents and participants (Kahn, Mastroianni & Sugarman 2018:2).

During Phase 1 of the study, participants who completed the self-administered questionnaire were informed of the research objectives (Appendix 8). For participants aged 18 years and above, written consent was obtained directly from them (Appendix 10). In contrast, for individuals younger than 18 years, consent was procured from a parent or legal guardian. (Appendices 11 and 12).

During Phase 2 of the study, participants were provided with an information sheet to review thoroughly (Appendix 4b). Any ambiguities or unclear points were clarified upon inquiry to ensure a comprehensive understanding. Prior to the interview, informed consent was obtained (Appendices 9 and 10). Additionally, explicit consent was obtained for the audio recording of the participants during the interview process (Appendices 9 and 10).

1.13.1 Privacy and confidentiality

The names of the participants were omitted in both Phases I and II of the study. The researcher chose a suitable location and time for data collection. The gathered data were stored in a locked cabinet in a secure area to ensure privacy. Participants received the contact information and addresses of both the researcher and the supervisor. Participants were assured that the data would be used solely for research purposes.

1.13.2 Risk and benefit

Adolescents were informed about the benefits of gathering information to develop strategies that improve their use of SRH services. They did not receive direct benefits from the study but were told that participation involved no risk and that their data would not be used against them.

1.14 STRUCTURE OF THE THESIS

This thesis contains seven chapters organised as follows.

Chapter 1: Orientation of the study

Presents the introduction and background, the problem statement, the purpose, the objectives, the research questions, and concludes with definitions of key terms.

Chapter 2: Literature review

Elaborates on the adolescents' SRH definition in the context of this study. This chapter also discusses the extent of adolescents' utilisation of SRH services and the factors that determine it.

Chapter 3: Research design and method

Discusses the methodology to be followed in this research design, data collection techniques, data reliability and validity, sampling techniques, variables, data analysis, and interpretation. The chapter concludes with pre-testing of the study tools and addressing ethical issues.

Chapter 4: Analysis, presentation, and description of the research findings

Presents and discusses the quantitative results from Phase 1 and the qualitative findings from Phase 2.

Chapter 5: Strategy to enhance utilisation of adolescents' SRH services in south-east Ethiopia

The researcher integrates the findings from Phases 1 and 2 to develop a strategy to enhance adolescents' utilisation of SRH services in Arsi, Southeast Ethiopia.

Chapter 6: Conclusion and recommendations

The researcher articulates the study's conclusions, formulates recommendations grounded in empirical evidence, and systematically delineates its methodological and the strengths and limitations.

1.15 SUMMARY

This chapter provided an overview of the study, outlining its background, research problem, significance, purpose, objectives, and research paradigm. It explained the theoretical framework, ethical considerations, and methodological procedures, and ended with a summary of the thesis's structure. The next chapter presents a critical review of the relevant literature.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

A literature review is a systematic and critical synthesis of the existing body of knowledge, designed to identify conceptual and empirical gaps, minimise redundant research efforts, and substantiate arguments by integrating prior empirical and theoretical evidence. By informing the development of contextually appropriate and theoretically grounded research questions, a literature review enhances the rigour, credibility, and validity of subsequent findings. In essence, it synthesises and critically appraises the contributions of previous scholars and studies relevant to the focal topic (Aveyard 2019:2; Cantero 2019:1).

This chapter reviews literature on adolescents' SRH service utilisation globally, regionally, and in Ethiopia, with emphasis on south-east Ethiopia. The included literature was published within the past 5 years, starting in 2017, based on the time each chapter covered. It also summarises lessons from related strategies and interventions. Relevant studies were identified through electronic searches and the UNISA library. Furthermore, PubMed, EMBASE, UNISA's institution repository, Science Direct (Elsevier), Cochrane Library, and Google Scholar Search Engine searched for the following topics and text words: "adolescent," "sexual and reproductive health," "strategic", and associated synonyms and terms. In addition, the researcher combined the search terms with Boolean logic. These Boolean operators (AND, OR, NOT) are used to test the combinations of search terms and related headings mentioned above.

The major findings of related studies concerning the identified gaps in the proposed intervention were elucidated. Evidence from the literature, as well as experiential insights from other contexts, reveals substantive deficiencies in adolescent reproductive health services in Ethiopia, which in turn give rise to a range of associated adverse outcomes.

2.2 ADOLESCENT SRH SERVICES IN SOUTH-EAST ETHIOPIA

The WHO (2021a:1) defines adolescence as a unique formative stage of development. Adolescence is a period of life that comprises the transition from childhood to adulthood. Adolescents experience rapid physical growth, hormonal changes, sexual development, and new and conflicting emotions, which increase cognitive and intellectual capacity during the transition from ages 10 to 19. Age is the only characteristic that defines this critical period of human development, while an individual's behaviours and choices during this period determine their future health and well-being. The adolescents targeted in this study are aged 15-19.

According to the United Nations Fund for Population Activities (UNFPA) (2019:3), SRH services are essential parts of universal health coverage (UHC). Countries moving toward UHC should ensure that their populations' SRH needs are met throughout the life course, including during adolescence. Comprehensive SRH is cost-effective and affordable for most countries; however, some countries require substantial investments to meet essential SRH packages.

The Sustainable Development Goals (SDGs) have highlighted adolescents and their development as a central priority within the Global Strategy for Women's, Children's and Adolescents' Health (2016-2030). As per this report, for a lengthy period, the unique health issues of adolescents were not getting attention. According to the United Nations (UN) Secretary-General, adolescents are central to everything the UN plans to achieve and to the overall success of the 2030 Agenda for Sustainable Development (WHO 2017b: 4-25).

Adolescent SRH services include:

- Provision of comprehensive sexuality education (CSE).
- Contraception counselling and provision.
- Antenatal, intrapartum, and postnatal care (PNC).
- Safe abortion care.
- STIs and reproductive tract infections, together with their associated adverse health outcomes (including but not limited to malignancies and infertility), as well as strategies for their prevention and clinical management.

- HIV prevention and care.
- Violence against women and girls' prevention, support, and care.
- Preventing and responding to harmful traditional practices (child marriage and female genital mutilation) (WHO 2022a:5).

Ethiopia has worked for decades to address adolescent and youth health problems. The previous adolescent and youth sexual reproductive health (AYSRH) Strategy (2007-2015) was not comprehensive and was undermined by weak cross-sectoral collaboration, low stakeholder involvement, insufficient resources, and persistent social and cultural barriers. As a result, its limitations remain, and adolescents and young people continue to face health and development challenges (MoH 2020:11).

There have been efforts to address adolescents' health, including SRH services, through the Ethiopian National Adolescent and Youth Health Strategy (2016-2020), as this group comprises a significant (26.2%) part of the Ethiopian population (MoH 2016:1-3). However, the SRH services for adolescents have not sufficiently improved in accordance with the plan, so that adolescents are facing problems related to SRH (Habte & Dessu 2023:1). The adolescent SRH services covered in this chapter (Sections 2.2.1–2.2.8) include: CSE; contraceptive counselling and provision; antenatal, intrapartum, and postnatal care (PNC); safe abortion care; STI and reproductive tract infection (RTI) services; HIV prevention and care; prevention, support, and care for violence against women and girls; and services to prevent and respond to harmful traditional practices.

2.2.1 Comprehensive sexuality education (CSE) and adolescents.

CSE is a structured, curriculum-based programme that addresses the cognitive, emotional, physical, social, sexual, and reproductive aspects of human development. Its objective is to equip children and young people with the knowledge, skills, attitudes, and values needed to promote their health, well-being, and dignity. CSE aims to build respectful social and sexual relationships, encourage critical reflection on how personal choices affect one's own and others' well-being, and support the understanding, realisation, and protection of their rights throughout life (UNESCO 2018:16).

Adolescent SRH is a significant public health challenge in sub-Saharan Africa. CSE is a key strategy to inform adolescents about sexual health and prevent adverse outcomes

(Achen, Smith & Doe 2023:1). Most sub-Saharan African countries recognise the importance of CSE, have ratified regional and international agreements such as the 2013 ESA commitment, and have integrated CSE into Health and Education Ministry programmes. However, sociocultural norms still hinder implementation. The team recommends strengthening CSE in ESA through pre-service teacher training, curriculum integration, and community and parental involvement in programme design and delivery (Wekesah, Nyakangi, Onguss, Njagi, Bangha, UNFPA & Christensen 2019:1-2).

Furthermore, CSE plays a critical role in providing young people with accurate and age-appropriate SRH information. However, the implementation of CSE remains a significant obstacle to achieving universal access. Key implementation challenges include community resistance, rigid organisational structures and conservative institutional cultures among implementing agencies, insufficient financing of CSE programmes, inadequately trained educators, and the systematic exclusion of out-of-school children. Addressing these constraints is essential to advancing universal access to CSE, which constitutes an important pathway for increasing adolescents' utilisation of SRH services (Wangamati 2020:60).

According to the study done in Zambia, poor SRH places a heavy strain on the health system and undermines sustainable development efforts. In response to these challenges, the researchers initiated an implementation to develop a model and test the link between the CSE programme and schools with SRH information. The study was conducted at 23 schools and surrounding local catchment health facilities. The results of this implementation research showed a decline in pregnancy among students who received CSE services (Mbizvo, Kasonda, Muntalima, Rosen, Inambwae, Namukonda, Mungoni, Okpara et al 2023:2).

CSE equips adolescents with the knowledge and skills to lead safe, healthy, and fulfilling lives. It empowers them to prevent HIV, STIs, and unintended pregnancies, and to challenge gender-based violence and inequality, strengthening their overall well-being and future opportunities (WHO 2018:12).

In Ethiopia, the Ministry of Health (MoH), along with international organisations and non-governmental organisations (NGOs), introduced CSE to strengthen adolescent and youth SRH. It was formally integrated into the national adolescent and Youth Health Strategy

(2016-2020) as a key intervention. Despite this, the Ministry of Education and several cultural organisations have consistently resisted its adoption, citing social and cultural concerns. However, the inclusion of CSE is limited to sexuality and life skills education, only omitting the comprehensive parts. The addressing of gender-based violence in CSE is restricted, and it is focused on only health development outcomes (Le Mat, Altinyelken, Bos & Volman 2020:692-701).

As a result, the researcher concludes that CSE is a very important factor in improving adolescents' use of SRH services. Regarding the evidence the researcher could access, no study has been conducted in the Arsi Arsi/south-east of Ethiopia on the CSE.

2.2.2 Contraception counselling and provision

Contraception is intentional pregnancy prevention through artificial or natural means. Contraception helps to have the required number of children and determines the pregnancy period by delaying or preventing childbirth. Approximately half of pregnancies among girls between 15 and 19 years in developing countries are unintended. Globally, pregnancy and childbirth complications are the leading cause of death among adolescent girls (WHO 2018:10).

The provision of contraceptive services is reported to be the lowest (25.9%) for adolescents in Ethiopia (Habte & Dessu 2023:1). According to a study report in Ethiopia, unmarried girls have limited access to contraception and face serious risks due to unplanned pregnancies, particularly potentially unsafe abortions. They are subjected to pressure to remarry, to early marriage, or to the challenges of single motherhood (Pankhurst & Espinoza 2022:5).

Among other age groups in Ethiopia, the age group of 15 to 19 years has the highest unmet need for modern contraceptive methods. This means that teenagers have more difficulties in getting contraceptives and therefore, the need for more attention to be given in ensuring adolescents' access to modern contraceptives. Therefore, the friendly service provider is in urgent need (MoH 2021a:12). Despite high awareness 94.8%, contraceptive use among Ethiopian adolescents remains low 9.4%, indicating a significant knowledge-practice gap. This gap suggests that structural and socio-cultural barriers, rather than a lack of knowledge, may be the primary driver of low utilisation (EPHI & ICF 2021:42-43).

In Ethiopia, the prevalence of unmet need for family planning remains at 22%, with substantially higher levels observed among young and adolescent girls, particularly those who are unmarried. According to available reports, service quality is adversely affected by provider bias, widespread misconceptions, and deficiencies in providers' knowledge and practical experience in the delivery of modern contraceptive methods (MoH 2020:6). By 2030, the Ethiopian government is aiming to reduce the number of teenage pregnancies among girls from 13% to 7% by 2025 and 3% by 2030. However, the unmet need for family planning among 15-19-year-old women in Ethiopia is 20.5% (MoH 2021d:4).

The Ethiopian government's five-year health sector transformation plan (HSTP) II for 2022-2026 states that one of the significant strategic interventions is to improve the demand, access, and utilisation of family planning services. In this plan, the government plans to raise the contraceptive prevalence rate to 50% (MoH 2022b:1-6).

2.2.3 Antenatal, intrapartum, and postnatal care

Antenatal care refers to a comprehensive range of health services delivered by qualified healthcare professionals to pregnant women and adolescent girls to promote and maintain optimal maternal and fetal health throughout pregnancy (WHO 2018:18).

Intrapartum care refers to the comprehensive clinical management provided by qualified healthcare professionals to women and adolescent girls during labour and delivery, to optimise health outcomes and ensure the highest possible standard of safety and well-being for both the parturient and the neonate (WHO 2018:18).

Postnatal care is an important period that starts right after the baby's delivery and lasts for about 6 weeks (42 days). It is a crucial time for mothers, infants, fathers, families, and everyone involved in infant care. However, during this period, the rates of maternal and newborn deaths and diseases were still very high, and the chances of enhancing the health of mothers and helping the care of infants were not fully taken (WHO 2022b:8).

Pregnant adolescents urgently need ANC, intrapartum, and PNC. Girls aged 15-19 are more vulnerable to health and nutrition problems than adult pregnant women due to

marginalisation and limited knowledge of ANC services (Fulpagare, Saraswat, Dinachandra, Surani, Parh, Bhattacharjee, Purty, Mohapatra, Kejrewal, Agrawal, Bhatia, Ruikar, Gope, Murira, De Wagt & Sethi 2019:1).

Sub-Saharan Africa has the highest rate of teenage pregnancy in the world. Although pregnancy during childhood poses greater risks for the mother and baby, the use of maternal care to mitigate the effects is low. Many adolescents in sub-Saharan Africa do not have access to or use maternal services during pregnancy. Several factors, from the individual to system level, have contributed to the low access and use. This implies that interventions aimed at women, their partners, health professionals, communities, and organisations (local to national) are needed to improve teenage mothers' participation in maternity care in sub-Saharan Africa (Mekonnen, Dune & Perz 2019:1-5).

A study in Ghana found that pregnancy and birth complications are the leading causes of death among adolescent girls, and teenage pregnancy remains common. However, little is known about ANC use among adolescents and young mothers. The study concluded that socio-economic factors drive adolescents' optimal use of ANC. Furthermore, to increase ANC coverage, efforts should focus on promoting girls' education and removing financial barriers to healthcare (Anaba, Alor & Badzi 2022:1-7).

According to the final report of the 2019 Ethiopian mini-demographic and health survey, 72.8% of pregnant adolescents visited a healthcare facility for ANC at least once, only 36.4% visited a healthcare facility for ANC over four times, and 53.6% were delivered in a health facility, while the rest were delivered at home (EPHI & ICF 2021:65).Furthermore, evidence from other studies conducted in Ethiopia indicates that women residing in urban areas, with higher socioeconomic status, formal education, and four or more ANC contacts were more likely to receive high-quality intrapartum care. Furthermore, adolescent mothers were more likely to receive quality intrapartum care than women aged 20-49 years; however, they were less likely to receive quality PNC than mothers in the 20-49-year age group (Negero, Sibbritt & Dawson 2023:1).

The researcher understands from the above evidence that adolescent pregnancy increases risk in maternal and child morbidity and mortality worldwide. Therefore, access to safe, appropriate, and affordable ANC, intrapartum, and PNC is essential to minimise this risk.

2.2.4 Safe abortion care

The Global Abortion Policy Database (GAPD) was launched in June 2017 to increase transparency in global abortion laws and policies and improve accountability for the protection of women's and girls' health and human rights. The policies included going beyond the legal categories of abortion and contain information on access requirements, service provision, and conscientious objections (Lavelanet, Major & Govender 2020:1).

According to the WHO report, approximately 25 million unsafe abortions are carried out worldwide every year, almost all in developing countries. Unsafe abortion is the termination of pregnancy by unskilled individuals, in non-compliant medical settings, or both. Women, including adolescents, who are pregnant unintentionally can use unsafe abortions if they do not have access to safe abortions. Access to safe abortions is hindered by restrictive legislation, poor service availability, high service costs, stigmatisation, conscientious objections from health professionals and unnecessary requirements, such as mandatory waiting times, compulsory consultations, false information, third-party approval, and medically unnecessary examinations to delay care. Unsafe abortions can be prevented by effective contraception, including general sexual education, preventing unintentional pregnancy, and legal abortions. Furthermore, the timely treatment of complications reduces the death and disability of unsafe abortion (WHO 2019a:1-4). Data show that about 12 million girls aged 15-19 give birth each year, mostly in low- and middle-income countries, and an estimated 3.9 million in this age group undergo unsafe abortions annually (WHO 2019a:1).

Literature showed that in Ethiopia, Malawi, and Zambia, adolescents are less likely to access abortion services due to lower levels of knowledge about the service, fewer financial resources, delayed seeking care, lower ability to navigate the healthcare system, and higher perceived and experienced stigma. Therefore, in Ethiopia, 18%, in Malawi 96%, and in Zambia, 65% of adolescents attempted unsafe abortions due to those obstacles to getting safe abortion services. This study recommends that policies must support the provision of non-cost healthcare, including its associated components. Information and dissemination of knowledge are crucial, especially on when, how, and where to access healthcare, and policies and legislation must take into account the specific experiences and needs of adolescents (Coast 2022:3-21).

Adolescents and young people in Ethiopia comprise a significant proportion of the population. Healthy adolescents constitute critical human capital and represent a strategic resource with substantial potential to contribute to their families, communities, and the nation. Their role extends beyond that of passive recipients of social interventions; they function as active agents of social transformation in both the present and future. Everyone, including adolescents, has a right to health. Young women are confronted with unique vulnerabilities and barriers to access to healthcare that are related to their age and gender, and their rights are often not recognised or supported. Safe and respectful information and care about abortion are essential to ensure the health and well-being of young women in sexual and reproductive health (MoH 2018:90).

A study done in southern Ethiopia, Wolaita Sodo Town, revealed that the prevalence of teenage pregnancy in school was 14.6%, having a family history of teenage pregnancy and exposure to media were the contributing factors (Kumma, Chaka, Daga, Alemayehu, Meskele & Wolka 2023:1).

There is still a restrictive abortion law according to the Ethiopian 2005 Criminal Code Article 551. Safe abortion is legal only in cases of exception, such as when pregnancy occurred following rape or incest, pregnancy is deleterious to maternal health or life, or women's medical conditions warrant the immediate termination of pregnancy. This also applies when the pregnant woman, owing to a physical or mental deficiency or her minority, is physically as well as mentally unfit to bring up the child, and the foetus has an incurable and severe deformity. However, young women are especially vulnerable, particularly where contraception is restricted to married women or non-consensual sex is common. About 14% of unsafe abortions in developing countries occur among women under 20. In Ethiopia, beyond legal restrictions, barriers to safe abortion include inability to pay, lack of social support, delays in seeking care and referrals, shortages of skilled providers, negative provider attitudes, and poor service quality (MoH 2021e:26-28).

Government reports from the Arsi Zone Health Department show that there is an improvement in the safety of abortion services for adolescents. However, the magnitude of unsafe abortions is still significant for school adolescents (AZHD 2023:2).

2.2.5 Sexually transmitted infections and reproductive tract infections (RTI) and their adverse outcomes (such as cancer)

STIs constitute one of the most prevalent public health challenges globally, with a disproportionately high burden observed among adolescents and young adults, who account for nearly 50% of all individuals diagnosed with an STI. In the Western Amazon, 32% of adolescents had at least one STI; Chlamydia was the most prevalent (23%), followed by trichomoniasis (5.6%), herpes simplex (4.6%), and gonorrhoea (3.1%) (Monteiro, Azzi, Bilibio, Monteiro, Braga & Nitz 2023:1).

A study conducted among school-attending adolescents in Sodo Town, Southern Ethiopia, found that 56.8% of participants had heard of STIs, 62.1% were aware that STIs are preventable, and 24.7% reported not knowing the preventability of STIs. The prevalence of self-reported STIs among these adolescents was 29.1% (Kassim, Bekele, Alemayehu & Meskele 2020:48).

STIs are diseases that affect the entire public health system. More than 1 million STIs are diagnosed every day, and it is estimated that 357 million new infections occur annually. Youth and adolescents are the most affected groups with STIs due to the lack of knowledge and medical services that lead them to engage in unsafe sex and have multiple partners (Assefa, Sema & Mekuriaw 2021:1).

Reproductive tract infections constitute a significant public health concern in Ethiopia. Nevertheless, the association between menstrual hygiene management, water, sanitation, and hygiene (WASH) conditions, and the occurrence of RTIs has not been adequately investigated. Existing study reports indicate that approximately one in ten adolescent girls develops an RTI. According to these studies, the factors contributing to RTIs include use of unclean latrines, failure to wash hands with soap before touching the genital area, history of previous RTI, having multiple sexual partners, changing menstrual pads only once per day, and washing the genital area only once during the menstrual period (Ademas, Adane, Sisay, Kloos, Eneyew, Keleb, Lingerew, Derso & Alemu 2020:1-2).

According to Zewdie, Kassahun, Habtie, Gashaw and Ayele (2023:1), cervical cancer is the fourth most common cancer affecting females. Adolescent girl vaccination is the

recommended strategy to prevent this cancer, but this activity lacks attention in Ethiopia. Adolescent vaccine acceptance is also low; knowledge and attitudes about vaccines are factors associated with this low acceptance rate. The study recommended that policymakers work with adolescents to enhance this service in Ethiopia.

2.2.6 Human Immune Deficiency Virus prevention and care among adolescents

It is estimated that around 1.6 million adolescents (10-19-years-old) in the world have HIV. One-fifth of the population (68%, or almost seven-tenths) lives in East Africa and South Africa. In 2018, there were 250,000 new HIV infections among adolescents. In sub-Saharan Africa, almost three times more girls were infected than boys. In sub-Saharan Africa, a girl is infected with HIV every four minutes. To end AIDS among adolescents, United Nations International Children's Emergency Fund (UNICEF) continually tries different approaches. Finally, UNICEF confirmed a 4T approach, “target, test, treat and train” for young people at risk of HIV infection. This approach aims to improve their health and well-being, and to ensure their survival and a healthy transition to productive adulthood, free from poverty, discrimination, and exclusion (UNICEF 2018:3-4).

According to the evidence, HIV treatment can save lives and has a preventive effect by suppressing viral load among infected people and reducing potential transmission. A report by the Ethiopian MoH revealed that comprehensive knowledge about HIV/AIDS among adolescents and young people in Ethiopia is low, especially among rural females. Only 16% of rural females have comprehensive knowledge of HIV/AIDS (MoH 2021a:28). National HIV prevalence among youth aged 15-24 is 0.34%, with 0.4% among young women and almost none among young men (EPHI & ICF 2021:13).

As per the findings of a study carried out in eastern Ethiopia, almost 90 percent of adolescents had heard of HIV, and only 25 percent of them were tested. Increasing awareness of HIV/AIDS with age, attending school, and living in the city are the advantages of adolescents’ greater awareness of HIV/AIDS. The study recommends that the HIV/AIDS prevention programme should emphasise the school health strategy, including HIV/AIDS education in schools and outside schools, particularly those with low educational attainment (Tesfaye, Dessie, Berhane, Assefa, Semahegn, Canavan & Fawzi 2020:113-118).

2.2.7 Violence against women and girls: Prevention, support and care

According to the WHO, violence is the deliberate application of physical power or force, either actual or being in the form of threat, against a person himself, another person, or his or her group or society, which either directly leads to or is very likely to lead to harm, death, psychological suffering, unhealthy development, or privation. According to this report, one in three women over the age of 15 has been subjected to physical and/or sexual violence at least once since they were 15 years old (WHO 2022c:1-2).

It is any act of sex-based violence that leads to or is likely to cause physical, sexual, or psychological harm or suffering to women (Chandra-Mouli, Neal & Moller 2021:2). According to the WHO Division of Reproductive Health and Research (WHO 2019b:4-9), violence against women is a violation of human rights rooted in gender inequality, public health problems and obstacles to sustainable development. Worldwide, 30 percent of women experience physical and/or sexual violence from intimate partners throughout their lives. Young girls, young women, ethnic minorities and disabled women are especially vulnerable to violence. Many victims cannot disclose abuse or seek help because they fear repeated violence. The study categorised protective factors into four levels as follows: Society (promoting gender equality, employing women, and combating violence against women), community (promoting non-violence against women and empowerment of women), relationship (promoting joint decision-making with partners and household responsibility), and individual (avoiding violence in the family, education, and socialising gender-equality attitudes between women and men).

The National Adolescent and Youth Health Strategy (2021-2025) of Ethiopia's MoH notes that adolescents have minimal awareness of existing legal protection. For instance, over half (53%) of married girls aged 15-19 do not know about the legislation protecting women from gender-based violence in Ethiopia (MoH 2021c:16). Sexual violence among females in Ethiopia is 24.6%. This study provides additional evidence that at least one in five male and female adolescents may experience physical and/or sexual violence. Furthermore, evidence shows female adolescents were at a higher risk of experiencing sexual violence compared to males (Kebede, Setegne, Kniss, Garfinkel, Veldman, Adinew, Aguilera, Golwalkar, Kassaw & O'Connell 2023:35-39). According to the above study, schools will play a better role in tackling gender-based violence and linking gender-based violence survivors to one-stop centres.

2.2.8 Harmful traditional practices (child marriage and female genital mutilation) prevention and response

Female genital mutilation or cutting (FGM/C): Any non-medical procedure that wholly or partially removes, or otherwise injures, the external female genitalia (WHO 2019b:1). More than 200 million girls and women are estimated to be living with the consequences of female genital mutilation/cutting (FGM/C), a practice mainly performed on girls under 18 (WHO 2018:58).

Child marriage: A legally recognised marriage or de facto conjugal union established prior to the attainment of 18 years of age (WHO 2018:58). Each year, approximately 12 million girls enter marriage before reaching 18 years of age.

According to WHO reports, child marriage frequently results in early pregnancies among adolescent girls, which are associated with elevated risks of pregnancy-related mortality and morbidity, as well as increased mortality and morbidity among infants born to adolescent mothers. Child marriage is additionally correlated with a higher likelihood of intimate partner violence (IVP) and has detrimental effects on girls' educational attainment and broader life opportunities.

The WHO's (2018:58-60) recommendations on adolescent sexual and reproductive health and rights delineate interventions operating across three mutually interrelated levels:

(1) **Policy level**: Mobilise political leaders, policymakers, and community authorities to implement and enforce legislation prohibiting marriage of individuals under 18 years of age, particularly girls.
(2) **Community level**: Promote shifts in family and community norms to postpone marriage until at least 18 years of age and expand girls' educational opportunities through both formal schooling and non-formal educational programmes.
(3) **Individual level**: Strengthen the agency and empowerment of girls through targeted interventions, implemented in parallel with efforts to transform family and community standards, to support delayed marriage and improved SRH outcomes.

The WHO suggests that for an adolescent to remain healthy, he or she should avoid marriage before the age of 18 years old, avoid pregnancy before the age of 20 years, and increase the use of contraception, thus avoiding the risk of unintended pregnancy occurring. The recommendations further included reducing the risk of coerced sex, unsafe abortion and where pregnancy has occurred and increasing attendance of ANC, skilled childbirth and PNC among adolescents (WHO 2018:6).

Worldwide, 640 million girls and women have married before the age of 18. South Asia accounts for almost half of the world's child marriages (45%), followed by sub-Saharan Africa (20%), East Asia and the Pacific (15%), and Latin America and the Caribbean (9%). Globally, the burden of child marriages is concentrated in five countries: India (33.8%), Brazil, Nigeria, Bangladesh (6.5%), and Ethiopia (2.9%). India alone accounts for one-third of the world's child brides (UNFPA & UNICEF 2022a:14).

According to UNFPA and UNICEF's (2022a:12-13) Country Profiles and Joint Programme for the Elimination of Female Genital Mutilation report, realising the Global Promise to End FGM/C by 2030, FGM/C in Ethiopia is less common today than in previous generations. According to the findings, 5 out of 10 girls aged 15-19 are affected, compared with 9 out of 10 in the 1970s. The knowledge about the consequences of FGM/C in adolescents is poor, 3.5 out of 6. The aim is to increase girls' knowledge, skills and leadership through comprehensive sexual education and life skills programmes that integrate FGM/C, and media campaigns that promote gender equality and girls' and women's rights. Girls receiving education support between the ages of 5 and 19 years were among the key strategies to end FGM/C.

In conclusion, in Ethiopia, the revised 2005 Criminal and Family Law stipulate 18 years as the legal minimum age of marriage for women, thereby rendering marriage before the age of 18 unlawful. Nevertheless, child marriage remains highly prevalent, with a national prevalence rate of 40.3%. The burden is particularly pronounced in the northern regions of the country, most notably in Amhara and Afar (MoH 2021b:13). FGM/C is illegal in Ethiopia under Articles 565-570 of the 2004 Criminal Code of the Federal Democratic Republic of Ethiopia (FDRE). Its prevalence is associated with family education, place of residence (higher in rural than urban areas), socio-economic status (lowest among the wealthiest families), and ethnicity (77.1% of Oromo women have undergone FGM/C).

Muslim girls face a 51% risk of both child marriage and FGM/C, higher than girls of other religions (Thomson, Callaghan, Issell & Rattue 2023:11-32).

2.3 ACCESS AND UTILISATION OF ADOLESCENT SRH SERVICES

At the global level, the health and well-being needs of adolescents remain insufficiently addressed (Partnership for Maternal, Newborn and Child Health [PMNCH] 2021:19). Empirical evidence from a study conducted in California indicated that limited access to services (26.3%) constituted a major barrier to the utilisation of sexual and reproductive health (SRH) services among adolescents (Decker, Atyam, Zárate, Bayer, Bautista & Saphir 2021:5). Adolescent pregnancy represents a persistent global public health challenge. Restricted access to family planning services is a central contributing factor. It is estimated that, worldwide, one in four adolescents aged 15–19 years who wish to avoid pregnancy are not currently using modern contraceptive methods due to inadequate access (Chandra-Mouli & Akwara 2020:2).

Recent evidence from low- and middle-income countries indicates that UHC will not be achieved without the SRH needs of the population being met (Ravindran & Govender 2020:106). Adolescents' sexual and reproductive health (ASRH) service availability and accessibility are essential for the prevention and control of ASRH problems. Moreover, it promotes the adolescents' utilisation of SRH services (Odo, Samuel, Nwagu, Nnamani & Atama 2018:1).

Access to comprehensive, high-quality SRH education enables adolescents to make informed decisions about contraceptive use for family planning and STI prevention. Therefore, SRH education for adolescents should be developed and delivered with active support from healthcare providers, educators, policymakers, and relevant institutions. Such multi-sectoral collaboration is crucial to empower adolescents and involve them in planning, implementing, and evaluating effective SRH programmes (Leekuan, Kane, Sukwong & Kulnitichai 2022:1). Although expanding adolescents' access to SRH services, especially for girls, is a priority, their autonomy in using these services remains limited in low- and middle-income countries (Groenewald, Isaacs & Qoza 2023:1).

In a study from Kisumu and Kakamega, Kenya, adolescents' SRH service utilisation was categorised as: public policy (ASRH police), community (social stigma, religion, and

misconceptions about SRH services), organisation (health facilities, and school), interpersonal (peers, parents, teachers and healthcare workers), and individual (knowledge, attitude and skill) (Mutea, Ontiri, Kadiri, Michielesen & Gichangi 2020:6).

In the study by Violita and Hadi (2019:1-4) in Makassar, Indonesia, the adolescents' sexual and reproductive service utilisation is 24.3%. Adolescents with better knowledge utilise SRH services more effectively. The study concludes by proposing regular socialisation between parents and adolescents, dissemination of information online, and training peer educators to better utilise adolescents' SRH services.

Adolescents' access to comprehensive sexual and reproductive health (SRH) services constitutes a substantial public health challenge in low- and middle-income countries, particularly in sub-Saharan Africa, where early marriage, adolescent childbearing, elevated HIV transmission rates, and limited coverage of modern contraceptive methods are highly prevalent. The utilisation of SRH services by adolescents is crucial for reducing the burden of sexual and reproductive health problems in this population (Birhanu, Tushune & Jebena 2018:1; Melesse, Mutua, Choudhury, Wado, Faye, Neal & Boerma 2020:1).

According to studies in Ethiopia, utilisation of ASRH services is low. A study done in the East Wallaga Oromia region of Ethiopia revealed that only 8.6% of adolescents visited health facilities for SRH services (Tilahun, Bekuma, Getachew & Seme 2021:1). Other studies from Southwest Oromia, Ethiopia, revealed that only 36.5% of adolescents utilised some SRH services; advice or consultation (67.2%), SRH information (38.7%), and most of them preferred to visit public health centres to receive SRH services (65%). Concerning contraceptive awareness, injectables (33.3%) scored the highest, followed by condoms (30.1%). However, only 5.9% of females had ever used any modern method of contraception, and single and Muslim females are less likely to seek service when compared to others (Birhanu et al 2018:42; Habte & Dessu 2023:1).

A study conducted in the Haramaya district of eastern Ethiopia demonstrated that sexual and reproductive health (SRH) information, education, and counselling constituted the most frequently utilised components of SRH services. Specifically, among the available SRH services, 80.1% of respondents reported using counselling and information services, 53% utilised voluntary counselling and testing (VCT), 25.8% used contraceptive

services, 13.2% accessed pregnancy testing and care, 13.9% sought STI treatment, and 7% obtained safe abortion services. According to this study, adolescents living far from health facilities were more likely to utilise SRH services than those living near health facilities (Abdurahman et al 2022:7-8; Habte & Dessu 2023:1).

A study conducted in Arsi Zone, Oromia, Ethiopia, stated that ASRH service utilisation was 30.1% among service users who visited a health facility, 43.7% utilised contraceptives, 30% utilised HIV/AIDS counselling and testing, and 23.5% utilised other treatments for disease (Tejineh & Fekadu 2018:144). Furthermore, another study conducted in the Arsi Zone, Southeast Ethiopia, revealed that the utilisation of at least one type of adolescent SRH service was only 26.1%. The most frequently utilised services were HIV voluntary counselling and testing (41.1%), followed by family planning services (18.8%), and screening and treatment for STIs (3.8%). A majority of adolescents (52.9%) expressed a preference for obtaining sexual and reproductive health (SRH) services from private health facilities. Approximately 30% of respondents reported having ever engaged in sexual intercourse, and none of the unmarried adolescents accessed SRH services other than voluntary counselling and testing, primarily due to misconceptions regarding their entitlement to use these services (Wakjira & Habedi 2022:4).

A study conducted in Southwest Oromia, Ethiopia, provided psychosocial and socio-cultural SRH education to young people and families or communities, aiming to improve adolescents' utilisation of SRH services (Birhanu et al 2018:42).

2.4 FACTORS DETERMINING UTILISATION OF ADOLESCENT SRH SERVICES

This section discusses the factors that influence the adolescents' utilisation of SRH services. These factors have enhanced or eased SRH service utilisation and hindered adolescents' utilisation of SRH services.

2.4.1 Awareness of SRH service among adolescents

Adolescent use of SRH services in Bhaktapur District, Nepal, is alarming. An adolescent service centre was introduced to improve SRH service use, but adolescents underused it

due to low awareness (Napit, Shrestha, Magar, Paudel, Thapa, Dhakal & Amatya 2020:1).

The main barriers preventing adolescents from using SRH services are a lack of sexual knowledge and awareness about service availability. In the Lao People's Democratic Republic, young people also suffered from poor SRH service utilisation due to limited awareness of these services (Thongmixay, Essink, De Greeuw, Vongxay, Sychareun & Broerse 2019:1). A qualitative study in primary care in Nigeria found barriers to adolescents' use of SRH services at the individual, social, and broader health system levels. So, poor knowledge about SRH, a poor attitude about SRH service, and feelings of shyness and shame were the major barriers for adolescents to utilise SRH services (Nmadu, Mohamed & Usman 2020:1).

Adolescents in Ethiopia face many types of health problems due to low knowledge and awareness about their sexual and reproductive health. Therefore, it is essential to provide adequate, accurate, friendly, and high-quality SRH services for adolescents to ensure healthy, reproductive generations in the future (Abraham et al 2019:49). Most young people in Ethiopia lack adequate knowledge of sexual and reproductive health and are often involved in dangerous behaviour. Despite the high prevalence of health problems and risk factors among adolescents and young people, access to health services and their use are limited, and health education and life skills training for young people are often fragmented (MoH 2021a:25-26).

According to a study in Ethiopia, education is also a key to reducing adolescent motherhood. Through awareness creation, supplying information about how their bodies work, their health, and the financial risk of adolescent pregnancy, adolescents will learn how to prevent pregnancy and practice safe sex (Presler-Marshall, Jones, Baird, Yadete, Hamory, Das & Workneh 2024:20). Adolescent awareness about SRH services is the point of departure and essential for an adolescent to seek help. Melesse et al (2020:4) state that a lower educational level leads to early initiation of sex, marriage, and childbearing for girls.

In a study conducted in western Ethiopia, only 28.1% of adolescents had heard about the availability of SRH services, and schools were the primary source of information. Among all who heard about SRH services, 99.08% and 79.27% of them got information about

counselling and testing for HIV/AIDS and contraception, respectively (Tilahun et al 2021:132). In Arsi Zone, Ethiopia, 43.7% of adolescents are aware of SRH services, and 30.1% utilise them. According to this study, pocket money and distance from service areas were the affecting factors, and the researcher recommended that the MoH, regional governments, community leaders, and parents be actively involved in the program (Tejineh & Fekadu 2018:132-133).

Adolescents in Arsi, Oromia, face multiple barriers to SRH services at the facility, provider, community, and individual levels. The study recommends that government and NGOs collaborate to build an informed community and modernise health systems so adolescent services are private, confidential, affordable, and gender sensitive (Wakjira & Habedi 2022:8). Furthermore, social and behavioural change (SBC) approaches aim to improve adolescent and youth health (AYH) by strengthening provider capacity through training, promoting peer education, enhancing community health education, and leveraging digital technologies. These strategies foster social change and support the development of adolescents' awareness, attitudes, and practices regarding SRH services (MoH 2022a:26-28).

2.4.2 Socio-demographic determinants of SRH service utilisation

In their 2021 paper done in California, Decker et al (2021:5) reported that adolescents have multiple concerns about utilising SRH services. The test results (52.7%), the cost of the service (52%), and the confidentiality of the service (49.8%) were among the concerns regarding the use of SRH services for adolescents; more than 50% of adolescents were unable to pay for SRH services. The study indicates that as age increases, the magnitude of obstacles decreases.

In West Bengal, India, only 29.4% of adolescents had utilised SRH services at least once. The most utilised service was SRH information and counselling, followed by STI/HIV-related counselling and treatment. The barriers to service included younger age, female sex, increased reproductive health needs, stigma, and the absence or minimal adolescent-rent communication (Banerjee, Paul, Das, Bandyopadhyay & Bhattacharyya 2023:5-6).

The level and comfort of adolescents to discuss SRH with caregivers positively affect adolescents' SRH utilisation. On the other hand, the level of SRH communication reduced with an increase in the number of adolescents in the household (Akatukwasa, Nyakato, Achen, Kemigisha, Atwine, Mlahagwa, Neema, Ruzaaza, Rujumba, Kaida, Spittal Tumwesigye & Wanyenze 2022:8).

A study done in southern Ethiopia revealed that being a rural resident was a factor affecting SRH service utilisation (urban utilisation 56.9% and rural 30.8%) among adolescents (Habte et al 2022:1). Another study done in Southeast Ethiopia reports distance to health facilities and cost of services (a lack of money) as factors hindering adolescents' SRH service utilisation (Wakjira & Habedi 2022:5).

2.4.3 Socio-cultural determinants of SRH service utilisation

According to a study conducted in Rwanda, even though health facilities provide enough information for adolescents concerning SRH services, religious leaders and family members are preventing adolescents from using SRH services by promoting abstinence and discouraging protective means during sexual intercourse (Ndayishimiye, Uwase, Kubwimana, Niyonzima, Dzekem Dine, Nyandwi & Ntokamunda Kadima 2020:1).

According to a study conducted in Mulanje, Malawi, community leaders play a substantial role in shaping how the youth make use of SRH services, including those related to HIV prevention and care. Their responsibilities encompass advisory functions, providing encouragement, regulating and restricting certain cultural practices, formulating local by-laws, and receiving and addressing complaints related to sexual abuse. Despite this extensive involvement, most community leaders exhibit limited knowledge and awareness of SRH services. The study therefore recommends that stakeholders allocate resources to strengthen community-level SRH awareness and capacity-building initiatives (Chimatiro et al 2020:1).

From a study conducted in Nigeria, fear of parental reaction, community attitude, and religious norms were raised as factors preventing adolescents from utilising SRH services (Nmadu et al 2020:1). Furthermore, the findings of other studies from Kenya show negative social-cultural influences being one of the significant barriers of SRH service utilisation among adolescents (Mutea et al 2020:1). A study among adolescent girls in

Kenya shows that there getting permission from the family to make use of SRH services is very difficult (Embleton, Braitstein, Di Ruggiero, Oduor & Wado 2023:1).

Evidence from Uganda showed that most caregivers/families (84.8%) have negative attitudes towards SRH services for adolescents. Female caregivers have a higher (85%) negative attitude to issues of adolescent usage of SRH services when compared to male caregivers (Akatukwasa et al 2022:6).

In Northern Ethiopia, family economy and religion highly affect adolescents' SRH service utilisation. According to this study, adolescents whose families were financially better off and who were Christians were more likely to utilise SRH services for adolescents when compared to adolescents who came from poor and Muslim families, respectively (Zepro, Ali, Tarr, Medhanyie, Paris, Probst-Hensch & Merten 2023:7-8).

A study conducted in the Arsi area of Oromia, Ethiopia, found that barriers to community perceptions of SRH services affect adolescents' use of these services. Among the obstacles, about 43% of adolescents reported fear of being seen by parents and neighbours at the facilities (Tejineh & Fekadu 2018:154).

In the Western Gojjam Zone of Ethiopia, the community is intolerant of premarital sex, discourages SRH service utilisation (e.g., contraceptive use) by unmarried adolescents, and discourages SRH communication with unmarried adolescents. According to the community, adolescent premarital sex and communication about SRH services are not accepted. It is believed that these services encourage the initiation of early sex. Therefore, it should not be practised (Munea, Alene, Debelew & Sibhat 2022:1).

According to a study conducted in the Arsi Zone of Oromia, Ethiopia, the community found SRH discussions with parents unacceptable. It can initiate early sexual behaviour (77%), which is culturally unacceptable (47.3%), and causes shame (53%). Families are busy with work and have no time to discuss SRH with adolescents (25.6%) (Bekele et al 2022:5). While the Rwandian study highlights the role of religious norms in limiting SRH uptake, similar Ethiopian studies show that religious influence varies by region, indicating that cultural factors may be highly context specific. This gap suggests the need for localised SRH strategies.

2.4.4 Healthcare-related barriers to adolescents' utilisation of SRH services

According to the researcher's survey, utilisation of SRH services and barriers to it can be categorised into individual, social, and broader health system barriers. Healthcare system factors include poor attitudes among service providers and inconvenient working hours at health facilities, which hinder adolescents' utilisation of services (Nmadu et al 2020:1).

Healthcare providers' knowledge, attitudes, and practices play an important role in adolescents' utilisation of SRH services. Substandard performance of healthcare service providers is a key problem to quality adolescent care (Odimba, Squires, Ferenchick, Mbassi, Chick, Plesons & Chandra-Mouli 2021:1). Evidence from a study conducted in Ghana indicates that stigma and discrimination by healthcare providers prevent adolescents from seeking SHR services (Challa, Manu, Morhe, Dalton, Lolla, Dozier, Zochowski, Boakye, Adane & Hall 2018:8).

The health system is poorly prepared to meet the health needs of adolescents in Ethiopia. Efforts must be made to change social norms affecting the ASRH service through actively engaging religious and community leaders, parents and families, and adolescents. Traditional values that negatively affect adolescent health, especially among girls, should be included (Health & Lives 2015:1-6).

Most healthcare workers in Ethiopia lack adequate information, knowledge, and skills regarding SRH service needs. Some healthcare workers have negative attitudes towards SRH services for adolescents (MoH 2021f:22). According to a study done in the southern part of Ethiopia (Habte & Dessu 2023:7) lack of skilled healthcare care providers, the high cost of services for adolescents, which they cannot afford, a lack of separate rooms for services to preserve adolescents' privacy and confidentiality, and the judgmental attitude of the healthcare providers were reported as the significant barriers for SRH service utilisation by adolescents.

Adolescents need different working hours from regular working hours to access SRH services because they are at school during regular working hours, or they fear that parents/family or neighbours in the service area will be there then. Therefore, most researchers recommended that stakeholders promote parent discussions with

adolescents; establish and strengthen youth clubs to provide better information and education on SRH services and related topics; and enhance utilisation.

2.5 ADOLESCENTS' PERCEPTION OF SRH SERVICES

Beliefs connect socialisation and behaviour. Formed through primary socialisation, they can change over time and differ even among people with similar backgrounds. Beliefs about the likelihood of a health problem, its severity, the benefits of preventive actions, and their costs are central in shaping health behaviours. In the early 1970s, the HBM was proposed as a key framework for understanding individual differences in health behaviour and designing behaviour-change interventions. It helps guide public health efforts and enables health professionals to work with patients' subjective perceptions of illness and treatment (Abraham & Sheeran 2014:30).

People are more likely to take preventive action when they believe they are at risk, see the condition as serious, think a specific action will reduce risk or severity, and judge that its benefits outweigh its costs. This reflects the HBM constructs: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action (triggers), and self-efficacy (confidence in one's ability to act) (Abraham & Sheeran 2014:47-49). Therefore, the HBM model will be used to assess adolescents' perception of SRH service. As per the HBM, perceived barriers such as stigma, distance, or negative provider attitude strongly influence utilisation. The reviewed studies consistently identify these as determinants.

According to a cross-sectional survey conducted in California, it was found that most adolescents face barriers to accessing appropriate SRH services, with the significant perceived barriers being service costs and confidentiality. Increasing age decreases all types of barriers (Decker et al 2021:7).

A study done in the southwest of Oromia, Ethiopia, revealed that adolescents' poor perception of SRH service, feelings of shame, being seen by others, and restricted norms will affect the use of SRH service. Most boys and girls associate SRH services with delaying having sex. So, 43.8% perceived SRH services as being connected to a healthy sexual life, protection from STI (35.4%), and not practising sex at all 31.2% (Birhanu et al 2018:1). A Similar study done in Arsi Zone, Oromia, Ethiopia, reported that the adolescent

SRH service utilisation is only 26.1% because most adolescents believe the SRH service, like contraceptives, is designed and allowed only for adults (Wakjira & Habedi 2022:4).

2.6 CURRENT FRAMEWORKS, STRATEGIES AND INTERVENTIONS FOR ADOLESCENTS' SRH SERVICES

There are various frameworks, strategies, and interventions that have been developed to improve sexual and reproductive health services globally, regionally, and at the country level. The discussion below presents literature on efforts to address adolescents' sexual and reproductive health services at different levels with a special focus on frameworks, strategies, and other interventions from other countries.

Even though the adolescent SRH service did not receive much attention in the millennium development goals (MDGs), there is a strong commitment to address it in the SDGs (United Nations 2016:23-26). The goal of SDG 3 is "Ensuring healthy lives and promoting well-being for all at all ages". Target 3.7 is, "By 2030, all people will have universal access to sexual and reproductive health services, including family planning, information and education, and the integration of reproductive health into national strategies and programmes".

As stated by Meherali et al (2021:1), access to quality SRH services and rights by adolescents in most low- to medium-income countries (LMICs) has been a major issue. Educational interventions (school and community-based SRH education), financial incentives and comprehensive family planning services after abortion have been effective in increasing the knowledge and use of adolescents' sexual and reproductive health and rights (ASRHR). However, there is inconclusive and limited evidence of the effectiveness of interventions aimed at improving violence prevention and adolescents' behaviour towards safe sexual practices. Finally, the researchers recommend further research to evaluate the program's effectiveness.

A study was conducted in Peru to develop a mobile SMS strategy to improve adolescents' SRH services by discussing it with community members, adolescents, and professionals. From this study, the researchers gained insight into adolescents' knowledge and attitudes regarding SRH. Moreover, the finding reveals that this strategy helped the researcher

understand how to approach adolescents to solve their problems (Guerrero, Lucar, Garvich Claux, Chiappe, Perez-Lu, Hindin, Gonsalves & Bayer 2020:2).

A systematic review by Onukwugha, Smith, Kaseje, Wafula, Kaseje, Orton, Hayter and Magadi (2022:1-2) to evaluate the effectiveness of mobile health (mHealth), interactive weekly text SMS or web-based interventions on SRH in improving adolescents' utilisation of SRH in sub-Saharan Africa reports that mHealth innovations are an effective solution to improving adolescent access to and use of sexual and reproductive health (SRH) services. The report did not mention the cost of intervention or the acceptance of the adolescents' families.

According to a study in Uganda, communication between parents and adolescents about SRH services during early adolescence (10-14 years) plays a significant role in improving adolescent SRH services and better adolescent and adulthood reproductive health outcomes. This communication success depends on parents' comfort in communicating with younger adolescents. The study concludes with recommendations for a strategy to improve parent/caregiver comfort levels by enhancing communication skills with adolescents regarding SRH service issues (Akatukwasa et al 2022:2).

A study in Uganda shows that adolescent girls and young women have a lot of public health issues to deal with, such as HIV, teenage pregnancies, SRH rights violations, child marriage, and violence. The enhancement of women's status has been selected as the primary tactic to increase adolescent SRH service usage. Financially supporting girls' education, at the national or local level, alongside community-integrated approaches to knowledge and skill development, can uplift adolescent girls and young women in LMICs, enhancing SRH outcomes and preventing violence (Lewington, Geddes & Gabagaya 2022:1-12).

Study in Kenya by Mutea (2023:39-40) reports that approaches to increase adolescents' access to SRH services cannot be achieved through a single strategy, since there are multiple barriers to adolescents' access to SRH services. Resolving SRH barriers to adolescents through efforts at the policy, health system, community, and individual levels is recommended. The study also calls for a paradigm shift from a single-intervention model to an integrated, multi-sectoral approach tailored to the local context to increase

adolescents' use of ASRH services. It is necessary to implement contextually specific evidence-based approaches to reach adolescents with life-saving interventions.

The Ethiopian strategic framework for adolescent and youth health (2021-2025) is based on an integrated, comprehensive service package. This five-year plan aims to improve their health and well-being by ensuring equitable access to and use of comprehensive health services (MoH 2021b:25).

The problem of SRH among adolescents has attracted attention within the strategic initiative of the Health Sector Transformation Plan II (HSTP II) to improve adolescents' use of SRH services by expanding comprehensive information, advice, and services, and by increasing access to psychosocial support. Recommendations include testing and expanding innovative initiatives focused on young people to improve the use of SRH services among adolescents. Further: Implement interventions to prevent, detect and manage sexual and other forms of gender-based violence and harmful traditional practices such as child and forced marriage. Moreover, strengthen the integration of adolescent and youth health with school health initiatives and programmes (MoH 2021a:40).

In Ethiopia, past adolescent youth health strategies have contributed to increased awareness among adolescents and young people, some changes in the contraceptive prevalence rate, reduced early marriage, and improved women's and young people's empowerment. However, early marriage is a critical concern where 19% of girls are married before their 15th birthday, contraceptive prevalence is less than 50% among adolescents' SRH services, and improvements in Ethiopia have been slow over the past 20 years. The new initiative is deploying middle-level healthcare providers to hard-to-reach areas of the community to address the gap left by the previous strategy (MoH 2021c:27).

These studies suggest that enhancing adolescents' utilisation of sexual and reproductive health services involves combining healthcare worker training, facility improvements, information dissemination, youth development programmes, education, and addressing cultural norms and gender inequality.

2.7 SUMMARY

The literature review chapter presented detailed information from the key literature on the use of SRH services for adolescents and the determinants. This chapter discussed the consciousness, perception, use, and factors affecting SRH services among adolescents worldwide, in Africa, in sub-Saharan Africa, in Ethiopia, and especially in Southeast Ethiopia. The issue of SRH among adolescents is described in terms of its purpose, impact, status, barriers, and socio-cultural factors.

The review of literature helped the researcher understand the shortage of studies on adolescents' SRH services and the low utilisation of existing studies in Ethiopia. According to the studies, the previously tried strategies were not successful in improving adolescents' utilisation of SRH services in Ethiopia. This review enabled the researchers to understand what available and what areas of focus are currently being explored. Therefore, this study aimed to develop a strategy to enhance the use of SRH services among adolescents in the Arsi area of Southeast Ethiopia. Chapter 3 describes in detail the methodology of Phase 1.

CHAPTER 3

RESEARCH DESIGN AND METHOD

3.1 INTRODUCTION

This chapter provides a detailed, well-organised description of the research design and methodologies used to achieve the study's objectives and answer the research questions. The first part outlines the research designs used in the investigation.

Mixed-methods research designs, including both quantitative and qualitative aspects, were used, characterised by descriptive, exploratory, and contextual research. The following section discusses research methodologies, including the population, sampling procedures, data collection processes and tools, and data analysis; all these matters are treated with great clarity. The text gives a thorough account of the measures taken to ensure validity and reliability within the quantitative paradigm and to establish trustworthiness in the qualitative approach. Research ethics were rigorously adhered to by considering the rights of participating institutions and participants and maintaining scientific integrity throughout the process.

3.2 STUDY SETTING

The research was conducted in six districts of the Arsi Zone, in Oromia, Ethiopia. The six districts referred to are Lemmu bilbilo, Digalu Tijo, Tiyo, Hetosa, Lode hetosa, and Diksis, and the selected schools were Lemmu, Hachalu, Bilallo, Eteya, Huruta, and Bulalla Secondary Schools, respectively. The districts were randomly selected from the Arsi Zone, which comprises 25 districts.

Arsi Zone lies 175 km southeast of Addis Ababa, Ethiopia’s capital. Asella is the capital of the Arsi Zone. It is subdivided into 25 rural districts and three urban (town) districts. Arsi Zone's estimated population for 2022 is 3,872,030, with 50.4% male and 49.6% Female. Adolescents and youth account for 35% (AZHD 2022:1). The total number of students currently attending secondary school (9-12 grades) in the Arsi Zone is 97622, of

whom 44734 (45.8%) are female and 52888 (54.2%) are male (Arsi Zone Education Office [AZEO] 2022:1).

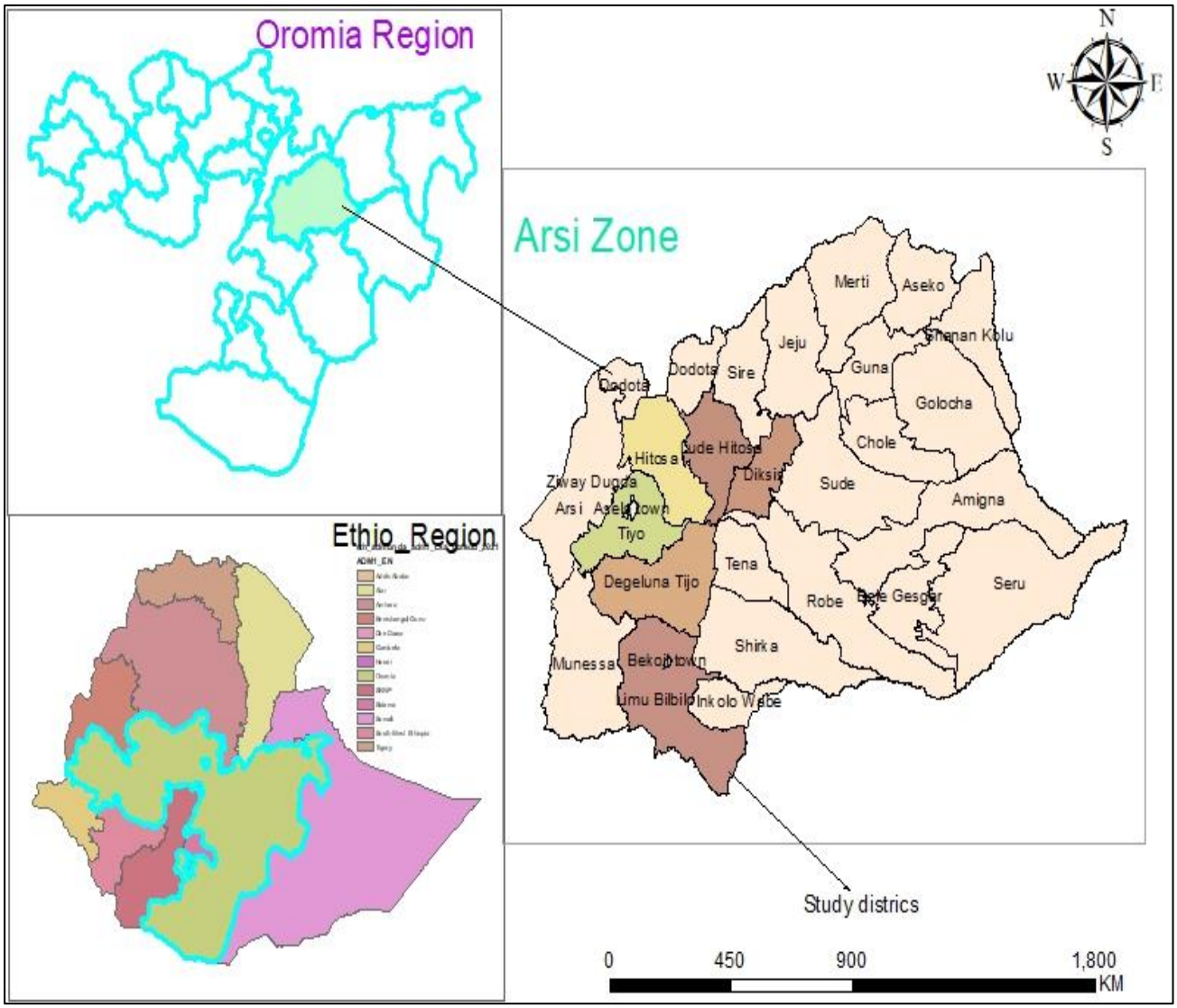

Figure 3.1 Map of the Arsi Zone, Oromia region, Ethiopia

(https://www.researchgate.net/figure/Map-of-Ethiopia-Oromia-Region-and-Arsi-Zones)

3.3 RESEARCH DESIGN AND PARADIGM

3.3.1 Research design

Research design refers to the set of plans that directs the collection and analysis of data to address a research question (Sekaran & Bougie 2016:95). It is a blueprint for collecting, measuring, and analysing data. Through the research design, the researcher decides

how to communicate with participants, select them, gather their information, analyse it, and present conclusions (Dubey & Kothari 2022:23; Sekaran & Bougie 2016:95). Research design is the plan and structure for answering research questions (Polit & Beck 2018:98).

The research design is chosen according to the research questions and goals. In this case, a mixed-methods approach has been utilised because it allows to tackle issues that are impossible to crack through either of the two methods, quantitative or qualitative, by their own (Creswell 2014:44). Mixed method research involves the collection, analysis, and integration of both quantitative and qualitative data either within or between a study or studies (Sekaran & Bougie 2016:106). It is a two-phase research design in which investigators initially collect either quantitative or qualitative data, followed in the subsequent phase by the complementary form of data collection. This sequential structure is employed to enable follow-up, elaboration, or further development of findings obtained in the preceding stage of the study (Creswell 2014:44).

The appropriate research method to answer the current research question is explanatory sequential mixed method design (Cresswell 2014:44). It is a design that attracts people with strong quantitative backgrounds or areas relative to qualitative approaches (Hafsa 2019:4-6). The goals of the explanatory design are to apply qualitative data in providing explanations for the quantitative results that require investigation, and to apply quantitative results in selecting the most appropriate participants for qualitative research (Creswell & Creswell 2018:304; Sharma, Bidari, Bidari, Neupane & Sapkota 2023:5).

An explanatory sequential mixed method involves initially carrying out quantitative research, analysing the outcomes, and then proceeding with qualitative research to provide further insight into the quantitative results (Cresswell 2014:44; Hafsa 2019:4-6). Utilising an explanatory mixed method research design with a sequential sequence, the researcher initially collects and analyses quantitative data in Phase 1. Following this analysis, the researcher intended to conduct a more in-depth investigation of adolescents' perceptions of SRH services in Southeast Ethiopia during the qualitative phase (Phase 2).

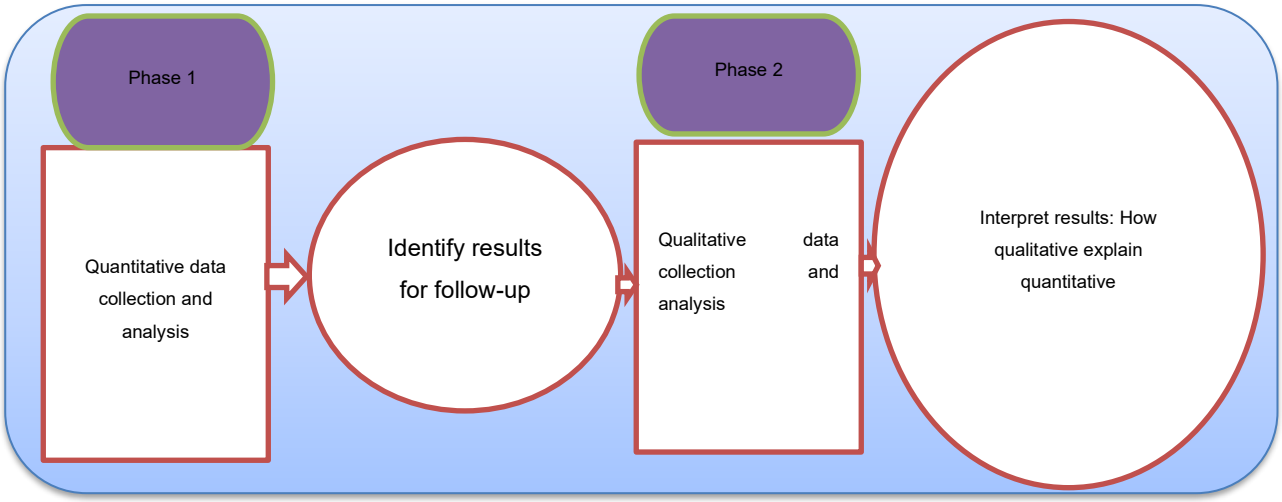

Figure 3.2 Explanatory sequential design (two-phase design)

(Adopted from Creswell & Clark 2018:300)

3.3.2 Research paradigms

The studies done by researchers often ground themselves upon research paradigms that display the researchers' fundamental beliefs about the truth, the reality, and the topics of research (Dawadi, Shrestha & Giri 2021:25). Accordingly, the researchers must understand and describe the nature of reality, what he/she can know, and how to search for it or best way to search for it (Rehman & Alharthi 2016:51). Research paradigms are the means of understanding and studying the world's reality (Rehman et al 2016:51) Among the four elements of research paradigm, namely, ontology, epistemology, methodology, and axiology (Guraya, Harkin, Yusoff & Guraya 2023:2-3). These four components together manage the research process. The methodology, which is a systematic approach or set of methods for conducting research, and epistemological and ontological assumptions influence the researcher's choice of methodology, and axiological considerations guide research ethical principles(Soto-Molina 2023:4).

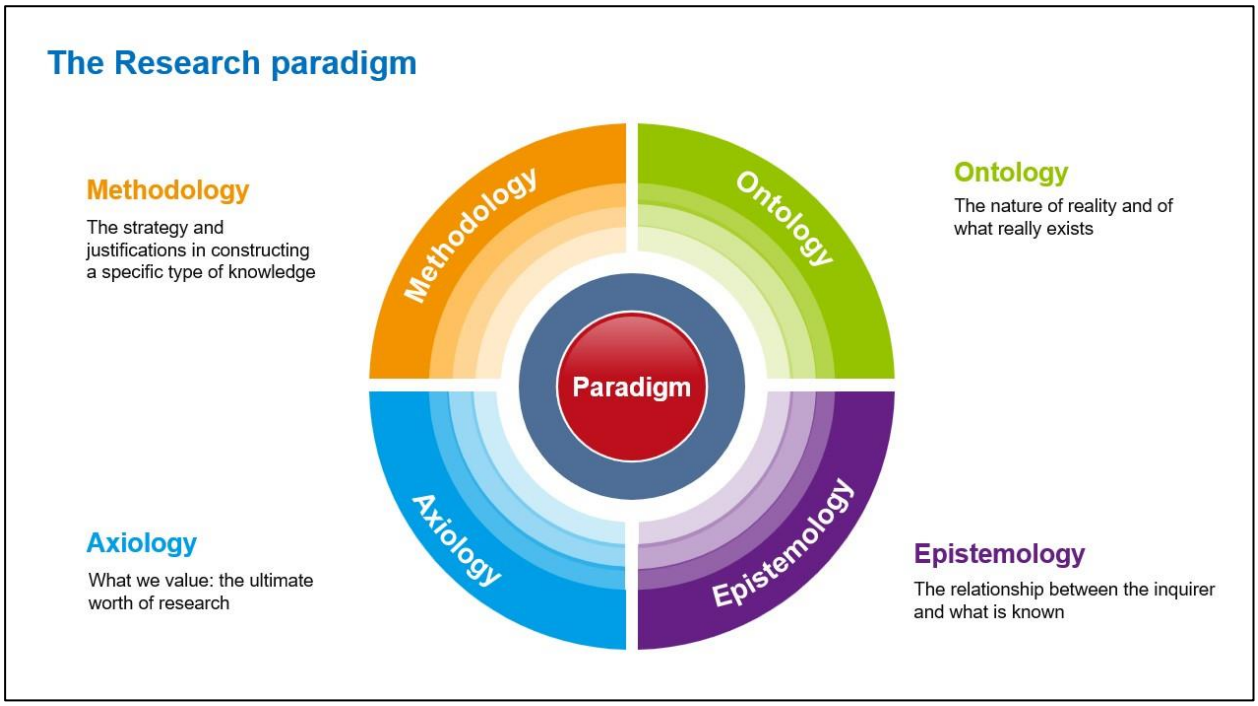

Figure 3.3 Elements of research paradigm

(Adopted from Soto-Molina 2023:4)

This study employed a pragmatic worldview as its overarching methodological orientation. The researcher focused on the central research problem and utilised all relevant and available methodological approaches to comprehensively understand the challenges associated with SRH services among adolescents in Southeast Ethiopia. Pragmatism, as a philosophical stance, does not conceive of reality as a single, absolute unity, but rather as multifaceted and context-dependent (Creswell 2014:9).

3.4 RESEARCH METHOD

Research methods are defined as the techniques used to collect data for a particular investigation (Bryman 2016:40). Moreover, the procedures followed in conducting a research study are often another way of describing research methods (Polit & Beck 2012:743). They are the systematic ways suggested by Polit and Beck (2012:118-136) and the WHO (2014b:1-3) for gathering and processing information pertinent to the research question. Hence, the research method impacts research quality. If researchers pick suitable research methods, they would be able to find a sample from the selected population, collect and analyse data, and finally come up with valid and reliable results (Bryman 2016:40). This study used methods that looked at the whole research life cycle

from population, sampling, sample size, data collection, data analysis, and even validity and reliability to ethical considerations.

3.4.1 Study population

In a research context, the term population denotes the entire set of individuals within a defined study domain who possess the fundamental characteristic specified by the research objective or underlying hypothesis (Asiamah et al 2017:1615; Majid 2018:3).

In the context of a research study, the population is defined as the complete set of units, such as individuals, organisations, events, objects, or items that are of interest to the researcher and from which samples are selected in order to address the research questions (Mohamed et al 2016:3-7; Willie 2023:2-3). The unit of analysis may therefore be a person, group, organisation, country, object, or any other entity about which researchers wish to draw scientific inferences. There are three types of populations in research: general, target, and accessible.

3.4.1.1 General population

The general population consists of individuals who share at least one defining characteristic that renders them eligible for inclusion in the study as members of the population (Asiamah et al 2017:1611; Willie 2023:2-3). This study quantitatively examines adolescents attending secondary schools in Southeast Ethiopia. The qualitative phase includes adolescents from these schools, healthcare workers with at least two years' experience in YFS at government health facilities, secondary school club leader teachers, and community leaders or elders in Southeast Ethiopia who meet eligibility criteria during data collection.

3.4.1.2 Target population

The target population is the entire group of individuals or units to which a researcher aims to apply the study's findings. It meets all predefined inclusion criteria, allowing the results to be generalised to its members (Asiamah et al 2017:1611; Casteel & Bridier 2021:5-6). In this study, the first quantitative phase targeted adolescents aged 15-19 years enrolled in secondary schools in the Arsi Zone, Ethiopia.

The researchers must eliminate general population groups that cannot convey their experiences and reflections clearly and in depth (Asiamah et al 2017:1613) to reach the target population. A qualitative research goal is to determine the target population from which the participants can share their best experiences. The qualitative phase (Phase 2) had the following four groups of the population as the target: adolescents aged 15-19 years, Healthcare workers in YFS class in government health facilities in Arsi Zone Oromia, Ethiopia who have served for at least 2 years, teachers of club leaders with 2 years of experience in secondary schools and community leaders/elders in Arsi Zone, Ethiopia who are eligible during this data collection period.

3.4.1.3 Accessible population

The accessible population refers to members of the target population who are willing to participate and will be available at the time of the study (Asiamah et al 2017:1613-1614). In Phase 1 (quantitative phase), the accessible population is adolescents aged 15-19 years in the six selected secondary schools in Arsi Zone, Ethiopia, who are willing and available to participate during the data collection period.

Accessible population refers to the final population from which the data are collected, or the sample drawn from it; it is equivalent to the sampling frame (Asiamah et al 2017:1613-1614) The target population for the qualitative phase is adolescents between 15-19 years old at six selected secondary schools, healthcare workers serving at YFS class for 2 years at government health facilities in the catchment of selected secondary schools in the Arsi Zone Oromia, Ethiopia. Club leader teachers teaching at secondary schools and community leaders/elders in Ethiopia during the data collection period, who fulfil the eligibility criteria.

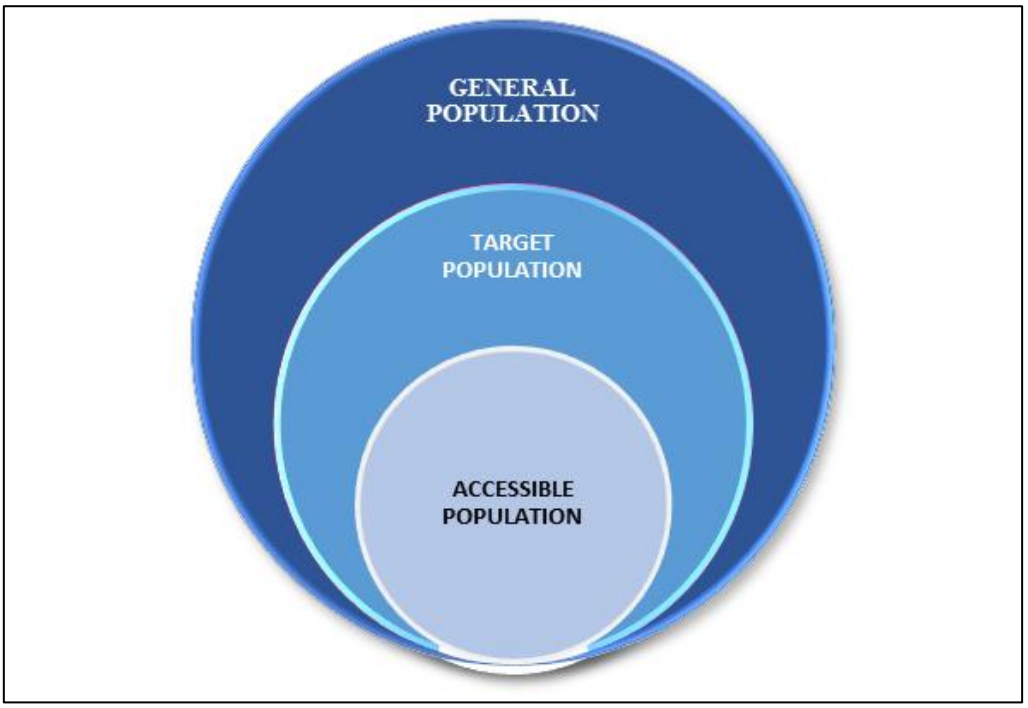

Figure 3.4 Relationship between the general population, target, and accessible population

(Adopted from Asiamah et al 2017:1611)

3.4.2 Sample size and sampling techniques

3.4.2.1 Sampling techniques and the sample size: Quantitative phase

Sampling refers to selecting a small group, known as the sample, from a larger group, known as the population, to gain knowledge about a situation in a manner that reflects the population as a whole. According to Brink, Van der Walt and Van Rensburg (2018:115-116), sampling helps manage resources more effectively. There are many reasons why complete population data collection is impractical, including the fact that the population may be spread across large areas, so sampling is necessary. The sample in this research consists of all adolescents aged 15-19 years attending selected secondary schools.

There are two main types of sampling techniques: probability sampling and non-probability sampling. Probability sampling is a technique in which every member of the population has a known and positive (non-zero) chance of being included in the sample, as defined by Daniel (2016:5). Conversely, Crossman (2014:38) states that the

probabilistic sampling method is the most appropriate for projects requiring a high degree of representativeness.

A researcher utilising non-probability sampling chooses research subjects according to their own judgment of the applicable parameters; thus, a more subjective selection procedure is used (Daniel 2016:5; Grove et al 2013:281). It involves choosing subjects on a non-random basis, based on convenience or other criteria, which makes data collection easier (Fowler 2014:54).

- **Sampling for this study**

In this study, the researcher applied specific sampling techniques that were the most suitable for the topic being investigated (Daniel 2016:2). This involves drawing statistically representative individuals from the population of interest (Majid 2018:3). Consequently, sampling was carried out for the Phase 1 (quantitative phase) and Phase 2 (qualitative phase) of the study.

Phase 1 (quantitative phase)

Respondents for this study were sampled using probability sampling methods and procedures considered appropriate. Probability sampling ensures that each population element has a non-zero chance of being selected (Showkat & Parveen 2017:3).

Among the procedures employed in probability sampling, simple random sampling was used to obtain a sample for this study. It ensures the sample reflects the larger population, which facilitates generalizability. Under this simple random sampling technique, the selection of participants or objects for research is done by giving everyone or everything an equal opportunity to be there and reducing bias (Crossman 2020:1). The simple random sampling technique has two recognised methods that are aimed at reducing any biases in the sampling process, these being the lottery method and number assignment. The study used the lottery method to select six districts from the 25 in the Arsi Zone, along with six secondary schools. The participants were then proportionally divided by school into 9^{th}, 10^{th}, 11^{th}, and 12^{th} grades based on the sample size.

The total sample size was then divided among the secondary schools based on the number of teenage students enrolled at each school. The systematic random sampling (SRS) method was applied to pick the study respondents. If the chosen student is absent from the survey, the researcher proceed to the next student on the list of registered students.

- **Selecting study respondents**

The study selected participants using multi-stage sampling. Initially, a simple random sampling method was used to select six districts of 26 districts in the Arsi Zone using a lottery system. There are 24 secondary schools in these selected districts, six of which have also been selected by lottery to ensure representativeness, so that studies can be carried out and meaningful cross-school comparisons can be made. The sample aligns with the scope of the study and provides sufficient data to answer the research questions without compromising quality.

Based on sample size calculations and the proportional distribution of samples across secondary schools, adolescents were grouped into grades 9-12, with both male and female proportions accounted for. The study encompassed all six randomly chosen secondary schools. The determined sample size was distributed proportionally to each school based on the number of adolescent students at each school. Systematic random sampling (SRS) was then employed to choose participants from each grade and class using the attendance lists. If a chosen adolescent was absent during the data collection period, the next adolescent on the list was selected as their replacement.

- **Eligibility criteria**

Participation in the research requires meeting the eligibility requirements. According to Polit and Beck (2018:726), eligibility criteria are the standards used to identify the population and refer specifically to the characteristics that define it. Fellegi (2013:42-48) also points out that eligibility criteria are the traits that potential respondents from the target population must meet to be included in the study. The adolescents aged 15 to 19 years, irrespective of gender, attending schools in any of the six selected districts in the Arsi Zone were the only participants in this study's Phase 1 who met the eligibility criteria.

To be eligible for participation in the second phase of this study, individuals had to be adolescents who took part in the first phase of the focus group discussion study. This requirement also extended to club leader teachers from the same school as the adolescents, health professionals employed at YFS/SRH or youth centres within the selected schools' coverage area, and community elders living in six designated districts of the Arsi Zone. The subsequent sections provide the inclusion and exclusion criteria for both Phase 1 and Phase 2.

Inclusion and exclusion criteria for Phase 1 (quantitative phase)

- **Inclusion criteria**

  - Adolescents who are residing in the six selected districts of Arsi Zone.
  - Adolescents attending grades 9-12 at public schools in selected districts.
  - Adolescents, girls, and boys attending secondary school aged 15-19 years.
  - The adolescents should be accessible during school operating hours during the data collection period, January to February 2024.

- **Exclusion criteria**

  - Adolescents attending class at night.
  - Adolescents aged under 15 years.
  - Adolescents who are either physically or mentally unwell and unable to engage in reading, writing, or listening.
  - An adolescent who was not present at school during the period when data was being collected.
  - Adolescents attending private school.

Inclusion and exclusion criteria for Phase 2 (qualitative phase)

- **Inclusion criteria: Qualitative phase**

  - Adolescents attending secondary school during the regular daytime and aged 15-19 years in six selected secondary schools in Arsi Zone, Oromia, Ethiopia.
  - An adolescent who participated in the first phase.

- An adolescent who is willing to participate.
- A teacher who has been teaching for 2 years at a selected secondary school, serving as a club leader, and is willing to participate in the study.
- A healthcare worker who has been working at least 2 years at a selected health facility on SRH service and is willing to participate in the study.
- Community Leader in the area surrounding the secondary school

- **Exclusion criteria: Qualitative phase**

  - Adolescents attending class at night.
  - Adolescents aged less than 15 and above 19 years old.
  - Adolescents who are physically or mentally ill and unable to respond to the questionnaire.
  - Adolescents who are not willing to participate in the FGD.
  - An adolescent who did not participate in the first phase of the study.
  - Teachers who serve less than 2 years at selected schools and are not club leaders.
  - Healthcare workers who have served for less than 2 years at selected health facilities and are not providing SRH services.

3.4.3 Sample size

A sample is understood as a portion of the population that serves as the primary source of data collection (Polit & Beck 2018:118-136). It has been observed that surveying the entire population is not only costly but also complex and time-consuming, particularly when subjects are distributed across different areas (Crossman 2014:17). This necessitated that the researchers use cost-effective sampling methods for data collection.

The adolescents aged 15 to 19 years attending classes in the six selected secondary schools during Phase one constitute the sample for this study. Apart from the adolescents, club leader teachers from the six selected schools, healthcare workers at YFS near each selected school, and community elders living around these schools were included in Phase 2, the qualitative phase.

3.4.3.1 Sample size for Phase 1 (quantitative phase)

The researcher used the single-population proportion formula to calculate the Phase 1 study sample size.

$$n = \frac{(Z_{\alpha/2})^2 * P(1-P)}{d^2}$$

As,

n = sample size of the study
Z = standard normal variate at the 95% confidence level (i.e., 1.96)
d = margin of error (0.05)
p = A previous study suggests that the anticipated rate of adolescents' utilisation of SRH services is 26.1% (Bekele et al 2022:1). A design effect of two (2) was applied, and an additional 10% was included for non-response due to the sensitive nature of the questionnaires, resulting in the final sample size.

$$n = \frac{(1.96)2 * 0.261(1 - 0.261)}{(0.05)2}$$

n = 296*2 (design effect) = 592
n = with 10% non-response rate = 592+59 = 651

Therefore, the final sample size for the quantitative study is 651.

Table 3.1 Allocation of sample size across secondary schools

Name of schools	Population size	Sample proportional to schools	Sample allocated to each school
Lemmu Secondary School	421	(421/6518) *651	42
Hachalu Secondary School	1352	(1352/6518) *651	135
Bilallo Secondary School	321	(321/6518) *651	32
Eteya Secondary School	2301	(2301/6518) *651	230
Huruta Secondary School	1720	(1720/6518) *651	172
Bulalla Secondary School	398	(398/6518) *651	40
Total	**6518**	**-**	**651**

3.4.3.2 Sample size and sampling techniques for Phase 2 (qualitative phase)

A nonprobability sampling method was deliberately used to select study participants (Creswell & Creswell 2018:239). The researcher deliberately selected participants, particularly teenagers aged 15-19, because of their understanding and familiarity with SRH among adolescents. The sample comprised four teachers from selected high schools, four health professionals from nearby medical centres, and four community leaders from the research area. Data collection continued until data saturation occurred during the focus group discussions, the point at which the group no longer generates new ideas and ideas begin to repeat. (Creswell & Creswell 2018:239). The total participant count was 32 for focus group discussion and 12 for KIIP. Each focus group discussion had 8 participants, and 4 focus group discussion groups took part. The eight participants of the FGD comply with the standard recommendations 6-10, providing sufficient diversity of views while maintaining a manageable size. for effective moderation. In Phase 2, the overall number of study participants was 44.

Determining sample size in qualitative research is challenging, as it requires continuous data collection until no new information is revealed. New information is no longer coming from the participants, and thus the previously gathered data becomes useless; this situation is termed saturation (Patten & Newhart 2018:101). Beitin (2014:2) states that qualitative researchers disagree on a single ideal sample size; hence, the present research did not set one in advance. Instead, it followed the course of data saturation, that is, collecting data until it was complete (Beitin 2014:2). Saturation is reached when no new concepts are introduced, and the same concepts are heard repeated throughout the data collection process.

3.5 DATA COLLECTION AND PROCEDURE

Data collection is the systematic gathering and measurement of relevant variables to answer research questions, test hypotheses, and evaluate results (Kabir 2018:201-275). The two phases, which were distinctly different, made up the data collection process. Firstly, a quantitative approach was used to collect the data, and questionnaires were administered to adolescents. The quantitative phase was conducted in Southeast

Ethiopia from January to February 2024. Later, the qualitative phase, which involved the researcher's position, took place in May and June 2024.

The UNISA Health Studies Research Ethics Committee provided ethical approval (Appendix 1), and the Arsi Zone Education Office in Ethiopia granted the permit for data collection (Appendix 4). The school officials were also asked to confirm the information provided by the UNISA Health Studies Research Ethics Committee by signing it (Appendix 5). This information sheet provides comprehensive details on the study aims and the ethical principles followed (Appendices 4a & 4b). Once permission was granted (Appendices 5 and 6), a simple random sampling technique was applied in the first phase, following clustering by grade. For the qualitative phase, a purposive selection method was employed.

3.5.1 Development and administration of data collection tools

The researcher considered the development of appropriate data-gathering tools to be one of the conditions for obtaining relevant data for his research. The proper methods of data collection were used for both quantitative and qualitative data in this research project. The questionnaire and in-depth interview guides (Appendix 8) were developed from a thorough literature review of the research topic and were also pre-tested.

3.5.1.1 Development of a questionnaire: Quantitative phase/Phase 1

A questionnaire is one of the main research tools comprising a list of questions or items to be answered by the participants (Nayak & Singh 2015:87). The different modes of administering questionnaires can be identified by various aspects such as the study's objectives and resource availability, which are the main factors influencing their choice (Thomas 2023:1). Questions can be set up either for respondents to fill in themselves or for an interviewer to administer (Jacobson 2017:129).

In this study, the researcher prepared and administered an interviewer-administered questionnaire (interview schedule) to collect data during the quantitative stage, as some respondents might not be able to read or write. Godwill (2015:83) argues that data collection through interviewer-administered questionnaires is superior to that through self-administered questionnaires and considers this a strength.

A list of questions guided the administration of the interviewer-applied questionnaire to the participants selected to share their views for this dissertation. The questionnaire consisted of both open and closed questions about the respondents.

Section 1: Socio-Demographic and Economic characteristics.
Section 2: Awareness of SRH Services utilisation.
Section 3: Adolescent SRH Service utilisation.
Section 4: Adolescent SRH Service utilisation barriers.

To facilitate comprehension among participants, the English questionnaire was translated into Afan Oromo, the local language. After that, it was reverse translated to English to check for uniformity. Following the philosophy of (Bekele & Yimam 2017:111), the researcher scrutinised each questionnaire for clarity and correctness. Identification numbers were assigned to all filled questionnaires (Bekele et al 2022:4-6).

3.5.1.2 Development of an interview guide: Phase 2

The investigator developed the interview guide for both the focus group discussion and KIIP by consulting existing literature and aligning it with the study's goals. The key interview guide themes were derived from an extensive analysis of the quantitative results. The researcher selected key issues from the quantitative phase that required further investigation and clarification through qualitative focus group discussion and key interviews and developed major questions and prompts to explore these themes and findings in greater depth.

3.5.1.3 Training of research assistants and data collection instruments

A team of six research assistants was recruited to gather Phase 1 or quantitative data. Among them, two served as supervisors and held a BSc in Health, while the other four possessed a diploma. These data collectors were chosen from the Asella City Administrative Health Office. The supervisors were part of the SRH/YFS unit at the Asella Health Centre.

The research assistants underwent a two-day training session in Asella town and carried out a pilot test at a school in the nearby district. During the training, the study's objectives, paradigm, and methodological techniques were discussed. The data collection instruments were reviewed with the researcher.

3.5.1.4 Pre-testing of research tools (quantitative and qualitative phases)

Pretesting involves testing research tools on members of the target population to assess their reliability and validity before final distribution. This evaluation uses individuals who meet the inclusion criteria but are not part of the sample (Polit & Beck 2018:131).

Pre-testing data collection instruments is essential to ensure that relevant questions are included and irrelevant items are excluded. Jacobson (2017:129) further notes that pre-testing enables the researcher to systematically review the instrument to determine whether the questions are logically coherent and meaningful and to implement any necessary revisions.

Pre-testing estimated the time needed to administer the instrument package and identified difficult, misinterpreted, or offensive questions. It also assessed data collector training needs and ensured the measures yielded sufficiently variable data (Polit & Beck 2018:296). The questionnaire and interview guides were pre-tested on eligible respondents who were not part of the main survey. The pre-test took place on 31 October 2023 at Sagure Secondary School.

A pilot study at a local secondary school refined the data collection tool, but its findings were excluded from the primary data. Ethical clearance was granted by the UNISA Health Studies Research Ethics Committee (Appendix 1), and local authorities approved the study (Appendices 4, 5 and 6). Adolescents gave informed consent and were briefed on the purpose and ethics (Appendices 9, 10, 11 and 12).

3.5.2 Data collection for the quantitative phase data collection

A sample of 651 respondents from secondary schools and class categories completed a self-administered questionnaire (Appendix 8) after providing consent; for those under 18, parental or guardian permission was obtained (Appendix 11). Assistance was provided

to adolescents who needed help completing the questionnaire. Trained healthcare workers collected the data after pre-testing it on 5% of the sample (33 adolescents) near the study site (Sagure secondary school on 31 October 2023). An adjustment was made to the data collection tool after the pre-test.

3.5.3 Data collection for the qualitative phase data collection

As described by Creswell and Creswell (2018:239), data collection was conducted with 32 adolescents from Lemmu and Hachalu Secondary Schools. The adolescent was purposely selected from those who participated in phase one of this study in selected secondary schools and volunteered to participate in FGD. Furthermore, data were gathered from 4 healthcare providers working at the Lemmu, Sagure, Bilallo, and Iteya health centres' youth-friendly units. The research assistants (two health workers working at the YFS unit) participated in all data collection processes. The researcher coordinated the interview while the research assistant took notes and followed the digitally recorded interview for better idea capturing. Probing was used during FGD discussions and interviews with key informants to obtain a better explanation of the topic. The discussion was conducted by Afan Oromo because all the participants were Afan Oromo-speaking participants, which made the discussion easier. Four gender club focal teachers from Lemmu, Hachalu, Bilallo, and Iteya Secondary Schools also contributed data. Furthermore, data were collected from 4 community leaders specifically chosen from the areas of Lemmu, Hachalu, Bilallo, and Iteya Secondary Schools.

Focus group discussions involved eight adolescents from two secondary schools, organised into four groups (two female, two male). Same-sex grouping was used to help participants share experiences freely. The researcher moderated the FGDs, while two assistants took notes and made audio recordings.

Discussions were held in a separate room large enough for all groups, with circular seating. The discussion took place during breaks in private classrooms, with other students outside and no other adults present. With participants’ consent, each FGD was audio recorded to enhance data reliability. Each discussion lasted 45–60 minutes.

Participants were assigned codes, for example: Group 1 Participant 1 = (G1P1), Group 2 Participant 1 = (G2P1). In the analysis, each verbatim quote is represented accordingly (Table 3:2).

Table 3.2 Number of focus group discussion participants from each group

Focus group discussions	Number of focus group discussion participants
Group 1	8
Group 2	8
Group 3	8
Group 4	8
Total	**32**

Data were collected through written responses, idea recording, and structured open-ended interview guides for Key Informant Interviews (KIIs). The purpose was to explore perceptions and socio-cultural factors affecting adolescents' use of SRH services and to identify strategies to improve SRH service utilisation in the study area.

Key informants were purposively and voluntarily selected health care providers, secondary school teachers, and community leaders, chosen for their experience in providing SRH services, educating adolescents, and their influential community roles. Researchers travelled to their workplaces at an appropriate time for the participants and conducted in-depth, semi-structured interviews in Afan Oromo. Key Informants' suggestions and comments were used to address adolescents' SRH problems and to assess whether current SRH education content and scope meet adolescents' needs, as well as to recommend improvements. Written consent, including permission for audio recording, was obtained from each participant. Twelve KIIs were conducted (four health workers, four teachers, and four community leaders). Data collection continued until thematic saturation was reached after 12 interviews, at which point it was concluded. Each interview lasted about 35 minutes on average.

Table 3.3 Number of key informants' interview participants

Number of key informant interviews	Number of key informant interview participants (KIIP)
Healthcare worker	4
Teacher	4
Community Leader	4
Total	**12**

3.6 DATA ANALYSIS METHOD

3.6.1 Phase 1: Quantitative data analysis method

Questionnaires were checked for completeness, then coded, cleaned, edited, and entered into SPSS version 30 for analysis. Descriptive statistics summarised frequency distributions, means, and standard deviations. Binary logistic regression assessed associations between variables and estimated crude odds ratios (COR) with 95% confidence intervals (CI). Variables with $p<0.25$ in bivariate analysis were entered into multivariate logistic regression to assess the effect of each independent variable on SRH service use, controlling for confounders. Statistical significance was set at $p<0.05$. A professional statistician verified that the underlying assumptions of the applied statistical tests were satisfied (including normality, uniformity, and independence). Procedures for data cleaning, recoding, and transformation were comprehensively documented. The results were interpreted using confidence intervals, effect size indices, and predefined significance levels in an appropriate and methodologically rigorous manner.

3.6.2 Phase 2: Qualitative data analysis method

The analytic procedure followed the stages of transcription, organisation, familiarisation, coding, and the subsequent grouping of codes into themes (Lacey & Luff 2009:20–24). Immediately after each interview and focus group discussion, the researcher reviewed the corresponding audio recordings to verify the completeness of the data and to assess the audibility and clarity of the recordings. Any unclear segments were identified and, where possible, clarified while the interview content was still recent in the researcher's memory, thereby facilitating accurate recall of discussion points.

Following repeated engagement with the audio recordings, the researcher conducted a meticulous verbatim transcription of the tape-recorded discussions. During the transcription process, systematic attention was also directed to non-verbal cues, including facial expressions and emotional responses that had been observed and documented during data collection.

Concurrently with the preparation of verbatim interview transcripts, the researcher systematically digitised and organised the field notes. These notes documented contextual features of the research setting, non-verbal communicative behaviours, and reflexive observations recorded during the interviews. Although the field notes were not transcribed verbatim in the same manner as the audio recordings, their substantive content was incorporated into the subsequent thematic analysis to enhance interpretive depth and to ensure that the findings captured both participants' spoken accounts and salient contextual nuances.

A bilingual expert translated the Afan Oromo transcripts into English with the explicit aim of preserving both linguistic fidelity and conceptual equivalence. Initial coding of the data was independently undertaken by the primary researcher and an experienced qualitative researcher, after which the codes were compared and refined collaboratively. The primary researcher then conducted a thematic analysis of the qualitative dataset, during which emergent themes and sub-themes were identified, iteratively refined, and systematically categorised.

3.7 RIGOUR OF THE STUDY: VALIDITY AND RELIABILITY

Rigour is the pursuit of excellence in research, requiring discipline, attention to detail, and precision (Burns et al 2015:39). A rigorous approach yields more reliable results, with reliability indicating confidence in the data, analyses, and methods used to ensure study quality (Connelly 2016:435).

3.7.1 Validity and reliability of the quantitative data collection instrument

In this quantitative phase of research, ensuring the instrument's validity and reliability is essential to minimise measurement-related errors in the study. Typically, an instrument can be reliable without being valid, but a valid one is usually reliable as well. Nonetheless,

reliability alone does not guarantee validity. Therefore, the researcher must ensure both the reliability and validity of the instrument to be used (Surucu & Maslakçi 2020:4).

3.7.1.1 Validity of instrument

Quantitative research requires standards of validity and reliability (Creswell & Creswell 2018:37). An instrument is considered valid when it allows one to draw relevant and useful conclusions from its scores (Creswell & Creswell 2018:206). The questionnaire, created in line with the objective and WHO's recommendations for adolescent health, was reviewed by the supervisor and family health experts. The questionnaire is deemed valid if it successfully evaluates the study's independent variables.

3.7.1.2 Reliability of the instrument

Reliability is the stability of scores over time when an instrument is used repeatedly and the consistency of the testing and scoring process (Creswell & Creswell 2018:206). The questionnaire's reliability was assessed using pilot study data. To establish the reliability of the research instrument, a reliability analysis was conducted, and Cronbach's alpha coefficient was calculated to be $\geq$0.7 to confirm internal consistency (Taherdoost 2016:28-33).

3.7.2 Trustworthiness for the Phase 2 (qualitative phase)

Credibility, dependability, conformity, and transferability

Athanasou et al (2012:140) mention Perakyla, stating that the trustworthiness of the researcher is defined as the researcher's ability to collect, organise, and classify the data. On the other hand, Lincoln and Guba (1985), as cited by Du Plooy-Cilliers et al (2014:258), assert that trustworthiness consists of credibility, dependability, and conformity.

Credibility

Holloway (2005:290) argues that credibility should be understood as an indicator of how accurately the research findings represent the phenomenon under study. In this case, the

study relies on credibility through purposive sampling, in which the primary informants have firsthand experience with the phenomenon under investigation.

To enhance credibility, the research objectives were clearly stated to elicit genuine responses. Probing questions were used to gather rich data, enabling a detailed description of the findings. Researchers immersed themselves in the data during transcription and analysis, repeatedly reading the transcripts and closely observing field data throughout the data collection. During both FGDs and KIIs, they maintained close contact with participants while collecting data and identifying themes and categories.

Triangulation refers to the use of multiple methods, data sources, or analytical perspectives to corroborate empirical findings, thereby mitigating bias and enhancing the overall trustworthiness and robustness of research outcomes (Noble and Heale 2019:67–68). The combined use of surveys, focus group discussions (FGDs), and key informant interviews (KIIs) constitutes methodological triangulation, which reduces dependence on any single data source or technique and strengthens the validity of the study through the convergence and corroboration of evidence.

Member checks are also known as participant validations, which involve the return of data, interpretations or conclusions for confirmation to participants. This process ensures credibility by ensuring that researchers' interpretations accurately reflect the experiences of the participants' lives, reducing misrepresentations and strengthening trust (McKim 2023:45). The researcher checked with adolescent participants to ensure that the results accurately reflect their perspectives. The researchers had also worked on the study area for three years before the study.

Dependability

Dependability is depicted as “the consistency of results over time”. (Lincoln & Guba 1985, cited in Korstjens & Moser 2018:121). Dependability is assured through the design of the research process as logical, traceable, well-described, and well-documented. Every stage of the research method, which includes sampling, data collection, and analysis, is documented well, showing how the research decisions are made and presented along with their implementation in the field. In this study, colleagues and study supervisors followed the procedures and procedures used by researchers during the study. The

research objectives were systematically reviewed by the principal investigator to ensure conceptual clarity and alignment with the overall research design. The interview guide was iteratively revised based on expert feedback obtained before data collection. Subsequently, participants engaged in a member-checking process to confirm that the findings accurately represented and interpreted their lived experiences.

Confirmability

Confirmability is achieved by accurately recording the complete procedures of data collection and analysis, which supports the audit trail and allows other researchers with similar interests to repeat the study. Ghafouri and Ofoghi (2016:1917) have characterised confirmability as the degree to which others can corroborate the results. To ensure conformability, audio recordings and field notes were systematically compared with the final report, creating an audit trail reviewed by experienced qualitative researchers. Bias was minimised by directly quoting participants and providing neutral interpretations of their views. To ensure conformability, audio recordings and field notes were systematically compared with the final report, creating an audit trail reviewed by experienced qualitative researchers. Bias was minimised by directly quoting participants and providing neutral interpretations of their views.

Transferability

Transferability refers to the degree to which the findings of a qualitative study can be meaningfully extrapolated or generalised to other contexts, settings, or populations beyond those in which the original data were produced (Elo et al 2020:45). In the present study, transferability was strengthened by providing a comprehensive and transparent description of the research context and the methodological procedures employed.

3.8 ETHICAL CONSIDERATIONS

Ethics are the moral principles that guide behaviour. In the context of research, adhering to what is morally and legally correct is known as research ethics (Parveen & Showkat 2017:4). Ethical concerns in research are now receiving more attention than ever before. This includes quantitative, qualitative, and mixed-methods research at every stage

(Creswell & Creswell 2018:32). The ethical issues that must be foreseen are numerous and are reflected in the research process (Creswell & Creswell 2018:4).

Researchers are expected to follow established ethical principles respecting institutional and participant rights and maintaining scientific integrity as set out by the Australian Council for International Development and the Republic of South Africa (Australian Council for International Development {ACFID] 2017:4-5; National Department of Health (South Africa):16). Ethical clearance and study permission were obtained from the UNISA's Research Ethics Committee and the Arsi Zonal Education Office (Appendices 1 and 5).

The core ethical principles underpinning research conduct standards include beneficence, respect for human dignity, and justice (Polit & Beck 2018:134-137). Participants protected by informed consent and may withdraw at any time without penalty. They informed of the study's purpose and the importance of their participation.

During the study, privacy and confidentiality were maintained, and the principle of justice guided the fair selection of respondents and participants (Kahn et al 2018:2). Ethical principles guided the research discussed as follows:

Beneficence

Beneficence requires researchers to actively safeguard participants' well-being, protecting them from physical, psychological, emotional, economic, social, or legal harm. Human research should be designed to benefit participants and others. Any study that risks causing such harm must be abandoned or redesigned to uphold ethical standards (Brink et al 2018:29; Polit et al 2018:134). Across both Phase I and Phase II, the study adhered to the ethical principle of beneficence, seeking to maximise potential benefits and minimise potential harms to participants. The principal investigator and research assistants sought to minimise discomfort by carefully formulating questions and conducting interviews in a supportive, non-threatening manner. Data collection sessions were held in quiet classroom settings during students' break periods to minimise environmental distractions and interruptions. An atmosphere of honesty and transparency was maintained to foster rapport and trust, and participants were informed of their right to withdraw from the study at any time without coercion or adverse consequences. In

instances where discussions appeared to cause distress, the interview was discontinued, and the participant was left undisturbed to prioritise and safeguard their psychological well-being.

Non-maleficence

Non-maleficence, literally translated as “do no harm,” obliges researchers to design and implement studies in ways that prevent physical, psychological, social, or cultural harm to participants. This ethical principle is operationalised through minimising the risk of stigma, discrimination, or exploitation. Non-maleficence functions in a complementary manner to beneficence: whereas beneficence mandates the promotion of participants’ welfare, non-maleficence emphasises the systematic avoidance and prevention of harm (DeGrazia & Millum 2021:58). In adherence to the principle of non-maleficence, the researcher avoided posing highly sensitive questions and ensured the provision of sufficient information about the study to minimize the risk of psychological distress or harm to participants.

Respect

Individuals can autonomously decide whether to participate or not in the study without the risk of penalty (Brink et al 2018:29). Adolescents were regarded as autonomous agents, possessing the right to provide voluntary participation, to withdraw from the study at any point without penalty, and to request clarification of any aspect of the research procedures without exposure to coercion or undue influence. Community gatekeepers were systematically engaged to respect and integrate local sociocultural norms, while concurrently upholding and protecting the rights and welfare of participants in accordance with ethical research standards. Attention was directed toward safeguarding adolescents in vulnerable circumstances, including the implementation of additional protective measures to ensure that data collection took place in supportive, confidential, and non-exploitative environments.

Justice

The ethical principle of justice necessitates equitable participant selection, adherence to established agreements, and attentiveness to relevant cultural norms and values. Accordingly, interviews were conducted in a manner that upheld participants' dignity, with interactions characterised by respect and termination at the prearranged time, thereby promoting fairness and honouring participants' autonomy and expectations (Brink et al 2018:29).

In this study, justice was achieved through a fair selection of adolescents and a transparent selection of other study participants. The agreement was respected, cultural values respected, and interviews were conducted at agreed-upon times to protect equality and dignity.

During Phase 1, participants who completed the self-administered questionnaire were informed of the study's objective. A written consent form was provided to individuals aged 18 and above; for those under 18, consent was obtained from their family or guardian (Appendix 11).

During Phase 2, respondents were given an information sheet to review and were asked to clarify any unclear points before granting permission to proceed with the interview (Appendix 4b). Written permission was also granted to record participants on audiotape (Appendices 9, 10, 11 and 12).

3.9 SUMMARY

In this chapter, the study's layout, the author's methods, and the techniques used to analyse the data are made more explicit. A sequential explanatory mixed method study design was the choice made by the researcher. The chapter not only listed the techniques but also provided more detail on them; it described the entire population from which the sample was drawn, the sampling methods and procedures, and all the processes and instruments used for data collection and analysis. It stated that validity and reliability were confirmed in the quantitative part and that trustworthiness was maintained in the qualitative part. The qualitative phase involved the transcription and analysis of data by thematic analysis. Apart from that, ethical considerations focused on the rights of the study institutions and participants, as well as the preservation of scientific integrity. The study results will be shown in Chapter 4.

CHAPTER 4

ANALYSIS, PRESENTATION, AND DESCRIPTION OF THE RESEARCH FINDINGS

4.1 INTRODUCTION

This chapter presents and critically examines the study's findings. The first section provides a detailed description of the sample demographics, and the second section reports the empirical results of a strategy to improve the utilisation of sexual and reproductive health (SRH) services among adolescents in Southeast Ethiopia.

The presentation of the findings is organised in alignment with the specific objectives of the study, which are articulated as follows:

Phase 1: Quantitative

- To explore and describe adolescents' awareness of SRH service utilisation in the Arsi Zone of Ethiopia.
- To identify and describe SRH services for adolescents in the Arsi Zone of Ethiopia.
- To establish and describe barriers to adolescents' access to SRH services in the Arsi Zone of Ethiopia.

Phase 2: Qualitative

- To explore adolescents' perceptions about SRH services in the Arsi Zone of Ethiopia.
- To explore and describe socio-cultural determinants of adolescents' SRH in the Arsi Zone of Ethiopia.

Phase 3: Integration of the quantitative and qualitative results

- To develop a strategy that enhances adolescents' SRH service utilisation in the Arsi Zone of Ethiopia.

4.2 DATA MANAGEMENT AND ANALYSIS

4.2.1 Data management

Data quality issues can affect study findings in many ways, so the researcher worked to maintain data quality throughout the study. Data were managed for both quantitative and qualitative phases. In Phase 1, the quantitative phase, data were collected from adolescents aged 15-19 attending secondary school.

For Phase 2, the qualitative phase, FGDs were conducted with adolescents aged 15-19 years attending secondary school. Healthcare workers providing SRH services at the YFS unit, club leader teachers in selected schools, and community representatives were involved in key informant interviews (KIIs).

The researcher examined the gathered information for completeness, correctness and understanding. The data are stored in a password-protected file on the researcher's computer to prevent unauthorised access and thereby ensure their confidentiality. In accordance with the university's data management policy, the researcher will retain the collected data for 5 years following publication of the results. After these five years, any decision regarding data disposal will be made by the university, provided that no request to extend the data retention period has been submitted.

4.2.2 Data analysis

Data were analysed using SPSS version 30 for Phase 1 (quantitative phase) and thematic analysis using Atlas.ti version 25 for Phase 2 (qualitative phase). The analytical procedures for Phase 1 (quantitative) data are presented first, followed by the description of the qualitative data analysis.

4.2.2.1 Data analysis: Quantitative phase

Consistency and precision were maintained throughout data collection and entry using a Google Form. The collected information was subsequently coded, cleaned, and imported into IBM SPSS version 30 for analysis. Descriptive statistics, including frequency distributions and cross-tabulations, were employed to examine relationships between

dependent and independent variables. The principal characteristics of the dataset were summarised using descriptive statistics and presented in a structured overview that described the sample and its measurement properties. In addition, inferential statistical techniques were applied to make conclusions about the target population from the sample collected at the study site.

4.2.2.2 Data analysis: Qualitative phase

The qualitative data were thematically analysed using Atlas.ti version 25. This involved repeatedly reading transcripts to familiarise with the data; identifying significant statements and phrases; formulating meanings; and identifying, labelling, and subdividing themes into sub-themes, followed by a detailed description of the phenomenon under study. Direct quotations were extracted to support the findings, with participant codes shown in brackets at the end of quotations. The qualitative phase explored and described the experiences and challenges of adolescents, their families, and government officials regarding the utilisation of SRH services.

4.3 CONTEXTUAL BACKGROUND

4.3.1 Study area

The study was conducted in the Arsi Zone of the Oromia Region of Ethiopia, with Asella as its capital, located in central Ethiopia, southeast of Addis Ababa. The area's altitude ranges from 500 to 4377 m. The total population is 88.1% rural, 11.6% urban, and 0.3% pastoral. Wheat, barley, corn, tef, sorghum, and coffee are among the important crops grown in the region. Wheat is the most important crop, accounting for 43.7% of the region's total cereal production (Agazhi, Mada & Alemu 2024:4).

The Bale Zone geographically delineates the Arsi Zone to the south, the West Arsi Zone to the southwest, the East Shewa Zone to the northwest, the Afar Region to the north, and the West Hararghe Zone to the east. Administratively, it is subdivided into 25 rural districts and three urban (town) districts, encompassing a total area of 19,825.22 km².

Public health facilities in Arsi include nine hospitals, 109 health centres, 509 health posts, and 35 community pharmacies. 3,785 healthcare workers are serving in Arsi Zone (AZHD 2023:2-8).

4.4 RESEARCH RESULTS

For each phase, the demographic and socioeconomic characteristics of the study sample are presented first. Subsequently, the findings are reported in a manner aligned with the predetermined study objectives; accordingly, the results are organised and structured according to these previously outlined objectives.

For the quantitative phase, results are presented, among other methods, using figures, tables, and graphs for further illustration. The themes and sub-themes are used to strengthen the qualitative phase and to depict participants' narratives, including their knowledge, experience, and perceptions of SRH services.

4.4.1 Findings of Phase 1 (quantitative phase)

The study was carried out in six (6) secondary schools in the Arsi Zone (South-east Ethiopia), Oromia, Ethiopia. The study sample size was 651 adolescents for Phase 1 (quantitative phase). The questionnaire was administered to all adolescents in the sample; hence, a 100% response rate was attained in this phase of the study. As explained above, the results are presented based on the objectives and research questions.

- Adolescents’ awareness of SRH service use in Ethiopia’s Arsi Zone.
- Description of adolescent SRH services in Ethiopia’s Arsi Zone.
- Barriers to adolescents’ access to SRH services in Ethiopia’s Arsi Zone.

However, the socio-demographic factors are presented first in 4.4.1.1, followed by the quantitative phase findings in 4.4.1.2, 4.4.1.3, and 4.4.1.4.

4.4.1.1 Socio-demographic characteristics of adolescents and adolescents' families

The discussion on socio-demographic factors begins with an overview of respondents' age range, gender, education level, religious affiliation, ethnicity, marital status, living situation, family's educational background, family's occupation, allowance given to adolescents, and family's monthly income. These variables were deemed suitable for accurately representing the socio-demographic characteristics of the adolescents involved in this study.

Table 4.1 Socio-demographic characteristics of the respondents in the quantitative phase of the study (N=651)

Variables		**Frequency (N=651)**	**Percent (%)**
Age	15-16	305	46.9
	17-19	346	53.1
Gender	Female	331	50.8
	Male	320	49.2
Educational level	Grade 9	144	22.1
	Grade 10	272	41.8
	Grade 11	149	22.9
	Grade 12	86	13.2
Religion	Muslim	216	33.2
	Orthodox	286	43.9
	Protestant	149	22.9
Ethnic group	Amhara	69	10.6
	Oromo	581	89.2
	Other	1	0.2
Marital status	Divorced	5	0.8
	Married	21	3.2
	Single	625	96
Adolescent living arrangement	Live independently	36	5.5
	Both parents	360	55.3
	Father only	54	8.3
	Mother only	179	27.5
	Guardian/relative	22	3.4

Age of respondents

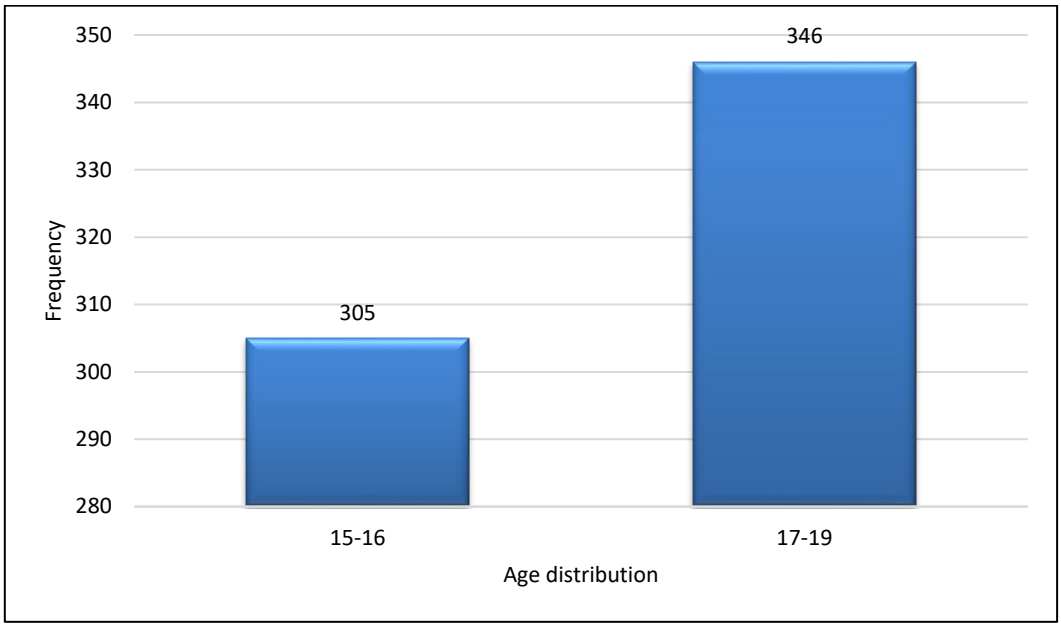

Figure 4.1 Age distribution of adolescents (N=651)

Table 4.1 presents the age distribution for a sample of 651 adolescents, divided into two distinct age groups: 15-16 and 17-19. This elucidation provides insight into the proportional representation within these developmental stages. Notably, 46.9% of the adolescents were aged 15 to 16 (n=305), whereas 53.1% were aged 17 to 19 (n=346). The marginally higher percentage of older adolescents (17-19 years) at 53.1% suggests a slight inclination toward this age group, though the distribution remains balanced. Understanding this age distribution is imperative for formulating interventions, educational programmes, and healthcare services that address the unique needs of each age group, as illustrated in Figure 4.1.

A similar study in southern Ethiopia found that 59.1% of older adolescents (17-19) attended school, compared to only 46.9% of younger adolescents (15-16) (Habte & Dessu 2023:5). The study carried out in Kinondoni Municipality, Dar es Salaam, Tanzania corresponds with the current research, revealing that a greater proportion of older adolescents aged 17-19 (67.2%) were engaged compared to their younger counterparts aged 15-16 (32.8%) (Mwandali, Msuya & Mwakanyamale 2020:8) . Unlike the current study, research carried out in Kenya showed that a larger proportion of younger adolescents aged 15-17 years (53.6%) participated in the study compared to older

adolescents aged 18-19 years (46.4%) (Embleton et al 2023:6). The discrepancy might be socio-demographic characteristics of the target population.

Gender of respondents

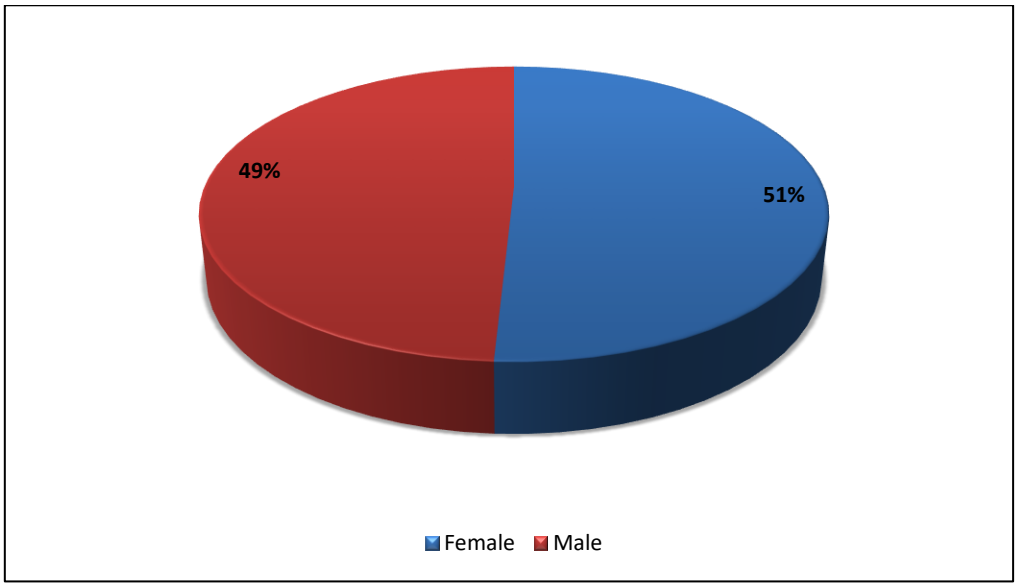

Figure 4.2 Gender distribution of respondents (N=651)

Figure 4.2 shows an almost equal gender distribution, with females at 50.8% (n=331) and males at 49.2% (n=320). This near parity suggests minimal gender bias in the sample, enabling balanced gender-related analyses. It is consistent with a study from Southern Ethiopia, which also reported a relatively balanced distribution (males 42.2%, females 57.8%) (Habte & Dessu 2023:5). A related study in Bahir Dar city, Amhara Region, Ethiopia, found a higher proportion of females (64.4%) than males (35.6%) (Elefachew, Alemu, Chanie, Getachew, Bogale & Bogale 2024:5). The data showed a trend different from that of the current study, likely because the Bahir Dar study was conducted in an urban area where school attendance is more accessible for female students.

A study in West Bengal reported more male (56.3%) than female (43.7%) participants, in contrast to the present study (Banerjee et al 2023:4). Research conducted in Ghana's Adaklu district revealed that female participants accounted for 59.73%, surpassing the male participants at 40.3%. Similarly, a study in Rwanda found that 68.9% of participants were female and 31.1% were male, aligning with the current research, which shows a higher female participation rate (Westerman, Gyapong, Ansah, Klu, Aberese-Ako &

Dalaba 2024:3; Uzayisenga, Nshimiyimana, Kaberuka, Bazakare, Mbarushimana, Mukeshimana, Musafili & Nyirazinyoye 2024:3).

Educational level of respondents

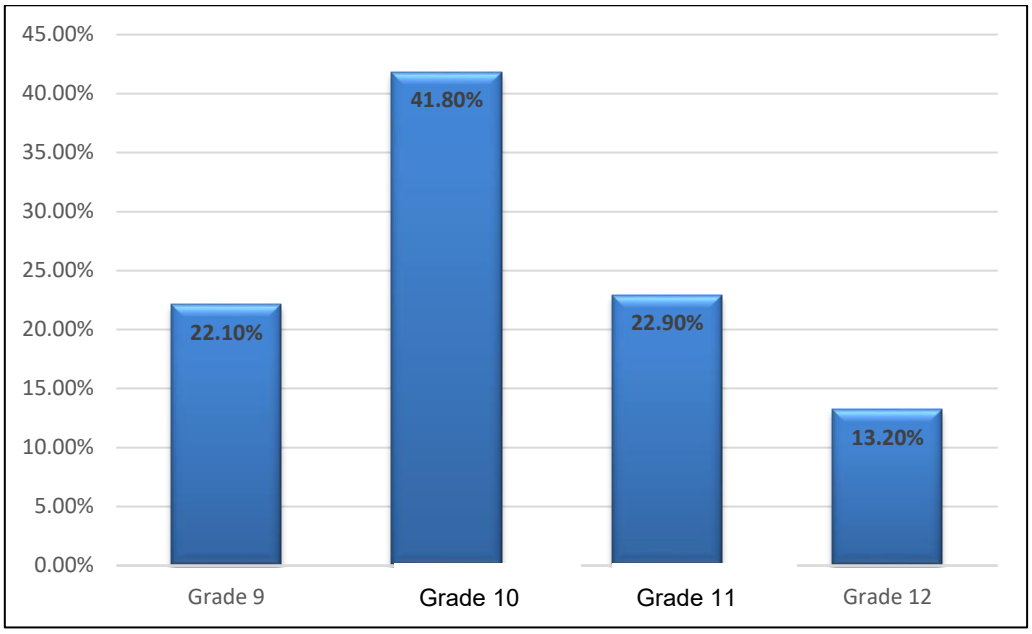

Figure 4.3 Educational level of respondents (N=651)

The report evaluates the educational distribution among 651 adolescent participants, categorising them into four grade levels: 9, 10, 11, and 12. It offers a summary of student representation at various stages of secondary education. The educational levels are distributed as follows: 9th Grade 22.1% (n=144), 10th Grade 41.8% (n=272), 11th Grade 22.9% (n=149), and 12th Grade 13.2% (n=86). Notably, most respondents (41.8%) are in the 10th grade, suggesting this grade has the highest enrolment in the sample. The percentage declines in the 11th grade (22.9%) and further in the 12th grade (13.2%), potentially indicating a drop in the number of students transitioning to higher secondary grades.

Overall, 63.9% (n=416) are in grades 9-10, while 36.1% (n=235) are in grades 11-12, indicating that a significant proportion of adolescents (63.9%) are in grades 9-10. This could be attributed to higher retention rates at these levels due to the challenges of advancing studies. These findings align with research conducted in Haramaya district, Eastern Ethiopia and rural Arsi Zone, Ethiopia, where student percentages decrease as they progress in school (Abdurahman et al 2022:4). A parallel study carried out in the

Andaman and Nicobar Islands revealed that the 11th class had the highest student participation at 26.6%, whereas the 12th class recorded the lowest participation at 23%. The participation rate for the 9th class was 24.2%, and for the 10th class, 6.2% (Yadav & Kumar 2023:2-3). Conversely, the study conducted in South-eastern Nigeria indicated a higher proportion (62.6%) of students in senior secondary school compared to those in junior secondary school (37.4%) (Eze, Mbachu, Agu, Akamike, Eigbiremolen & Onwujekwe 2023:5). The discrepancy could be attributed to the differing socio-economic characteristics of the target populations.

Religion distribution of the respondents

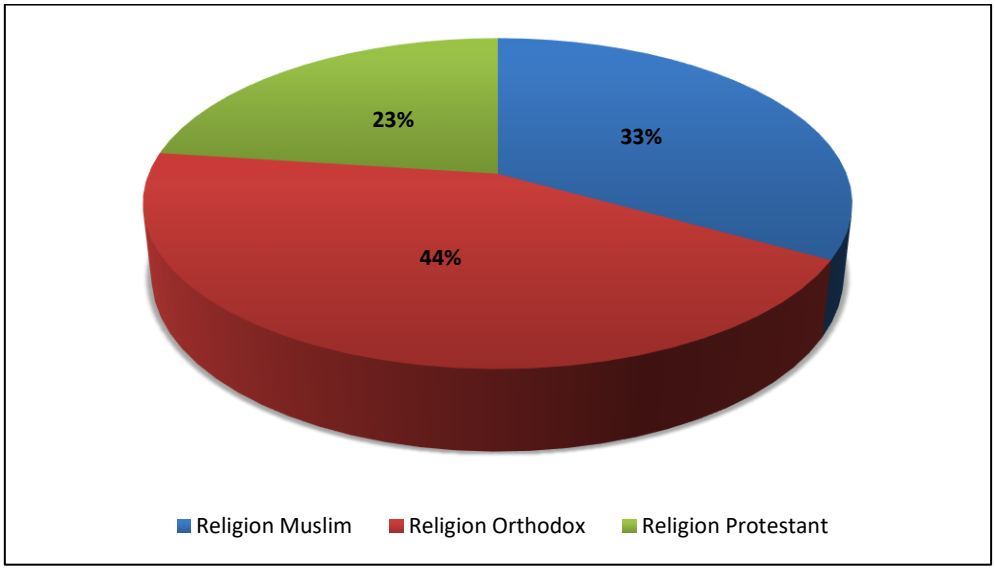

Figure 4.4 Religion distribution of the respondent (N=651)

The study classifies religious identification into three main categories: Orthodox, Muslim, and Protestant. According to the data, the respondents' religious distribution is as follows: 43.9% were Orthodox (n=286), 33.2% were Muslim (n=216), and 22.9% were Protestant (n=149). In the religious context, a study conducted in pastoralist settings in Northeastern Ethiopia reported results that differ from those of the current study, indicating that the majority of adolescent participants were Muslims (91.6%). In comparison, the remaining (8.4%) were Christians (Zepro et al 2023:5). This variance may stem from the demographic characteristics of the target population.

This distribution significantly influences the formulation of inclusive programmes that acknowledge and accommodate diverse religious beliefs and practices (refer to Figure

4.4). Regarding religious affiliation of adolescents, the findings of this study contrast with those of a recent investigation conducted in Makassar, Indonesia, which reported that the majority of adolescent participants identified as Muslim (89.3%), followed by Protestant (7.8%), Catholic (2.3%), and Hindu (0.5%) (Violita & Hadi 2019:3). This discrepancy may be attributed to variations in geographic and demographic characteristics. The findings of a research study conducted in Mbeya, Tanzania, are in concordance with the current study, indicating that a majority of adolescents identified as Christians (85.6%), whereas 12.5% identified as Muslims, and the religious affiliation of the remaining 1.9% was unspecified (Mcharo, Mayaud & Msuya 2021:5).

Ethnic group of respondents

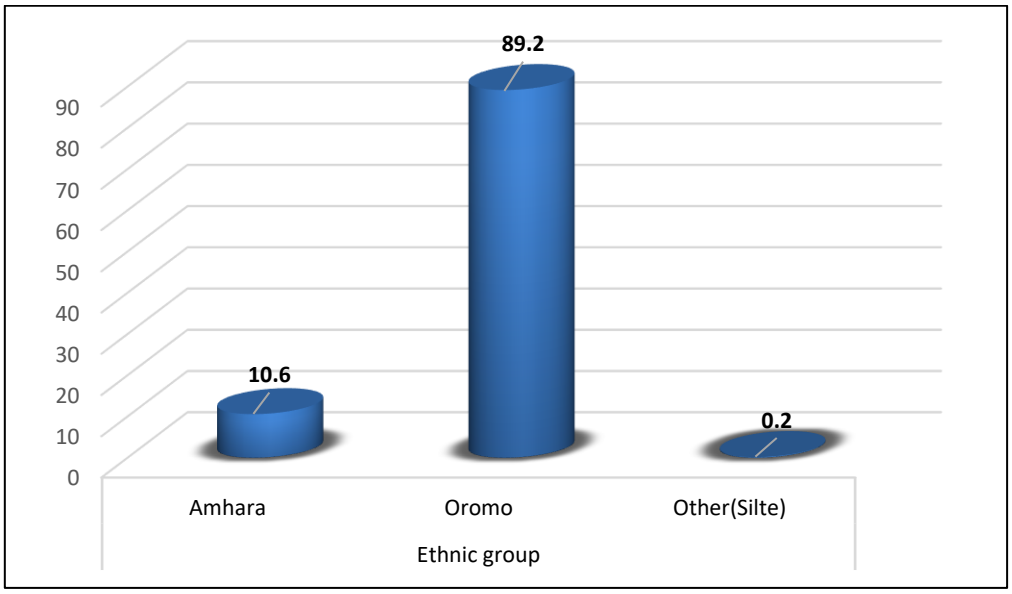

Figure 4.5 Ethnic group of respondents (N=651)

The study's findings highlight the ethnic distribution, with the Oromo as the leading group, accounting for 89.2% of the sample (n=581). The Amhara form a smaller portion at 10.6% (n=69). In contrast, other ethnicities (Silte), make up a mere 0.2% (n=1) (see Figure 4.5). According to a similar study conducted in Gambella, Southwest Ethiopia, this study reveals the distribution of ethnic groups among adolescents as follows: Oromo (29.9%), Amhara (12.7%), with the Nuer having a numerical predominance at 33.2%) (Hailu, Negero, Melkamu & Tsega 2024:5). Ethiopia is home to over 80 distinct ethnic groups, with the Oromo and Amhara being the predominant groups reflected in the current study (Central Statistical Agency 2016:34). Despite extensive searches, no studies conducted outside of Ethiopia have been identified that report similar ethnic group proportions.

Marital status of respondents

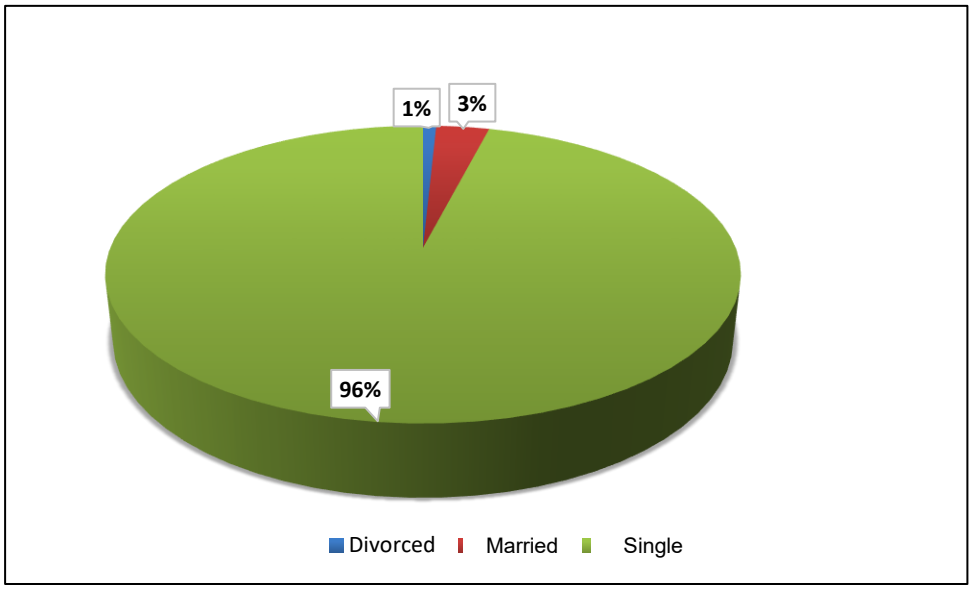

Figure 4.6 Marital status of respondents (N=651)

Figure 4.6 above indicates that most respondents, 96.0% (n=625), were single, while 3.2% (n=21) were married, and the smallest group, 0.8% (n=5), were divorced. This suggests that young adults are mostly unmarried. This discovery indicates an improvement over the national finding in Ethiopia, where 13% married adolescent aged 15-19 start childbearing (MoH 2021:13). The current study findings align with a previous study conducted in Gambella, Southwest Ethiopia by Hailu et al (2024:5), where about 92.6% of adolescents are single and 7.6% married. A comparable study conducted in Rwanda revealed that most adolescents are single (95.3%). In comparison, the remaining 4.7% are married, yielding nearly analogous results (Mukeshimana, Nkurunziza, Nyiringango, Karamage, Asingizwe, Nshutiyukuri, Musabwasoni, Bagweneza et al 2025:8). These findings corroborate earlier research, such as a study conducted in Mexico, which reported that the majority of adolescents are single (74.6%), married (1.8%), in a free union (22.9%), and separated (0.6%) (García-Bello, Heredia-Pi, Zavala-Arciniega, Paz-Ballesteros, Velázquez-Viamonte & Serván-Mori 2022:8).

Living arrangements of the adolescents

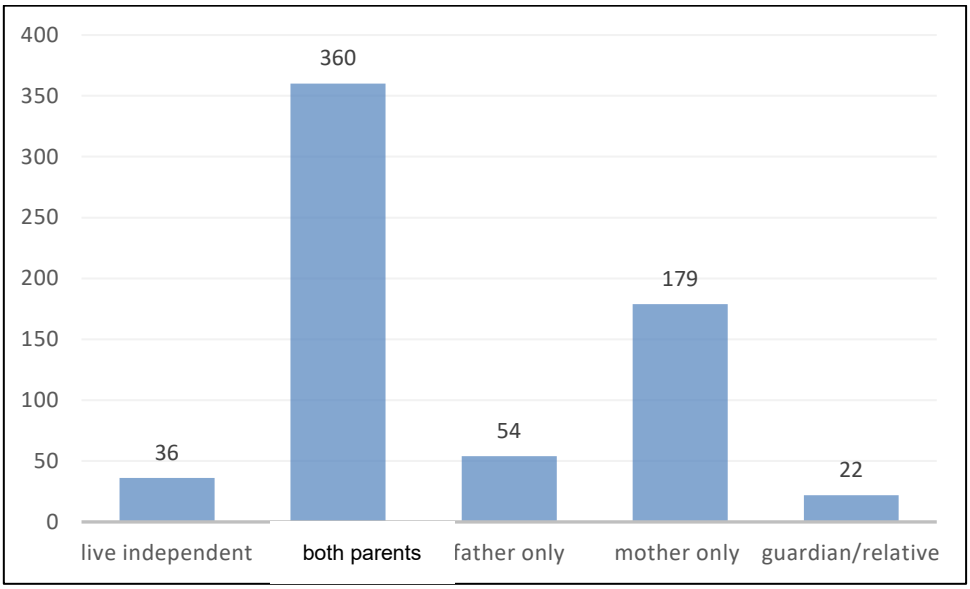

Figure 4.7 Distribution of living arrangements of adolescents (N=651)

Regarding household composition, the data indicate that 55.3% (n=360) of adolescents reside with both parents. The following most prevalent arrangement is living solely with the mother, accounting for 27.5% (n=179). A smaller segment lives only with their father, accounting for 8.3% (n=54), while an even smaller number are independent, constituting 5.5% (n=36). The least common living scenario involves residing with a guardian or relative, comprising 3.4% (n=22) (refer to Figure 4.7).

Contrasting these results, a study from western Ethiopia indicates that most adolescents live with both parents (73.3%), followed by those living with just their mothers (10.8%), relatives (7.7%), fathers only (3.4%), and other arrangements (4.8%) (Daniel, Kejela, Fantahun, Desalegn & Guteta 2023:4). In another study conducted in southern Ethiopia, it was reported that most adolescents, 83.6%, reside with both parents. In comparison, 7.8% live only with their mother, 4.1% with only their father, and 4.5% with a spouse (Habte & Dessu 2023:6). A study conducted in Bangkok, Thailand, supports these findings, indicating that most adolescents reside with their parents during their teenage years. Specifically, 70% live with their biological parents, whereas 30% live apart from their parents (Thepthien & Celyn 2022:5).

A comparable study conducted in Kenya among low-income households highlights adolescents' living arrangements, documenting that 40% reside with both parents, 45%

with their mothers only, 5% with their fathers only, and 10% with other relatives or not reported. The report indicates that most adolescents live only with their mothers, which contrasts with the findings of the current study, where it is observed that more than half of the adolescents live with both parents (Maina, Nyakangi, Mbuthia & Kabiru 2025:7). This discrepancy may be attributed to the differing demographic characteristics of the two nations.

Family educational level

Table 4.2 Percent distribution of adolescents' family educational level (N=651)

Educational level	Variables	Frequency (N=651)	Percent (%)
Father's educational level	No formal education	162	24.9
	Primary school (1-8)	286	43.9
	Secondary school (9-12)	161	24.7
	College (diploma and above)	42	6.5
Mother's educational level	No formal education	149	22.9
	Primary school (1-8)	323	49.6
	Secondary school (9-12)	146	22.4
	College (diploma and above)	33	5.1

The study underscores parents' educational attainment, indicating that 43.9% (n=286) of fathers and 49.6% (n=323) of mothers have completed primary education. A significant proportion of the parents of adolescents, comprising 24.9% (n=162) of fathers and 22.9% (n=149) of mothers, have not received any formal education. The percentages of parents who have attained secondary education are 24.7% (n=161) for fathers and 22.4% (n=146) for mothers. The proportion of parents who have pursued higher education at the collegiate level (diploma or higher) remains remarkably low, with only 6.5% (n=42) of fathers and 5.1% (n=33) of mothers achieving this educational threshold (Table 4.2). Despite the pivotal role of parental education in the developmental guidance of adolescents, the topic of familial education receives insufficient attention within the study locale. The study shows higher primary and secondary education participation but, lower diploma/higher education attainment compared to a study in southern Ethiopia, where 32.7% of fathers and 42.4% of mothers had no formal education, 28% of fathers and 31.1% of mothers completed primary education, 16.5% of fathers and 12.9% of mothers

reached secondary education, and 22.3% of fathers and 13.5% of mothers earned a diploma or higher qualification (Yonas & Chernet 2022:3).

A Kenyan study identified family education as a key factor in adolescents' use of SRH services. The study categorised family education status as follows: primary incomplete (34.4%), primary complete (40.6%), secondary incomplete (3%), secondary complete (15.6%), and unknown (6.3%) (Maina, Ushie & Kabiru 2020:5). Prevailing literature suggests that family education plays a crucial role in facilitating adolescents' utilisation of SRH services. The results of the current study corroborate this, revealing that most adolescents' families have attained a primary education level. This finding presents a distinct trend from that observed in a study by Aliyu & Aransiola (2023:6) in Nigeria, where it was indicated that most families possess a secondary level of education (51.5%), with the remainder having no formal education (13.3%), primary education (18.5%), and post-secondary education (16.7%). This discrepancy may be due to differences in the demographic characteristics of the two countries.

Adolescent family occupation

Table 4.3 Percentage distribution of adolescents' family occupation (N=651)

Family occupation	Variables	Frequency (N=651)	Percent (%)
Father occupation	Daily labourer	14	2.2
	Farmer	199	30.6
	Government and other employment	264	40.6
	Private/merchant	174	26.7
Mother occupation	Daily labourer	79	12.1
	Farmer	300	46.1
	Government and other employment	47	7.2
	Private/Merchant	225	34.6

A substantial proportion of fathers were categorised as employed, representing 40.6% (n=264), whereas the predominance of mothers, 46.1% (n=300), were principally engaged in farming activities. Fathers in private or commercial roles accounted for 26.7% (n=174), while the daily labourers segment was the least represented at 2.2% (n=14). Conversely, a significant fraction of mothers held private or commercial employment, as evidenced by 34.6% (n=225). The number of mothers identified as daily labourers

constituted 12.1% (n=79), and those classified as employed mothers comprised 7.2% (n=47), as indicated in Table 4.3.

The data indicate significant differences in the occupational distribution between fathers and mothers. Fathers are more prominently engaged in governmental and non-governmental institutions, while mothers are predominantly involved in agriculture. These disparities in employment status between fathers and mothers may be attributed to the community's limited awareness of the importance of female education in the past, which subsequently contributed to reduced women's participation in government occupations. The employment status of mothers among respondents aligns with national statistics, which show that 6% are employed in government positions (Ulandssekretariatet 2024:13).

A study in Tanzania found that unemployed family members significantly influence adolescents' SRH discussions. The findings indicate that 83.6% of adolescent fathers and 84.9% of mothers are self-employed. Additionally, 11.7% of fathers and 6% of mothers are employed by the government or NGOs. In comparison, 4.6% of fathers and 9.1% of mothers are not employed (Millanzi, Osaki & Kibusi 2023:4). These results are consistent with the current study, as it was found that a majority of adolescents' families are engaged in private sector employment, with a minority working for the government or NGOs. The findings from the study by Aliyu & Aransiola (2023:6) partially corroborate with the current investigation, indicating that a majority of adolescent family occupations are in the private sector (52%). In comparison, other occupations include farming (1.6%), artisan work (22.2%), teaching/professional roles (6.2%), and civil service (3.9%).

Pocket money for adolescents

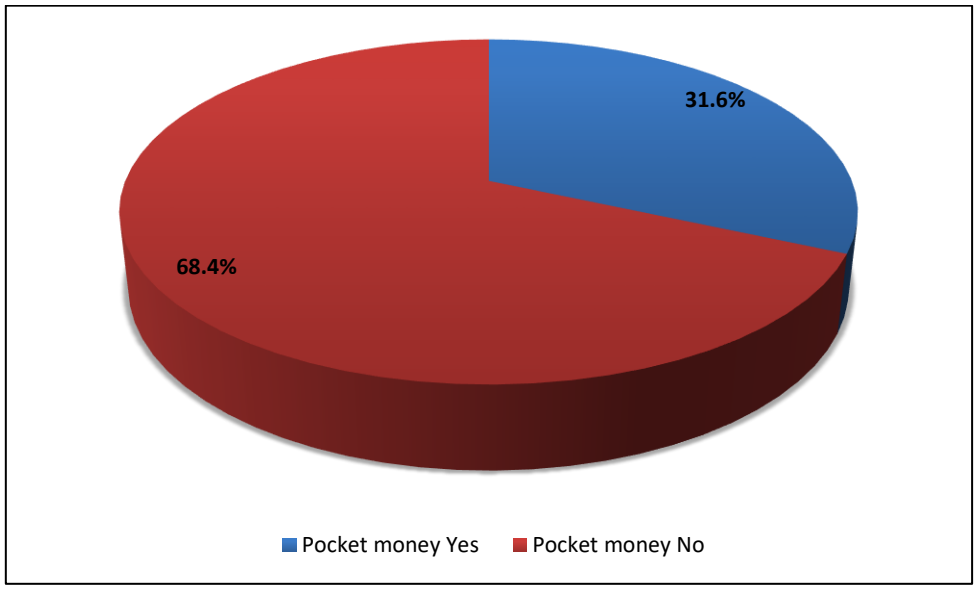

Figure 4.8 Percentage of adolescents who get daily pocket money (N=651)

Providing pocket money helps children acquire financial management skills, make informed decisions, and cultivate a sense of responsibility. It contributes to the development of confidence, imparts lessons in saving and patience, and fosters a sense of independence. Even minimal financial allocations or discussions about money can impart crucial life skills (Government of South Australia 2021:1-2).

As shown in Figure 4.8, most teenagers do not receive pocket money for regular expenses: 68.4% (n=445) receive no daily-use money, while 31.6% (n=206) do. The findings so far indicate that having pocket money significantly affects adolescents' use of SRH services. This finding differs slightly from the study by Abdurahman et al (2022:4), which reported that only 14% of adolescents have income to cover expenses, while 86% do not receive pocket money. Research conducted in low- and middle-income nations indicates that adolescents' pocket money is allocated for transportation, service, and contraceptive expenses. Similar studies from Gambella Southwest, Ethiopia reveal that 27.4% receive pocket money, whereas 72.6% do not, and in Dawuro, Southern Ethiopia, it is reported that 41.2% receive pocket money and 58.8% do not, respectively (Hailu et al 2024:6; Yonas & Chernet 2022:4). Contrary to the findings of the present study, research conducted in Switzerland indicated that 71% of adolescents aged 16-18 years receive pocket money, 28% receive it on a superficial basis, and 1% do not receive any

(Sotomo 2025:16). This discrepancy may be attributed to differences in the demographic characteristics of the two nations.

Adolescent family monthly income categories in Ethiopian Birr (ETB/USD)

Table 4.4 Adolescent family income status categories

Family income in Ethiopian Birr (ETB/USD) ($1=57ETB during data collection)		Frequency	Percentage (%)
Family monthly income	<5250/$91.1	245	37.6
	5250-10900 ($91.1-191.2)	245	37.6
	>10900 ($191.2)	161	24.7
	Total	**651**	**100.0**

The study categorised family monthly incomes according to the tax brackets established by the Ethiopian government for its employees. The findings indicate that a notable proportion of households fall within the income bracket of less than 5250 ($91.1), with 37.6% (n=245), the middle-income range of 5250 to 10900 ($91.1-191.2), which also accounts for 37.6% (n=245). A comparatively smaller segment of families, constituting 24.7% (n=161), is in the high-income category, exceeding $10900 ($191.2) per month. This distribution highlights the economic heterogeneity present within the population, thereby suggesting potential avenues for economic intervention and development. In a study conducted in southern Ethiopia, 72.03% of family incomes were classified as average, as reported by Sidamo, Abebe Kerbo, Gidebo and Wado (2024b:7) in their examination of adolescent family economic categories. These data do not align with those reported by Mukeshimana et al (2025:8), where individuals receiving 5000 RWF or less per month constitute 72%, those earning between 6000 and 20000 RWF per month constitute 24.7%, and those earning more than 20000 RWF per month constitute 3.3%. This finding concurs with the present study in demonstrating that most adolescent families, in both cases, fall within the lower-income bracket. The disparity in income levels may be attributed to socio-economic differences between the study populations. The data showed a different pattern than in the Democratic Republic of Congo, where 70.5% of households are high-income, and 29.5% are low-income (Mpunga, Chenge, Mambu, Akilimali, Mapatano & Wembodinga 2022:9). The preceding section outlined the socio-demographic characteristics of the adolescents. The following section reports the findings in relation to the objectives of this phase of the study.

4.4.1.2 Adolescents' awareness of SRH service utilisation in the Arsi Zone of Ethiopia

Adolescent awareness of SRH services is a critical determinant of their ability to access and utilise them optimally. Empirical investigations conducted across various settings in sub-Saharan Africa reveal that a significant proportion of adolescents exhibit a limited understanding of the full spectrum of available SRH services (Akakpo, Sah, Kumah, Fianu, Oppong & Kodjo 2024:1).

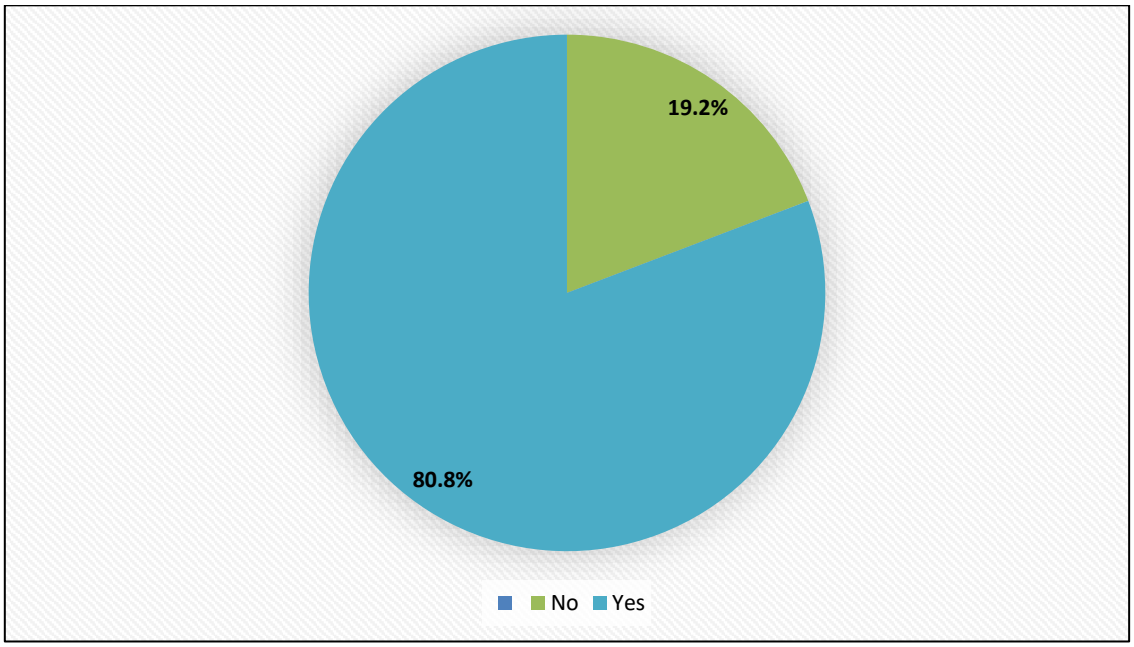

Figure 4.9 Proportions of adolescents who heard abouts sexual and reproductive health services (N=651)

Figure 4.9 illustrates the proportion of adolescents who reported hearing about at least one type of SRH service. Among these participants, 80.8% (n=526) reported hearing about SRH services, whereas 19.2% (n=125) lacked any information about SRH services. This result exceeds the findings of the study conducted in Kombolcha town, Northeast Ethiopia, where 71% of the respondents know at least one component of SRH services (Endalew, Kefale, Atnafu Gebeyehu & Birhan 2024:4). The difference could be due to socio-cultural differences, which include minimal adolescent family discussion in most parts of Ethiopia. This finding surpasses that of a study conducted in South-eastern Nigeria, where adolescent awareness about SRH was 50.8%, and another study in the Arsi Zone of Oromia, Ethiopia, which discovered that 43.7% of the youth were familiar

with the types of SRH services (Eze et al 2023:5; Tejineh & Fekadu 2018:132). The discrepancy between the two findings might be attributed to the period during which the Ethiopian study was conducted and to the distinct socio-demographic characteristics identified in the Nigerian study.

The results of the present study exceed those of similar investigations in Rwanda and Nepal's Bhaktapur district, where adolescent awareness of SRH services was 45.3% and 59%, respectively (Mukeshimana et al 2025:7; Napit et al 2020:5). The observed variation may be ascribed to the differences in socio-characteristics between the two countries. This difference may be due to demographic disparities between the two nations.

Types of SRH services heard of by adolescents

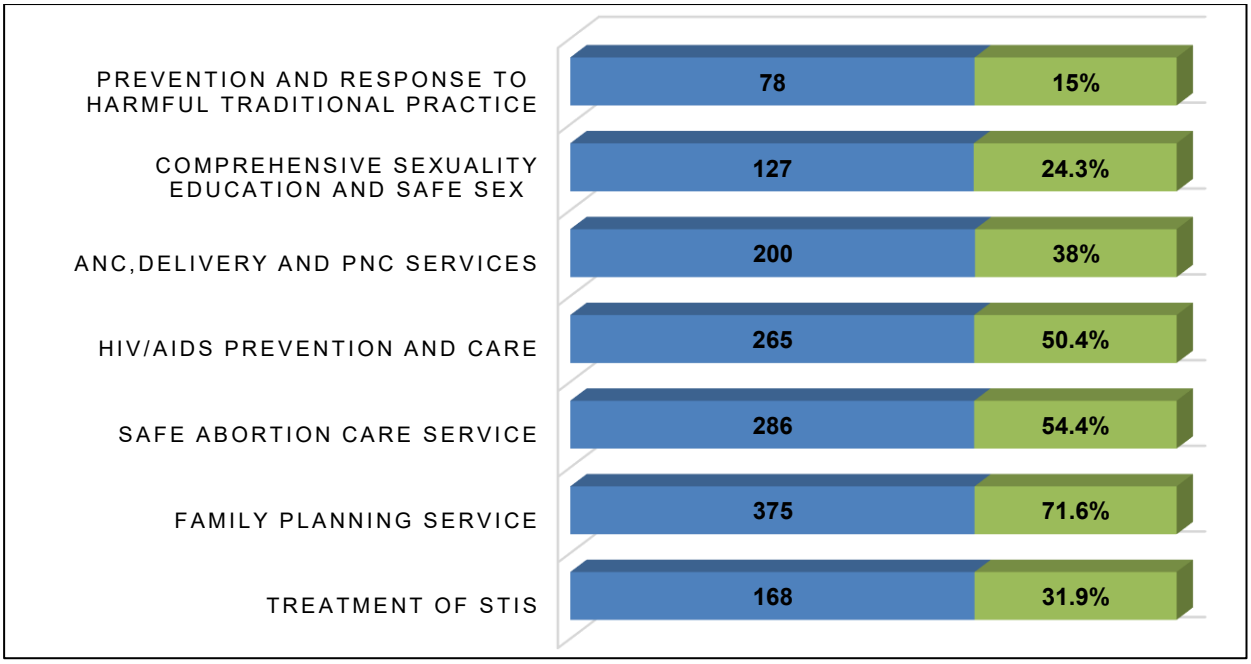

Figure 4.10 Percent distribution of sexual and reproductive health services components heard by study participant adolescents in Arsi Zone, Oromia, Ethiopia (N=651)

Family planning is the most widely recognised SRH service type among adolescents, with 71.6% (n=375) of respondents acknowledging it. Safe abortion care services were noted by 54.4% (n=286) of participants, while HIV/AIDS prevention and care accounted for 50.4% (n=265). Maternal newborn and child healthcare (MNCH) was recognised by 38% (n=200) of respondents, STIs treatments by 31.9% (n=168), comprehensive sexual education (CSE) by 24.3% (n=127), and the prevention and response to harmful traditional practices by 15% (n=78). In the present study, harmful traditional practices and

comprehensive sexual education are comparatively less recognised. These findings can inform future educational and outreach strategies to enhance awareness and accessibility of all SRH services.

A comparable result was obtained in a study conducted in eastern Ethiopia, where 73.1% of respondents acknowledged adolescent contraceptive information (Abdurahman et al 2022:5). A comparative study conducted in Cameroon highlighted adolescent awareness of the availability of SRH service components. The study found that awareness among adolescents was 82.9% for HIV testing, 47.3% for STI treatment, 64% for contraceptive methods, and 60.3% for ANC and PNC. These figures exceed those observed in the current study (Dine, Uwamahoro, Oladapo, Eshun, Effiong, Kyei-Arthur & Tambe 2023:6). The discrepancy may be attributable to differences in community awareness-raising strategies between the two nations.

Source and preferred source of information by adolescents on SRH services

Table 4.5 Source of SRH services information and preferred source of SRH services information selected by adolescents (N=651)

Sources of SRH information for adolescents	Source of SRH information		Primary/preferred source of SRH information	
	Frequency	Percent (%)	Frequency	Percent (%)
Healthcare worker	368	70.0	394	74.9
School teacher	322	61.2	311	59.1
Social media	189	35.9	118	22.4
TV/radio	219	41.6	109	20.7
Parents	315	59.9	174	33.1
Peer educators	133	25.3	176	33.5

Information source on SRH services for adolescents

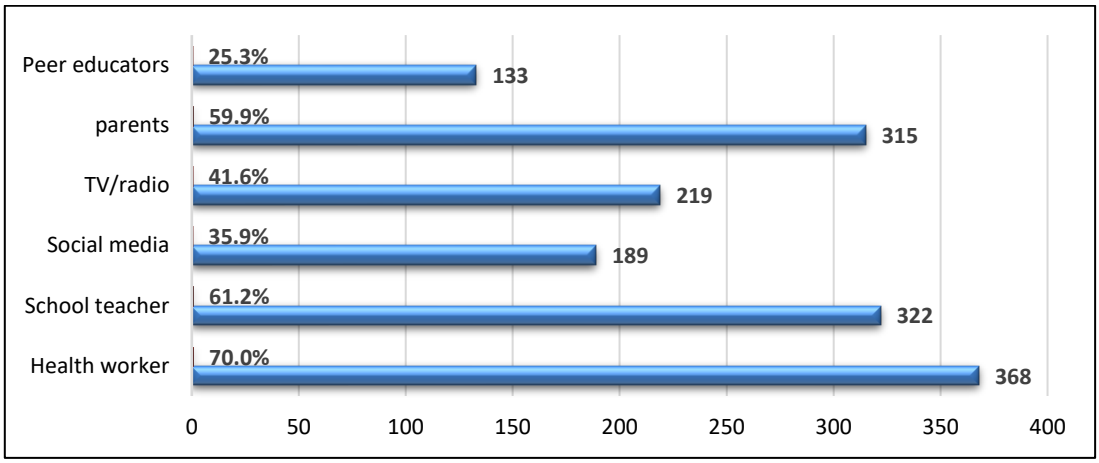

Figure 4.11 Source of sexual and reproductive health services information for the adolescents (N=651)

Health professionals have been identified as the primary source of SRH information, with 70% (n=368) of survey participants reporting receiving SRH-related services from these practitioners. Educational institutions, represented by teachers, and family units are also acknowledged as significant sources, with 61.2% (n=322) and 59.9% (n=315) of respondents, respectively, indicating them as significant sources. Television and radio stations are considered notable mediums, cited by 41.6% (n=219) of participants, while 25.3% (n=133) of adolescents prefer peer educators as a source of information. About 35.6% (n=189) of respondents use social media platforms, suggesting an increasing reliance on digital channels for disseminating SRH information.

The sources of SRH information differ between adolescents in Ethiopia and those in other parts of the world. The results are in line with those reported in the findings from a study conducted in the Guraghe Zone, situated in southern Ethiopia, where adolescents' sources of SRH information consisted of schools (85.1%), radio (57.6%), family/parent (36.25%), social media (16.8%), and television (15.1%) (Habte & Dessu 2023:8). Another study conducted in Tanzania revealed that peers and teachers are the primary sources of information for adolescents. Furthermore, the media and schools are identified as preferred sources of SRH service-related information (Mcharo et al 2021:1).

A study conducted in Kenya revealed that radio programmes are a source of information for adolescents to learn about SRH services (Maina et al 2025:1). A study conducted in

the Andaman and Nicobar Islands reported teachers, friends, mass media, and parents as sources of information concerning SRH (Yadav & Kumar 2023:3).

Preferred source of information on SRH services for adolescents in the Arsi Zone, Ethiopia

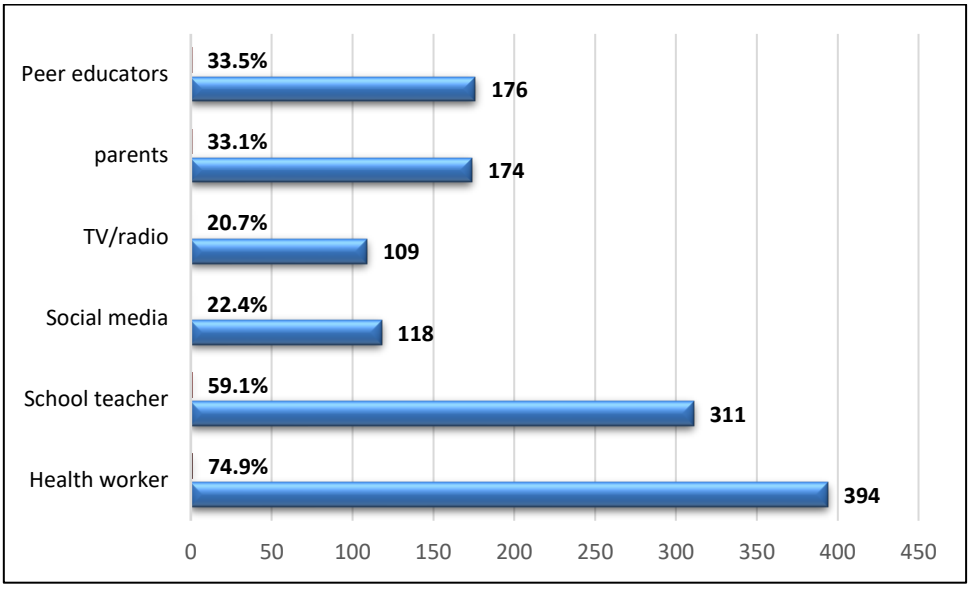

Figure 4.12 Preferred sexual and reproductive health services sources of information for adolescents in the Arsi Zone of Ethiopia (N=651)

In this study, most adolescents named healthcare workers as their preferred source of SRH information, with 74.9% (n=394) choosing this option. This preference emphasises the trust and reliability of professional healthcare providers for sensitive and accurate information. School teachers are the second-most-preferred source, accounting for 59.1% (n=311) of responses. This suggests that educational institutions play an important role in disseminating SRH information to students. Peer educators, Parent/family, social media, and television/radio were less desirable, with 33.5% (n=176), 33.1% (n=174), 22.4% (n=118), and 20.7% (n=109) of the respondents. The low preference for social media and television/radio may reflect concerns about the accuracy and reliability of information from these sources. The relatively low percentage of parents shows that, although some people seek information from their family, it is not the primary source for most. This finding contrasts with a study conducted in rural schools in South Africa, which advocates for social media as the optimal choice (Adekola 2023:1). This discrepancy may be due to smartphone and network accessibility in the Arsi Zone of Ethiopia. From the findings of other studies done in the Democratic Republic of Congo, the primary sources

of information on SRH services, unlike the current study, are Television and radio, followed by health facility sources (Mpunga et al 2022:5). This discrepancy might be related to the better accessibility of Television and radio in rural areas compared to the Arsi Zone of Ethiopia. The study conducted in Brazil identifies the principal sources of information for adolescent SRH as parents/responsible adults, teachers, and friends, in that order (Arruda, Brito, Prandini, Lerri, Reis, Dos, Barcelos & Lara 2020:31).

The study's results highlight the critical role of health professionals and educational institutions in providing information on SRH. Efforts to improve SRH education should focus on improving the capacity of these reliable sources. In addition, it is necessary to address the gaps in information dissemination through social media, television/radio and parental guidance to ensure that individuals can obtain accurate and reliable SRH information from multiple channels.

Proportion of study participant adolescents who have ever discussed the components of SRH service

About 24.7% (n=161) of adolescents report discussing SRH components with parents, health professionals, religious leaders, friends, and others in the Arsi Zone of Ethiopia. More than 75.3% (n=499) of adolescents did not talk about SRH with other adolescents who are better aware of SRH services. Literature has shown that the discussion of adolescents on the problem of SRH services is a key variable for adolescents to use the service. The results of the study conducted in Nigeria exceed the current results of the study, where 56.9% of adolescents discussed SRH issues in the period 12 months before the study took place (Aliyu & Aransiola 2023:8). Similar trends have been observed in the study conducted by (Millanzi, Osaki & Kibusi 2023:4) in Tanzania on adolescent-parent communication concerning SRH topics, where in only 26.7% of adolescents participated in discussions with their parents.

Adolescents' comfort to receive SRH services in Arsi Zone, Ethiopia

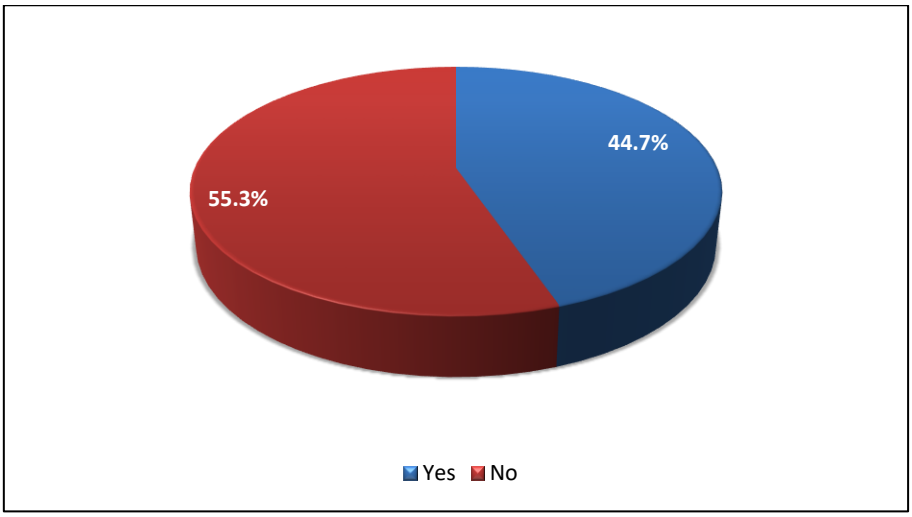

Figure 4.13 Adolescent comfort to receive SRH services in the Arsi Zone, Oromia, Ethiopia (N=651)

This study revealed that 44.7% (n=291) of adolescents reported being comfortable receiving SRH services if needed, while 55.3% (n=360) reported not being comfortable receiving them. A similar study conducted in the Greater Banjul Area, the Gambia, reported adolescents' perceived comfort and access to SRH services, indicating that 46% of adolescents felt comfortable, while 54% did not (Jallow, Awolude, Bah, Solomon, Bampoque & Nshimirimana 2025:15).

Adolescents' choice to prevent unwanted pregnancy

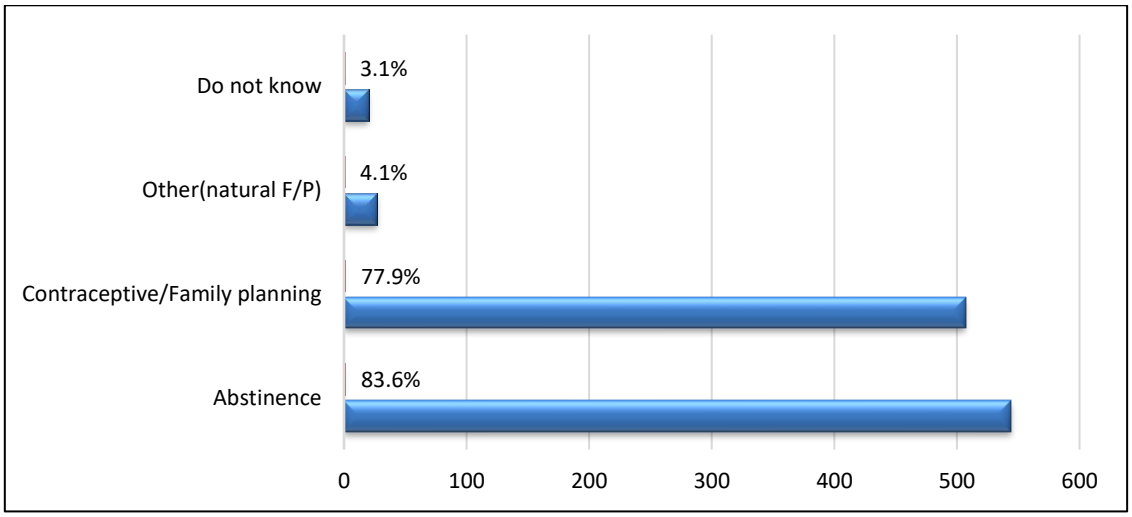

Figure 4.14 Adolescents' choice to prevent unwanted pregnancy (N=651)

Abstinence and the use of contraceptives are the most frequently reported methods by adolescents to prevent unwanted pregnancies, with 83.6% (n=544) respondents indicating abstinence and 77.2% (n=507) respondents reporting the use of family planning/contraceptives. A minor proportion of respondents (4.1%, n=27) reported using alternative methods, such as natural methods. A small proportion of adolescents do not know how to prevent unwanted pregnancy, 3.1% (n=20). Similar studies support the importance of contraceptive use in preventing unintended pregnancies among adolescents (Todd & Black 2020:10). The findings are consistent with earlier research, such as a study conducted in Zambia, where adolescents reported using various methods to prevent unwanted pregnancies, including abstinence (33.5%), barrier methods such as female and male condoms (56.6%), long-acting contraceptives (18.4%), and oral contraceptive pills(18.3%) (Namukonda, Rosen, Simataa, Chibuye, Mbizvo & Kangale 2021:7).

Contraception/family planning services

Condoms were identified as the most widely recognised contraceptive or family planning method, exhibiting an awareness prevalence of 92.5%. This is followed by emergency contraceptive pills, which are acknowledged by 41.8% of adolescents. Injectables, however, exhibit the lowest recognition among contraceptive methods, with an awareness rate of merely 13.9%. A comparable study undertaken in Gambella, Southwest Ethiopia yielded results lower than those of the present study for condom awareness and higher for other oral contraceptive pills and injectables, indicating that 76.1% of adolescents possessed knowledge of family planning, with condoms being the most recognised method, acknowledged by 48% of the adolescents, followed by oral contraceptive pills account 46%, and injectables 44% (Hailu et al 2024:5). This discrepancy could be attributed to the socio-demographic characteristics of the respondents. Furthermore, a study carried out in Rwanda presented different results, showing that adolescents demonstrated greater awareness of HIV testing and circumcision services (Ndayishimiye et al 2020:2). These findings are consistent with the study conducted in the Democratic Republic of Congo, where in male condoms were the most utilised contraceptive method at a rate of 34%, followed by oral contraceptives, which were employed by 12% of adolescents. Other methods included long-acting reversible contraceptives, with implants used by 9% and intrauterine devices by 1%, injectables at 7%, and emergency pills at 5% (Mpunga et al 2022:5).

Benefits of condom use among adolescents

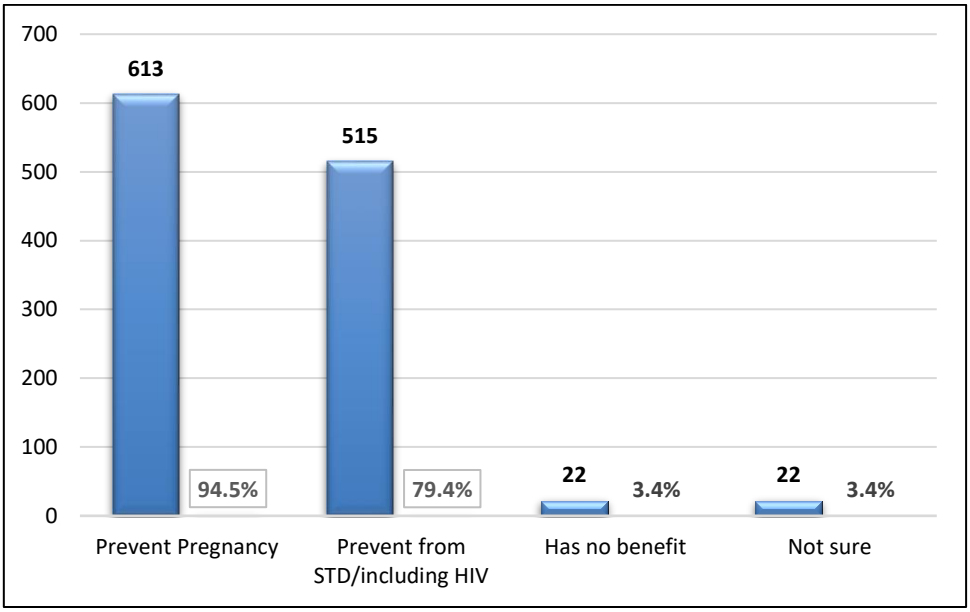

Figure 4.15 Understanding of adolescents about the benefits of condoms in Arsi Zone, Ethiopia (N=651)

The study investigated adolescents' awareness regarding the benefits associated with condom use. Most of the participants, 94.5% (n=613), acknowledge the benefits of condoms in preventing pregnancy, indicating a substantial cognisance of their benefits. Moreover, a significant portion of adolescents 79.4% (n=515) asserts that condoms play a crucial role in mitigating the risk of STDs, a small number 3.4% (n=22) of adolescents respond condom has no benefit and 3.4% (n=22) are not sure about the benefit of condom 3.4% (n=22). This result agrees with the WHO global objective which established to achieve 90% usage of condoms and lubricants during the most recent sexual intercourse with a client or non-regular partner by the years 2025 and 2030 (WHO 2022a:47). This objective underscores the essential function that condoms fulfil in the prevention of HIV and other STIs, particularly among adolescents and essential populations. It is essential to improve the accessibility and quality of these services to encourage greater utilisation of SRH services among adolescents. Comparable trends have been documented by Namukonda et al (2021:7) in their study on adolescent SRH service utilisation in Zambia. In this study, 71.8% of participants acknowledged the role of condoms in preventing pregnancy, while 76.3% recognised their efficacy in protecting against HIV/AIDS and other STIs.

Potential risks associated with unsafe sexual activities among adolescents in Arsi Zone, Ethiopia

Table 4.6 Adolescent awareness about risk of unsafe sex in South-East Ethiopia

Variables	Yes/percentage	No/percentage
Adolescent has ever had sex	181/27.8	470/72.2
Adolescent is aware of the risk of unsafe sex	562/86.3	89/13.7

In this study, it was observed that 27.8% (n=181) of adolescents have experienced sexual intercourse, while 72.2% (n=470) have not engaged in such activities as reported in the current study. The age at which individuals first engaged in sexual intercourse ranges from 11 to 19, with the average age being 16.4 years among those adolescents who have engaged in sexual practices. This result is in line with study conducted in Zambia where 16.5% of adolescents experience first sex before age of 16 and mean age at sex debut is 16.5 (Mukanga, Dlamini, Mwanabute & Taylor 2024:5). The current study finding is lower than the study result obtained from Ribeirao Preto, state of Sao Paulo, Brazil where 66.94% of adolescents reported sexual intercourse and age of first sexual intercourse were 7 to 17 in girls and 7 to 18 in boys (Arruda et al 2020:4-5). The observed discrepancy may be attributable to variations in socio-cultural and socio-economic factors prevalent in the respective study locations. Moreover, the proportion of adolescents who have experienced sexual intercourse in the study conducted in Bangkok, Thailand, equates to 14.1%, which is comparatively lower than the findings of the current study (Thepthien & Celyn 2022:2). The difference might be due to socio-demographic characteristics between the two nations.

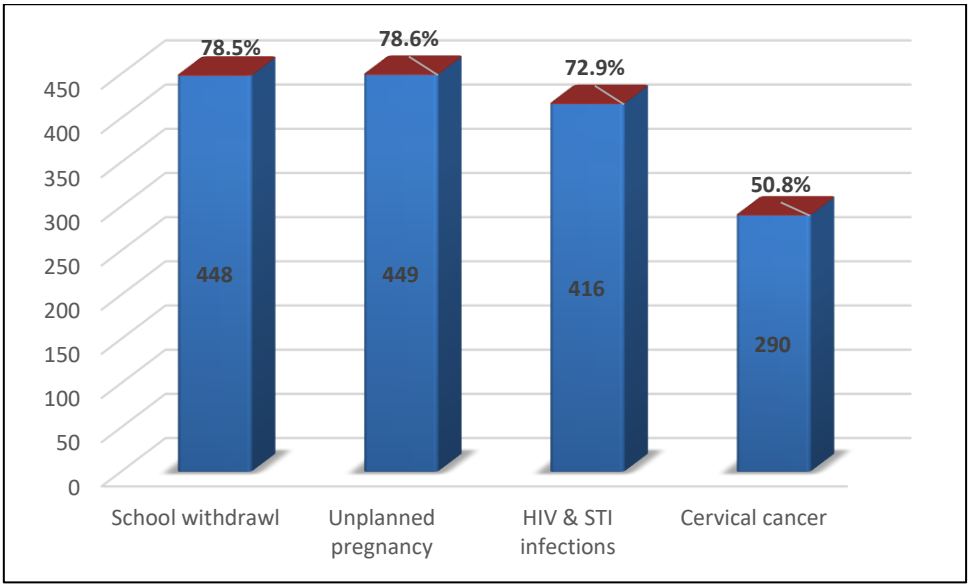

Figure 4.16 Potential risk associated with unsafe sexual activities of adolescents in Arsi Zone, Oromia, Ethiopia (N=651)

A significant percentage of adolescents, 86.3% (n=562), reported perceiving themselves to be at risk if engaged in unsafe sexual activities. Conversely, 13.7% (n=89) demonstrated a lack of awareness concerning the potential risks associated with engaging in unsafe sexual practices. A comparative study conducted in Harar, Ethiopia, revealed that 41.9% of adolescents possess a positive attitude towards risky sexual activity, a result lower than the findings of the current study (Mesele, Alemayehu, Demissee, Yusuf, Abubeker, Ahmed & Jemal 2023:1). This discrepancy could be attributed to socio-cultural differences between the two geographic locations.

Adolescent involvement in unsafe sexual activities represents a substantial public health challenge due to its association with numerous negative consequences. The present study investigates various perceived risks associated with premature sexual involvement (Figure 4.16). The study identifies several potential risks for adolescents engaging in unsafe sexual practices, revealing that rates of unplanned pregnancy were 78.6% (n=449), school withdrawal 78.5% (n=448), HIV and STIs 72.9% (n=416), and cervical cancer 50.8% (n=290). Comparative study conducted in Bhutan indicated that 86% of adolescents expressed concerns regarding the contraction of STIs as a secondary consequence of engaging in unsafe sexual practices (Dorji, Wangmo, Tshering, Tashi & Wangdi 2022:6-11). Literature indicates that half of pregnancies among adolescents aged 15 to 19 are unintended. Consequently, the renewed Ministerial Commitment from

Eastern and Southern Africa (ESA) aims to reduce unintended pregnancies by 40% by 2030 (Choonara, Hwati, Tayebwa & Govender 2024:1).

Awareness of gender-based violence among adolescents

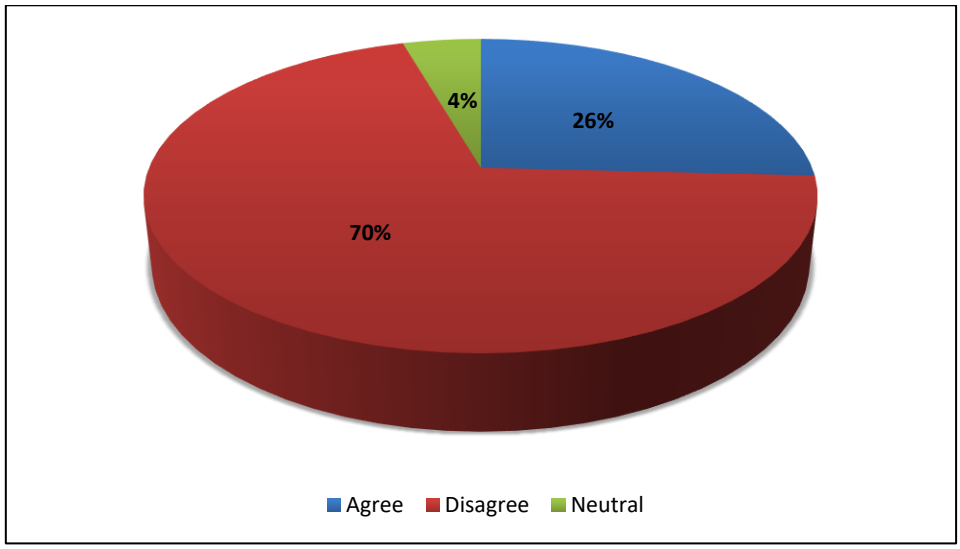

Figure 4.17 Adolescent attitude to gender-based violence (N=651)

As per the WHO report, a quarter of young girls (15-19 years old) in relationships have been subjected to physical and/or sexual violence in their lifetime by intimate partners. A figure that has essentially not changed over the last decades (WHO 2024:7). The present study revealed that the perception of IPV in adolescents, particularly the perception that husband and wife are critical problems reflecting broader social norms and attitudes toward gender-based violence. The report examines the attitudes of adolescents towards men who beat women based on the responses. Most adolescents, 69.7% (n=454), disagree with the notion that a husband should beat his wife. However, a significant minority (25.8%, n=168) agrees with this perception, and 4.5% (n=29) remain neutral. Similar studies conducted in Addis Ababa, Ethiopia, revealed that 18.7% males and 7.6% females believe that it is alright for a boy to beat his girlfriend if she is unfaithful or lying (Kebede et al 2023:7). The difference may be targeting the population with awareness level difference since the comparative study takes place in the capital, Addis Ababa. A study conducted in Zambia corroborates the current findings, indicating that approximately 27.2% of adolescents believe that a man is never justified in beating his girlfriend or wife (Namukonda et al 2021:7).

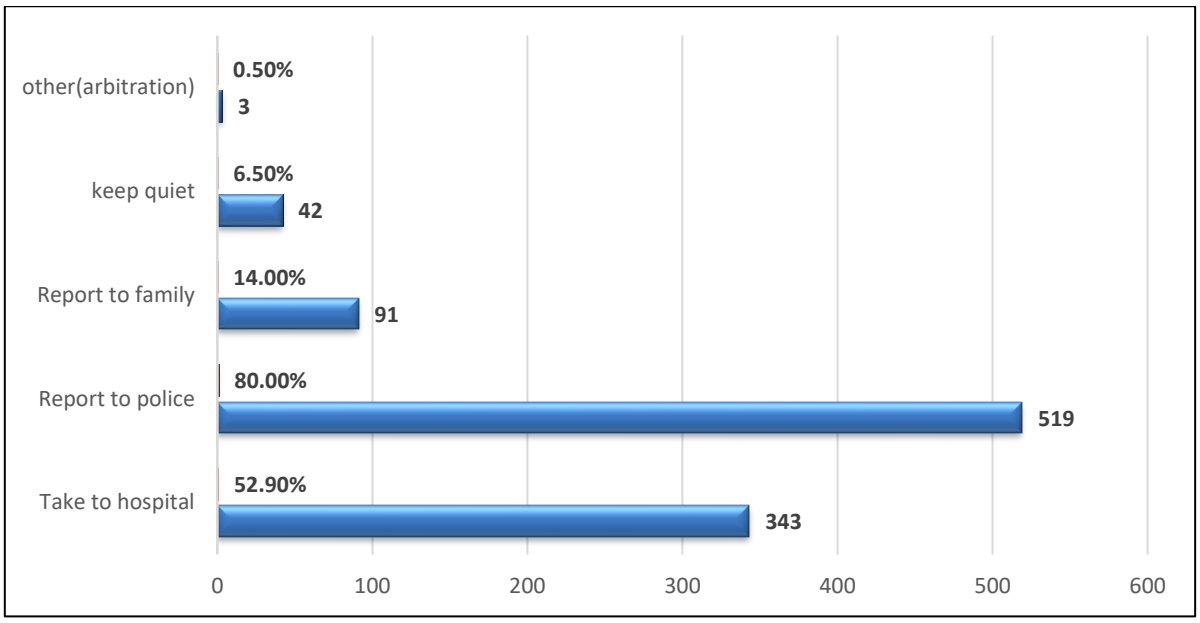

Figure 4.18 Adolescent awareness of gender-based violence response and management (N=651)

The study provided valuable information on the perception and management of gender-based violence by adolescents. The survey, which contains 651 responses, reveals several key trends in the management preferences of adolescents with GBV. The majority, 80.0% (n=519) of total responses from adolescents believe that involving law enforcement is the most effective way to handle gender-based violence incidents. This indicates a firm trust in the legal system to address and resolve such issues. A significant proportion, 52.9% (n=343) of adolescents prioritise medical attention, recognising the importance of immediate care for gender-based violence victims. Some 11.0% (n=91) of adolescents prefer to report gender-based violence incidents to their family members, indicating a dependence on family support systems, and a small 0.2% (n=42) of adolescents choose to remain silent about gender-based violence incidents, which could be due to fear, stigma, or lack of awareness of available support systems. The study from Indonesia supports the current study in that all adolescents did not report the case due to being afraid to talk about, being embarrassed about, being afraid to make the family burdened, and being confused about how to tell the story (Tristiana, Pratiwi, Wulansari, Yusuf & Sulistyono 2023:1-5).

Therefore, the data show that adolescents are more likely to report gender-based violence incidents to the police and then seek medical help. There is less dependency on family support, and a small percentage of adolescents prefer to remain silent about such

incidents. These conclusions highlight the need for greater awareness and education on the importance of reporting on gender-based violence and the available support systems to ensure the safety and well-being of adolescents.

Menstrual hygiene management

The adolescent asked about the availability of specially designed rooms for women to rest during menstruation in schools where female students can manage their periods with dignity and privacy. The report examines the awareness and availability of such facilities in schools, based on the provided data. Based on the findings, 17.4% of respondents confirm the facility's availability, 72.2% confirm its lack, and 10.4% are unaware of its availability. This finding is supported by the study done in Western Ethiopia, where 33.1% of adolescents miss class 1-2 days per month due to lack of facilities at school (Daniel et al 2023:5). The study conducted in the capital of Ethiopia, Addis Ababa, reported a higher presence of menstrual hygiene management rooms in schools. However, half of the schools lacked sanitary pad-changing rooms (Melaku, Addis, Mengistie, Kanno, Adane, Kelly-Quinn, Ketema, Hailu et al 2023:1). This discrepancy may be attributed to better infrastructure in urban areas compared to rural areas.

Adolescent autonomy to decide on SRH service utilisation

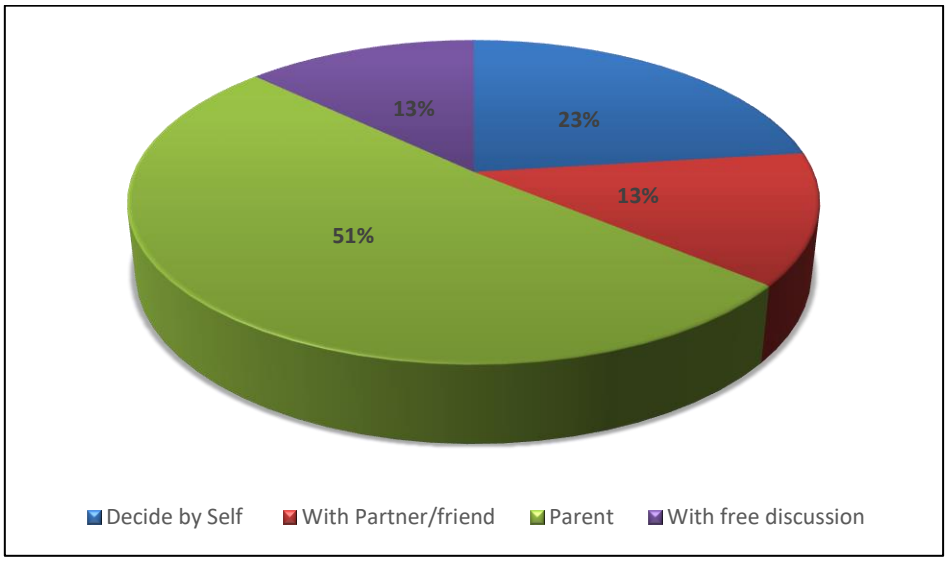

Figure 4.19 Adolescent autonomy in decision-making for sexual and reproductive health services (N=651)

The autonomy of adolescents in making decisions about SRH services is essential to their overall well-being and empowerment. This study examines data on influences on adolescents' decision-making processes. A significant proportion of adolescents (51.0%, n=332) rely on their parents for SRH decisions, indicating substantial parental influence. Only 23.0% (n=150) of adolescents make these decisions autonomously, underscoring the necessity for greater autonomy. Although the influence of partners or friends, as well as discussions with either group, is not prevalent, it remains notable at 13.1% (n=85). Approximately 12.9% (n=84) of adolescents engage in open discussions with other family groups when making decisions (Figure 4.19). This result is lower than the study done in Uganda, where adolescent decision-making autonomy to use contraceptives on their own is 26.8% (Matovu, Amongin, Akulume, Tuhebwe, Murungi & Wanyenze 2025:1). This discrepancy can be ascribed to differences in the implementation of national SRH policies, the accessibility of health services that cater to adolescents, and the sociocultural attitudes towards adolescent sexuality. The study conducted in Rwanda aligns with current findings indicating that most adolescents require parental consent to access SRH services (Habtu, Rutayisire, Nisengwe, Nikwigize, Asingizwe, Dodoo & Ntakirutimana 2025:1).

This study revealed that most participants, 87.7% (n=571) of adolescents, are committed to opposing early marriage if directed at them, while 12.3% (n=80) still support early marriage. The literature indicates that empowering young individuals to make independent decisions about SRH services is essential (Chipako, Singhal & Hollingsworth 2024:17).

4.4.1.3 Description of the SRH services for the adolescents in the Arsi Zone of Ethiopia

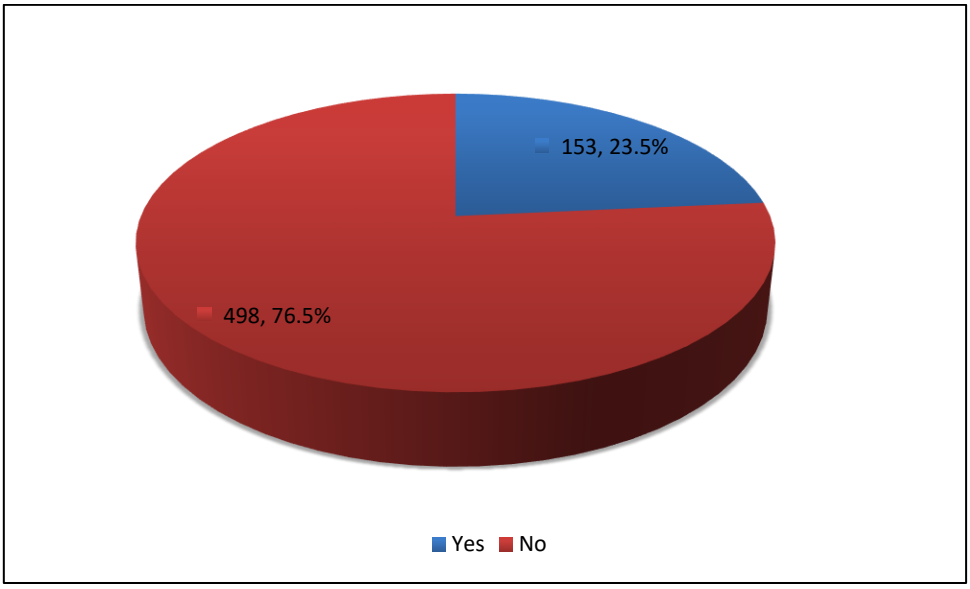

Figure 4.20 Percent distributions of SRH service utilisation status by adolescents in Arsi Zone, Ethiopia (N=651)

This study revealed that a smaller number of 153 (23.5%) adolescents had experience using the SRH service utilisation. The result obtained from current study is higher than the study done in Gamo Zone, Southern Ethiopia and East Wallaga Oromia region of Ethiopia where SRH service utilisation by adolescent were 16.89% and 8.6% (Sidamo, Kerbo, Gidebo & Wado 2024a:1; Tilahun et al 2021:1). There might be various reasons for the difference, socio-demographic, economic, and cultural difference could be the source of difference. Similar results were obtained in the study conducted in Bhaktapur district, Nepal, where 24.7% of adolescents utilised SRH services (Napit et al 2020:1). This finding is lower than the national result, which is 42.73% (Belay, Arage, Degu, Getnet, Necho, Dagnew, Melkie, Seid et al 2021:1). The discrepancy could be the age range and place of residence of study participants, where the national result includes age range of 10-24 and the current study includes 15-19 and only rural. This result is in line with the findings of Abdurahman et al (2022:1), who reported that SRH service utilisation among adolescents is 23.5%. The current finding is less than the results obtained from a study done in west Bengal India which were 29.4% utilisation of SRH services by adolescents (Banerjee et al 2023:1). This result is also lower than the results of a study conducted in the city of Bahir Dar, northern Ethiopia, where 30.4% of adolescents used

SRH services (Elefachew et al 2024:4). The difference might be due to the availability of SRH services in the area.

Types of SRH services accessed by adolescents in Arsi Zone, Ethiopia

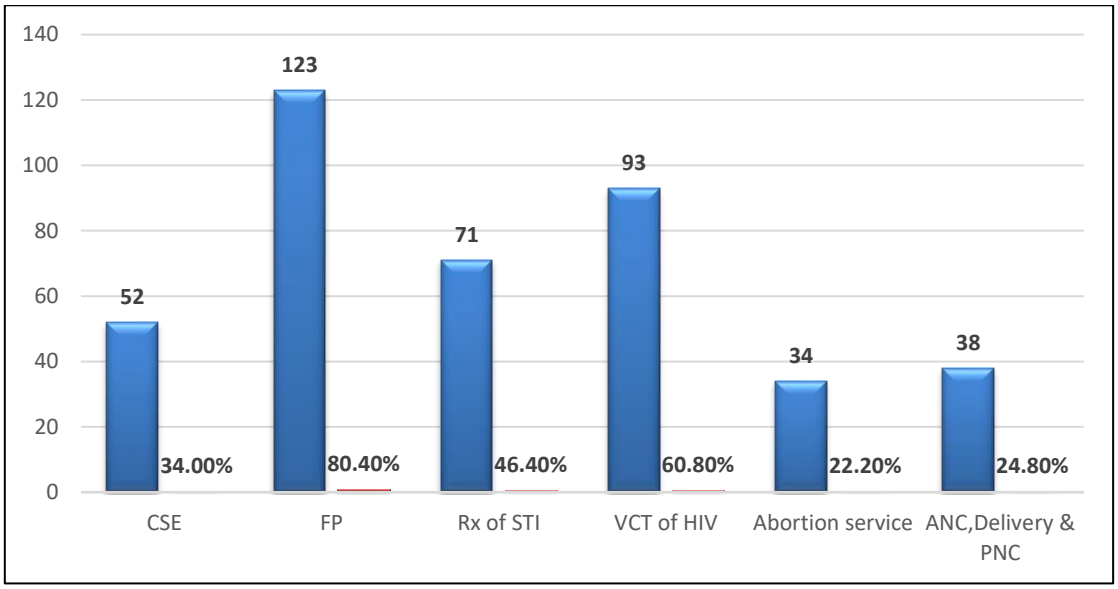

Figure 4.21 Types of SRH services utilised by adolescents in Arsi Zone, Ethiopia (N=651)

This study investigated the various components of SRH services employed by adolescents. Figure 4.21 reveals that among SRH services, family planning (contraceptive) services were the most frequently utilised, with 80.4% (n=123) of adolescents having engaged with these components. VCT was also substantially utilised among the SRH components, with 60.8% (n=93) of adolescents reporting access to and use of this service. Other significant components encompassed the treatment of STIs at 46.4% (n=71), comprehensive sexual education at 34% (n=52), antenatal care (ANC), delivery and PNC at 24.8% (n=38), and safe abortion services at 22.2% (n=34). The findings of this study suggest that adolescents engage with a diverse array of SRH service components.

The significant use of family planning (contraceptive) services emphasises their Importance and accessibility for adolescents. The high use of VCTs for HIV and STI treatment underscores the need for continuous education and support in these areas. However, the reduction in the use of CSE and safe abortion services may indicate obstacles or challenges in these areas. Study in West Bengal revealed that 23.3% of adolescents used information and counselling, STI/HIV related counselling or treatment,

18.1%, Family planning/contraceptive-related services (15.9%). ANC or abortion-related 1.5% (Banerjee et al 2023:5). A comparative study conducted in Kinondoni Municipality, Dar es Salaam, Tanzania, indicated that the most frequently utilised services were information and counselling services on SRH (32%) and voluntary counselling and testing services for HIV (29%). Contraceptive and emergency contraceptive services were utilised by 16% and 13% of sexually active adolescents, respectively (Mwandali et al 2020:7).

Prevalence of contraceptive utilisation among adolescents in Arsi Zone, Ethiopia

Table 4.7 Adolescent use of family planning/contraceptive methods in South-east Ethiopia

Family planning methods/contraceptive	Frequency (%)
Male condom	123 (33.4)
Emergency tablet/post pills	64 (17.4)
Injectables	42 (11.4)
Combined oral contraceptive pills (COC)	95 (25.8)
Long-term (implants and Intrauterine contraceptive devices [IUCD])	19 (5.2)
Others (natural methods, including calendar and withdrawal)	25 (6.8)

About 18.9% (n=123) of all participants and 80.4% of respondents utilising SRH services reported using contraceptives, while the remaining 81.1% (n=528) did not (Figure 4.21). This indicates a significant gap in contraceptive use among adolescents. The current study result is nearly similar with study conducted at Southern Ethiopia where contraceptive use by adolescent were 25.9% (Habte & Dessu 2023:1). This finding is lower than meta-analysis done in Ethiopia which reported 40% of the adolescents used contraceptive methods (Mekonnen, Odo & Nigatu 2022:1). The discrepancy might be due to the difference of socio-cultural and geographic location of the study area.

In the current study, condoms are the most widely used method, with 33.4% (n=123) of adolescents reporting using male condoms. Combining oral contraceptives (COC) is the second most popular method used by 25.8% (n=95) of people. Emergency tablets/post pills were used by 17.4% (n=64) female adolescents, Injectables 11.4% (n=42), long-term reversible methods (implants and IUCD) 5.2% (n=19), and other (natural methods including calendar and withdrawal) 6.8% (n=25). Some adolescents used more than one method. The findings of a study conducted in the Guraghe Zone, Southern Ethiopia,

corroborate the present study, indicating that condoms, oral contraceptive pills, injectables, implants, and IUCD are arranged in order of utilisation among adolescents (Habte & Dessu 2023:7). The current study result is consistence with study done by Chandra-Mouli & Akwara (2020:1) where male condom mentioned as the most used contraceptive methods used by adolescents not in union. Other similar studies done in the Democratic Republic of the Congo agree with the current findings, where a significant number of adolescents utilised male condoms (Mpunga et al 2022:7-8).

Healthcare institutions preference by adolescents

Table 4.8 Healthcare institutions' preference for SRH services by adolescents in Arsi Zone, Ethiopia

Types of facility	Frequency	Percent (%)
Public health facility	58	37.9
Private health facility	73	47.7
Youth centre	22	14.4

A survey of 153 participants, representing 23.5% of the total sample, was carried out to examine which types of health facilities they used to obtain services. The findings indicate that private health facilities were most frequently utilised, with 47.7% (n=73) of respondents reporting usage of these institutions. This was followed by government health facilities, which were accessed by 37.9% (n=58) of participants. Youth centres were the least utilised, with only 14.4% (n=22) of respondents reporting usage. These results suggest a pronounced preference for private health facilities over public options and youth-specific centres. This trend may reflect perceptions about service quality, accessibility, or privacy concerns among the target demographic. This is consistent with the study conducted in the Gamo Zone, Southern Ethiopia, where the majority of adolescents prefer to obtain SRH services from private clinics (Sidamo et al 2024b:11). These findings do not align with those reported in Greater Banjul Area, the Gambia by Jallow et al (2025:15), who identified public clinics/hospitals as the primary choice for 8.5% of adolescents, with private facilities being selected by 7.5%, community clinics by 3.5%, school clinics by 3.3%, and other locations by 0.7% for the reception of SRH services. Such discrepancies may result from differences in the facilities' infrastructure between the two countries.

Factors contributing to adolescents' engagement in unsafe sexual practices

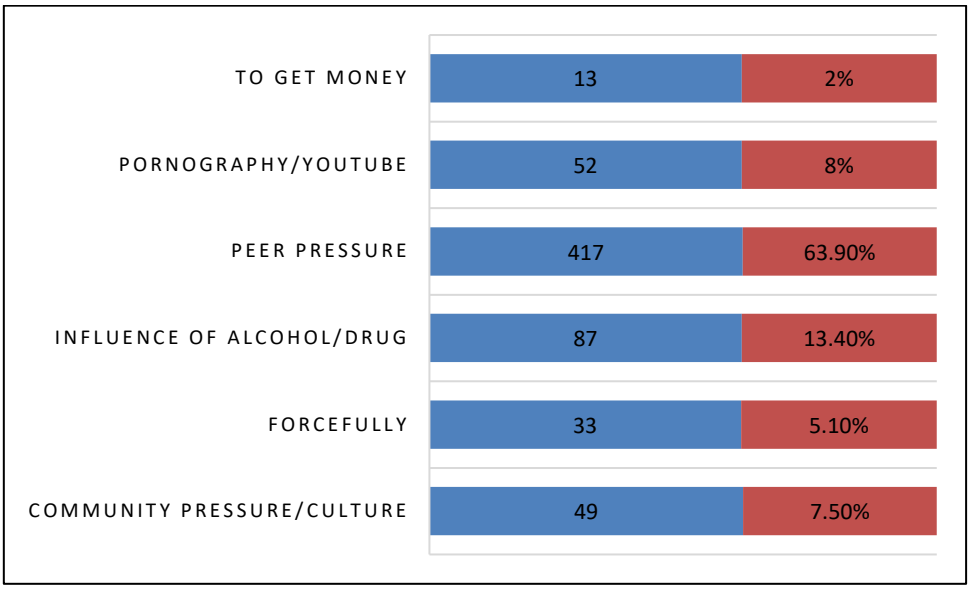

Figure 4.22 Factors contributing to adolescents' engagement in unsafe sexual practices in Arsi Zone, Ethiopia (N=651)

This study revealed that the most significant factor contributing to adolescents' engagement in unsafe sexual practice is peer pressure, with 63.9% (n=417) of respondents. About 13.40% (n=87) of adolescents engage in unsafe sexual activity due to alcohol or drugs, which affects judgment and increases unsafe behaviour. Pornography and YouTube 8% (n=52), community norms or culture also affect 7.5% (n=49), 5.1% (n=33) are involved forcefully (by rape), and the remaining 2% (n=13) of adolescents engaged in unsafe sexual activities to get money (Figure 4.22). Srahbzu and Tirfeneh (2020:1) similarly conclude from their data that risky sexual behaviour among adolescents aged 15-19 years was associated with poor support from family, living out of the family, experiencing family neglect, and alcohol drinking. This finding agrees with the result obtained from a study done in KwaZulu-Natal, South Africa, where peer pressure, drugs, and alcohol were among the reasons for adolescents to engage in unsafe activity (Govender, Naidoo & Taylor 2020:4-5). A study conducted in Bangkok, Thailand, is consistent with the current findings, as it identifies cannabis use, alcohol consumption, and sexual abuse as contributing factors to engaging in unsafe sexual practices or risky sexual activities (Thepthien & Celyn 2022:7).

Table 4.9 Percentage distribution of specific SRH services utilised by adolescents in the Arsi Zone of Ethiopia

Variables	Yes/percentage	No/percentage
Have you ever contracted any STDs?	91 (14)	560 (86)
Have you ever tested for HIV?	200 (30.7)	451 (69.3)
Variables (for females only)	-	-
Have you ever been vaccinated against cervical cancer?	34 (10.3)	297 (89.7)
Have you ever had an unwanted pregnancy?	30 (9.1)	301 (90.9)
Have you ever had an abortion?	17	13
Did you pay for the abortion service?	12	5

STDs are a significant public health problem, especially among adolescents. Understanding the prevalence of STDs in this population is essential for developing effective prevention and education programmes. This study reports on the occurrence of SDT contraction among adolescents. Consequently, the data indicate that 14% (n=91) of adolescents have contracted at least one type of STD. This underscores the necessity for targeted interventions aimed at diminishing the incidence of STDs among the youth. Among the respondents, a mere 30.7% (n=200) have undergone testing for HIV/AIDS and are aware of their status, while the remaining 69.3% (n=451) did not know their HIV status. The prevalence in this study was lower than that reported in a study conducted in Western Amazon, Porto Velho, Rondônia, Brazil, where the prevalence of adolescent STD was 32% (Monteiro et al 2023:1). The difference may reflect the target population and geographic context unique to the study setting.

The study revealed that although a significant proportion of adolescents were cognisant of the risks associated with cervical cancer, merely 10.3% (n=34) of female adolescents had received vaccination against it. This percentage is considerably lower than the objectives outlined in the global strategy to eliminate cervical cancer by 2030, which aims for 90% of girls aged 15 to be fully vaccinated with the HPV vaccine by that year (WHO 2020:10). A comparative study conducted in Albania indicated that merely 19.7% of individuals had undergone testing for STIs. Nearly all female students, accounting for 93.4%, had never undergone an HPV test (Merkuri, Qorri, Rizaj, Emir & Shapo 2025:1). Regarding unintended pregnancy among adolescents, 9.1% (n=30) experienced unintended pregnancies, and 17 of them sought abortion services, with 12 individuals incurring costs for these services. The results from a comparative study conducted in

Bangkok, Thailand, surpass the findings of the present study, as the prevalence of unintended pregnancies among adolescents was reported to be 14.3% (Thepthien & Celyn 2022c:5).

Factors associated with SRH services utilisation

Additional analysis of the data was conducted to identify factors associated with adolescent utilisation of SRH services. The findings are presented in Table 4.10 for both bivariate and multivariate logistic regression analyses.

Bivariate analysis of factors associated with adolescent utilisation of SRH services

The bivariate analysis revealed the variables that are linked to adolescents' use of SRH services, as outlined below: Being male in sex (COR=2.1, CI 95% 1.44-3.06), educational level from 11-12 grades (COR=0.55, CI 95%.38-.79), adolescents who get pocket money for daily expenses (COR=2.01, COR 1.38-2.93), and adolescents who discussed SRH issues in the past six months preceding the study (COR=3.22, CI 95% 2.18-4.76). Furthermore, adolescents who feel the SRH service provision system is comfortable (COR=3.67, CI 95% 2.49-5.40), adolescents who has an awareness about the availability of an YFS providing centre (COR=2.77, CI 95% 1.90-4.02), adolescents who get into one of the SRH problems like STI (COR=3.10, CI 95% 1.95-4.93), and working hours of the YFS centre (COR=6.19, CI 95% 3.62-10.58) were statistically significantly associated with SRH service utilisation (Table 4.9).

Multivariate analysis of factors associated with adolescent utilisation of SRH services

Table 4.10 Bivariate and multivariate logistic regression analyses results contributing to adolescent utilisation of SRH services

Variables	Categories	SRH utilisation		COR (CI 95%)	AOR (CI 95%)	P-value
		Yes	No			
Gender	Female	99	232	2.1 (1.44-3.06)	1.10 (.61-1.99)	0.745
	Male	54	266	1		
Educational level	9-10	81	335	0.55 (.38-.79)	0.75 (0.45-1.24)	0.256
	11-12	72	163	1		
Adolescents get pocket money	Yes	67	139	2.01 (1.38-2.93)	0.74 (0.43-1.28)	0.285
	No	86	359	1		
Discussed SRH in the past six months	Yes	66	95	3.22 (2.18-4.76)	2.12 (1.22-3.67)	0.007**
	No	87	403	1		
Adolescent has no fear of receiving SRH service	Yes	105	186	3.67 (2.49-5.40)	2.07 (1.12-3.83)	0.021**
	No	48	312	1		
Adolescents know the availability of the YFS clinic	Yes	94	184	2.77 (1.90-4.02)	1.27 (0.73-2.2)	0.400
	No	58	312	1		
Adolescents face SRH problems like STIs	Yes	40	51	3.10 (1.95-4.93)	4.88 (2.26-10.54)	0.000**
	No	113	447	1		
The operating hours of the YFS centre are convenient for adolescents	Yes	90	157	6.19 (3.62-10.58)	3.19 (1.57-6.52)	0.001**
	No	19	205	1		

1=Reference group, crude odds ratio (COR), adjusted odds ratio (AOR), (**) there is an association

The multivariate regression analysis, which accounted for potential confounding factors, demonstrated that adolescents who engaged in discussions about SRH topics with parents, teachers, or healthcare workers within the past six months were more than twice as likely to utilise SRH services compared to those who did not engage in such discussions (AOR=2.12,95% CI:1.22-3.67). Adolescents who did not experience fear when accessing SRH services were twice as likely to utilise these services compared to those who feared family members or other community groups (AOR=2.07,95% CI:1.12-3.83). Adolescents experiencing SRH problems were nearly five times more likely to utilise SRH services compared to those who did not experience such disorders (AOR=4.88,95% CI: 2.26-10.54). Adolescents who had access to the convenient operating hours of the YFS centre were 3.19 times more likely to utilise SRH services compared to those who did not have access to appropriate operating hours (AOR=3.19, 95% CI:1.57-6.52) (Table 4.9).

Engaging adolescents in discussions on SRH issues

This study demonstrated that conversations about SRH between adolescents and their parents or others have a positive correlation with the utilisation of SRH services. Engaging adolescents in discussions on SRH issues with family members, healthcare workers, friends, or teachers enhances their likelihood of utilising SRH services. Adolescents who discussed SRH topics were 2.12 times more likely to use SRH services than those who did not. This finding is corroborated by studies conducted in Southern Ethiopia and Ghana's Adaklu district (Habte & Dessu 2023:1; Westerman et al 2024:1). Another study conducted in Ghana supports this finding, indicating that adolescents who did not engage in discussions about SRH issues did not utilise SRH services (Klu, Gyapong, Agordoh, Azagba, Acquah, Doegah, Ofosu & Ansah 2023:9). Empirical evidence suggests that discussions regarding SRH between adolescents and their parents or healthcare workers significantly enhance adolescents' awareness of SRH services, subsequently improving the utilisation of these services (Akatukwasa et al 2022:1).

Fear of being seen by family or neighbours

According to this study's findings, adolescents' apprehension about being observed by family members or neighbours impedes their use of SRH services. The study identified that adolescents who do not harbour fear of being seen by family or neighbours are 2.07

times more likely to access SRH services compared to their counterparts who experience such fear. These findings corroborate the results of a previous study conducted in rural secondary schools of Arsi Zone, Oromia, Ethiopia, which indicated that adolescents perceived parental fear as an obstacle to accessing SRH services (Wakjira & Habedi 2022c:5). The findings of the present study align with the outcomes of research conducted in Rwanda and the People's Democratic Republic of Laos, where adolescents expressed concerns regarding parental discovery of their visits to public SRH services, thereby constituting barriers to the access of SRH services (Ndayishimiye et al 2020:2; Thongmixay et al 2019:1).

Adolescents who have a history of SRH problems

Adolescents who have a history of SRH problems are 4.88 times more likely to utilise SRH services compared to those who have not experienced any form of SRH problems. This observation corroborates the findings of an earlier study conducted in Ghana, which focused on adolescents who had never encountered any form of sexual coercion (Klu et al 2023:9). The findings are consistent with those of a study conducted in Bahir Dar, Ethiopia, which identified the history of SRH problems as a favourable determinant in adolescents' utilisation of SRH services (Elefachew et al 2024:1).

Operational hours of youth-friendly service centres

Furthermore, this study's findings underscore the importance of operational hours for YFS centres in facilitating adolescents' access to SRH services. According to the study's findings, adolescents who perceive the operational hours of youth-friendly centres as convenient are 3.19 times more likely to utilise SRH services compared to their counterparts who find the hours inconvenient. This outcome aligns with a qualitative systematic review conducted on studies within sub-Saharan Africa, which reported that YFS clinics that function only during regular working hours were not attracting adolescents to use SRH services (Sidamo, Kerbo, Gidebo & Wado 2023:8). Analogous conclusions were reached by the study conducted in North-western Nigeria, which indicated that the inconvenient operational hours of the health facility acted as a barrier preventing adolescents from accessing SRH services (Nmadu et al 2020:6).

4.4.1.4 The barriers to adolescents' access to sexual and reproductive health services in the Arsi Zone of Ethiopia

Adolescents face many challenges in accessing SRH services. Understanding the patterns of use of these services is crucial to improving adolescents' health outcomes.

Table 4.11 Utilisation and accessibility of youth-friendly health services among adolescents in Arsi Zone, Ethiopia

Variables	Yes	No
Do you know any YFS service centres in your locality?	471 (72.4%)	180 (27.6%)
Are the working hours for the facility convenient for you?	247 (37.9%)	224 (34.4%)
Do you think the facility provides sufficient privacy for the service?	247 (37.9%)	224 (34.4%)
Do your friends support you in your visit to the YFS services centre? (e.g., use of family planning)	373 (57.3%)	278 (42.7%)
Does your parent support you in the visit to the YFS services centre? (e.g., use of family planning)	323 (49.6%)	328 (50.4%)
Did you ever face any barrier to getting service from the YFS centre?	263 (40.4%)	388 (59.6%)

Of the 651 adolescents surveyed, 72.40% (N=471) reported being aware of the availability of a YFS facility in the area, while the remaining 27.6% (N=180) did not know about the availability of a YFS facility. A similar study conducted in Kogi state, Nigeria, reported that adolescent awareness about the availability of YFS is poor (Adione, Abamara & Vivalya 2023:1). These results are in line with those obtained by Ndayishimiye et al (2020:6) from a study done in selected cities of Rwanda, where adolescent awareness about the availability of YFS centres is 86.8%. The discrepancy might be due to differences in the target population. Only 28% of health facilities in Ethiopia provide YFS, and 15% have trained providers and guidelines to deliver the services (Ethiopian Public Health Institute (EPHI) & Ministry of Health (MoH) Ethiopia 2023:97). This conclusion underscores the need to increase the number of service delivery points.

The literature suggests that privacy and confidentiality issues represent substantial impediments to adolescents seeking access to SRH service facilities. In a study conducted in Southeast Nigeria, the majority of respondents identified privacy and confidentiality as primary obstacles in the utilisation of SRH services by adolescents (Ezenwaka, Mbachu, Ezumah, Eze, Agu & Onwujekwe 2020:6).

In this study, 37.9% (n=247) of adolescents believe YFS centres maintain privacy, whereas 34.4% (n=224) believe they do not. Research conducted in Kigali City, Rwanda, supports the current findings, indicating that 7.4% of adolescents are unable to attend YFSRH services due to concerns about confidentiality (Nyirarukundo, Musugire, Nsengiyumva, Mukashyaka & Nzeyimana 2025:11). The observed discrepancy in proportions may be attributable to varying levels of awareness within the target population.

Regarding social support from peers and family for considering YFS centres for SRH services, 57.3% (n=373) of friends and 49.6% (n=323) of parents are supportive. Conversely, 42.7% (n=278) of friends and 50.4% (n=328) of parents do not support the utilisation of SRH services. A study conducted in Rwanda highlighted the role of social support from friends and family in determining service utilisation. Receiving encouragement from family at 57.3% and from friends at 69.3% motivates adolescents to consider visiting facilities for services (Mukeshimana et al 2025:7).

Operational schedule of the youth-friendly service centre

Table 4.12 Preferred time to visit the youth-friendly service centre by adolescents in Arsi Zone, Ethiopia

Preferred time	Frequency	Percent (%)
Afternoon	61	27.7
Morning	126	57.3
Weekends/holidays	56	25.5

In this study, adolescents identified times they deem appropriate for accessing SRH services. The operating hours of YFS facilities are deemed inconvenient by 47.6% (n=224) of respondents, whereas 52.4% (n=247) of adolescents express satisfaction with the schedule.

The report's findings indicate that the preferred times to visit the YFS centre are 57.3% in the morning and 27.7% in the afternoon, while 25.5% of the respondents emphasised the necessity for services. This outcome concurs with a study conducted in Nigeria, which also identifies facility operating hours as a barrier for adolescents seeking SRH services (Arije, Madan & Hlungwani 2022:1). A comparative study carried out in North Shewa,

Amhara, Ethiopia concurs with the present findings, revealing that 50.3% of adolescents indicated that facility operating hours are convenient. In contrast, the remaining 49.7% reported that the hours are not convenient. The majority of respondents (67.6%) expressed a preference for weekends, with 12.2% favouring early morning, 11.1% late afternoon, 4.7% holidays, and 4.4% preferring nighttime for SRH services (Demeke, Yohannes, Abera, Belayneh & Nigussie 2022:11). A study conducted in Plateau State, Nigeria, reported analogous findings regarding the convenience of operating hours in health facilities for adolescent use. It was noted that less than 50% of the facilities in the state possess convenient working hours (Envuladu, Massar & De Wit 2021:5).

Types of barriers perceived by adolescents that hinder the utilisation of SRH services

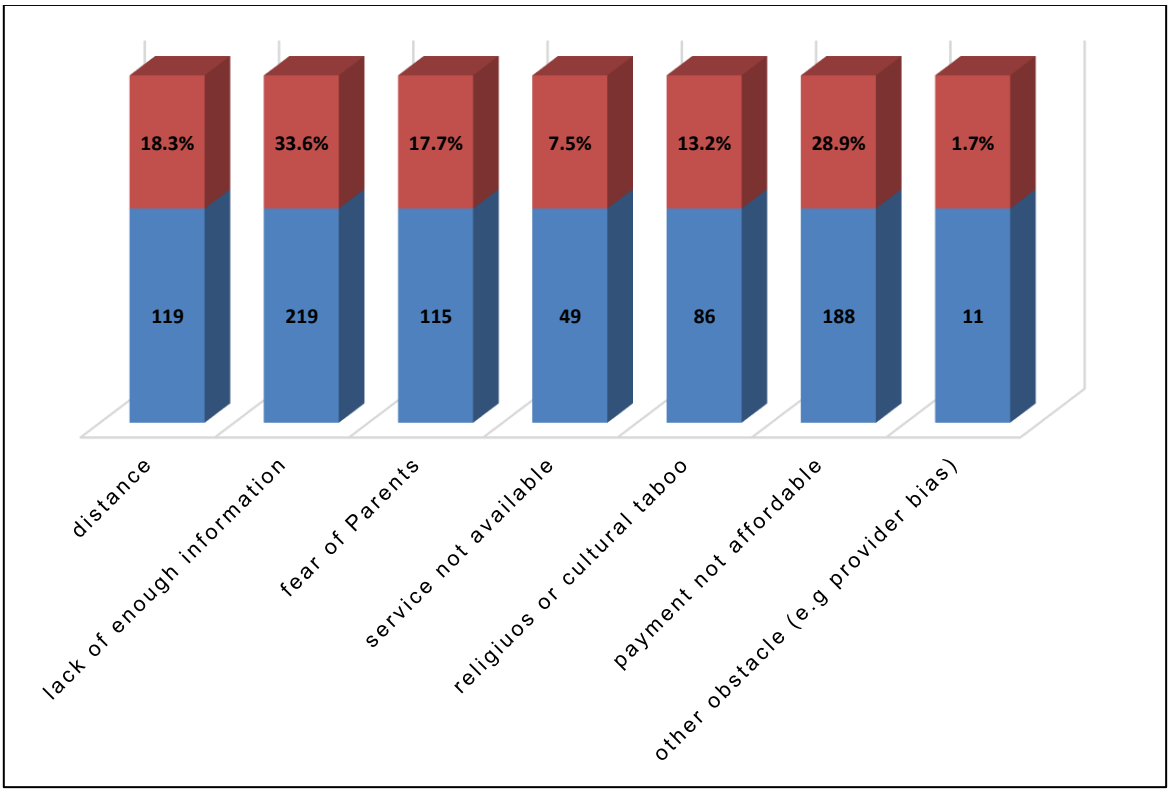

Figure 4.23 Barriers perceived by adolescents that hinder the utilisation of sexual and reproductive health services in the Arsi Zone, Ethiopia (N=651)

In this study, a significant proportion, 40.4% (n=263), of adolescents encounter multiple challenges when considering SRH services (Table 4.10). According to the results of this report, a lack of adequate information regarding the availability and services of SRH was notably significant at 33.6% (n=219). Other identified barriers include the cost of SRH

services at 28.9% (n=188), geographical distance at 18.3% (n=119), fear of parental reaction at 17.7% (n=115), religious beliefs or cultural taboos at 13.2% (n=86), unavailability of services at 7.5% (n=49), and other factors such as provider bias at 1.7% (n=11), as reported by adolescents (refer to Figure 4.23). These findings confirm those of earlier studies, such as study conducted in Rwanda where lack of information to access the services, community stigma, unaffordable service payment, fear of parents, and fear religious leaders (Ndayishimiye et al 2020:10) mentioned as a barrier of services. Related research conducted by Mwandali et al (2020:2) in Dar es Salaam, Tanzania, identified perceived obstacles contributing to the underutilisation of services, which included fear of being observed while attending clinics (23.3%), financial constraints (18.3%), absence of privacy and confidentiality (14.2%), and healthcare providers lacking friendliness.

A matching pattern has been documented by Ninsiima, Chiumia and Ndejjo (2021:1) in their systematic review concerning studies conducted in sub-Saharan Africa. This review identified insufficient information and biases among health professionals as obstacles to adolescents' utilisation of youth-friendly SRH services. These findings are consistent with those documented in the Greater Banjul Area, the Gambia, where cultural taboos, lack of information, fear of judgment, inadequate services, financial constraints, distance to facilities, healthcare providers' bias, gender roles, poverty, peer influence, and insufficient coverage of SRH in the school curriculum were identified as factors affecting access (Jallow et al 2025:16). Moreover, this study finding is supported by the result of study conducted in Kenya where barriers to access SRH services listed as, the negative attitudes of healthcare workers, distance from health facilities, cost of services not affordable, negative social cultural influences, lack of privacy and confidentiality (Mutea et al 2020:1).

Duration required to reach the youth-friendly service facility

The findings of the current study indicate that the most prevalent travel time to the YFS centre is 15-30 minutes, reported by 52.9% (n=249) of the adolescents surveyed. A considerable proportion of respondents, 40.6% (n=191), reported travel times of 30-60 minutes, whereas a minority, 5.7% (n=27), reported travel times of under 15 minutes. This result aligns with studies conducted in Kombolcha town, Northeast Ethiopia, and Southern Ethiopia, which have identified distance to the YFS centre, mostly greater than 30 minutes, as an impediment to visiting the YFS centre (Endalew et al 2024:5; Habte &

Dessu 2023:5). A comparable investigation conducted in Rwanda demonstrated that the distance to YFS facilities similarly serves as an obstacle for adolescents in accessing SRH services (Habtu et al 2025:11).

4.4.2 Finding of Phase 2 (qualitative)

In line with the objectives of the study, this phase, the qualitative phase of the study, aimed to:

- Explore adolescents' perception regarding SRH services in the Arsi Zone of Ethiopia.
- Explore and describe socio-cultural determinants of adolescents' use of SRH services in the Arsi Zone of Ethiopia.

First are the demographic details, then the research results. The findings are illustrated with quotations taken from the recorded interviews. This section discusses the findings. As explained in Chapter 3, data were generated from four focus group discussions involving adolescents and key informants. The adolescents were divided into the following groups: Group 1 (female), Group 3 (female), Group 2 (male), and Group 4 (male). Each group consisted of 8 adolescents. The adolescents were those who participated in the quantitative phase (Phase 1).

The key informant interview participants (KIIP) groups were 12, and these were purposively selected as follows:

- Four (4) healthcare workers who are employed in health facilities situated around the selected schools.
- Four (4) club focal teachers from the selected schools referred to above.
- Four (4) community leaders residing around the secondary schools.

The KIIP shared their perspectives on adolescent SRH. The key informant group also provided input on the socio-cultural determinants of adolescents' SRH in the Arsi Zone of Ethiopia.

4.4.2.1A Demographic profile of the participants who participated in the focus group discussions in Arsi Zone, Ethiopia

This section details the participants' demographics, including age, gender, marital status, educational level, Occupation, and study district. Of the participants, 16 were female, and 16 were male. All participants were unmarried and students. The number of focus group discussions was limited to 4 due to idea saturation.

Table 4.13 Demographic profile of focus group discussion participants (adolescents) (N=32)

Participants	Age in years	Gender	Marital status	Grades/ educational level	Occupation	Address/district	Pseudonym
1	17	Female	Single	11	Student	Lemmu bilbilo	G1P1
2	17	Female	Single	11	Student	Lemmu bilbilo	G1P2
3	16	Female	Single	9	Student	Lemmu bilbilo	G1P3
4	16	Female	Single	10	Student	Lemmu bilbilo	G1P4
5	16	Female	Single	10	Student	Lemmu bilbilo	G1P5
6	15	Female	Single	9	Student	Lemmu bilbilo	G1P6
7	19	Female	Single	12	Student	Lemmu bilbilo	G1P7
8	19	Female	Single	12	Student	Lemmu bilbilo	G1P8
9	20	Male	Single	12	Student	Lemmu bilbilo	G2P1
10	18	Male	Single	9	Student	Lemmu bilbilo	G2P2
11	17	Male	Single	10	Student	Lemmu bilbilo	G2P3
12	18	Male	Single	10	Student	Lemmu bilbilo	G2P4
13	18	Male	Single	12	Student	Lemmu bilbilo	G2P5
14	19	Male	Single	11	Student	Lemmu bilbilo	G2P6
15	18	Male	Single	11	Student	Lemmu bilbilo	G2P7
16	18	Male	Single	9	Student	Lemmu bilbilo	G2P8
17	17	Female	Single	11	Student	Digalu Tijo	G3P1
18	17	Female	Single	11	Student	Digalu Tijo	G3P2
19	15	Female	Single	9	Student	Digalu Tijo	G3P3
20	15	Female	Single	9	Student	Digalu Tijo	G3P4
21	15	Female	Single	10	Student	Digalu Tijo	G3P5
22	17	Female	Single	10	Student	Digalu Tijo	G3P6
23	18	Female	Single	12	Student	Digalu Tijo	G3P7
24	19	Female	Single	12	Student	Digalu Tijo	G3P8

Participants	Age in years	Gender	Marital status	Grades/ educational level	Occupation	Address/district	Pseudonym
25	18	Male	Single	12	Student	Digalu Tijo	G4P1
26	19	Male	Single	12	Student	Digalu Tijo	G4P2
27	17	Male	Single	10	Student	Digalu Tijo	G4P3
28	17	Male	Single	10	Student	Digalu Tijo	G4P4
29	19	Male	Single	11	Student	Digalu Tijo	G4P5
30	19	Male	Single	11	Student	Digalu Tijo	G4P6
31	17	Male	Single	9	Student	Digalu Tijo	G4P7
32	16	Male	Single	9	Student	Digalu Tijo	G4P8

Key: G1P1=Group 1, Participant 1

4.4.2.1B Demographic profile key informants (N=12)

The demographic characteristics of key informants, including age, gender, educational qualifications, and occupational positions of the participants in the study, are systematically presented in Table 4.14.

Table 4.14 Demographic profile of the participants who were key informants and pseudonyms (N=12)

Participants	Gender	Age in years	Marital status	Educational status	Current position	Pseudonym
1	Male	32	Married	BSc	Healthcare worker	KIIP1
2	Female	38	Married	BSc	Gender focal/Teacher	KIIP2
3	Female	50	Married	Grade 9	Community leader	KIIP3
4	Male	35	Married	MPH	Healthcare worker	KIIP4
5	Female	40	Married	BSc	Healthcare worker	KIIP5
6	Male	45	Married	MSc	Gender focal/Teacher	KIIP6
7	Female	30	Married	BSc	Gender focal/Teacher	KIIP7
8	Female	32	Married	MPH	Healthcare worker	KIIP8
9	Female	35	Married	BA	Gender focal/Teacher	KIIP9
10	Male	45	Married	MA	Community leader	KIIP10
11	Male	37	Married	BA	Community leader	KIIP11
12	Female	39	Married	MSc	Community leader	KIIP12

Key: KIIP=Key informant interview participant, Bachelor of Arts (BA), Bachelor of Science (BSc), Master of Science (MSc), Master of Public Health (MPH)

The table above shows that 12 key informants were interviewed, comprising four healthcare workers, four teachers, and four community leaders involved with adolescent families. The participants were aged 30-50 years. The gender distribution was seven

females and five males. All key informants were married, and their educational backgrounds ranged from the ninth grade to a Master's in Science (MSc) degree. Healthcare workers, teachers, and community leaders were purposefully selected based on their experience in adolescents' SRH.

4.4.2.2 Themes and sub-themes emerging from adolescent focus group discussions and key informant interviews

Focus group discussions with adolescents and KIIP composed of healthcare workers, teachers, and community representatives regarding SRH services have yielded insights into knowledge, experience, and perceptions of SRH services, as well as the socio-cultural determinants of adolescent SRH services. The section below presents the findings of the focus group discussion and KII, organised into four themes and 22 sub-themes as shown in Table 4.15.

Table 4.15 Themes and sub-themes emerging from the focus group discussions and key informant interviews

Themes	Sub-themes
1 Adolescent understanding of SRH services	1.1 Adolescents' awareness and knowledge about SRH services 1.2 Adolescents' perception of the importance of SRH education 1.3 Sources of SRH information 1.4 Attitude towards seeking SRH services 1.5 Perceived vulnerability to problems related to SRH
2 Motivating factors for risky sexual practice	2.1 Peer influence 2.2 Substance use 2.3 Exposure to sexually encouraging sources 2.4 Poor awareness of SRH services
3 Barriers to the utilisation of SRH service	3.1 Lack of comprehensive SRH education 3.2 Cultural taboo and stigma 3.3 Religious beliefs 3.4 Fear of parents and the community to use SRH services 3.5 Perceived impact of the use of SRH services 3.6 Operational timetable of health facilities 3.7 Facility readiness to provide SRH services 3.8 Cost of services 3.9 Lack of privacy and confidentiality
4 Enhancing adolescents' SRH service utilisation	4.1 Comprehensive sexual education (CSE) 4.2 Use of social media platforms 4.3 SRH service modification 4.4 Incorporation of SRH education into the school curriculum

Theme 1: Adolescent understanding of SRH services

Adolescents' understanding of SRH service concepts was assessed. The perspectives on adolescent understanding were categorised into various sub-themes, including knowledge about SRH services, Adolescent perception of the importance of SRH education, Sources of SRH Information, Attitude towards seeking SRH services, and beliefs about the effectiveness of SRH services. These are unpacked below:

Sub-theme 1.1: Adolescents' awareness and knowledge about SRH services

Adolescents' awareness and *knowledge of SRH services refer to participants' awareness and knowledge of these* services. Adolescents' awareness about SRH services is an important factor for adolescents to use SRH services, as addressed in Chapter 2, citing comparable studies. From this study's findings, adolescent awareness and knowledge about SRH services are very low, although a few participants have found a certain level of understanding of sexual issues.

Some adolescents narrated their understanding regarding the prevention of HIV and other STIs, as well as measures to prevent gender-based violence. Key informants also highlighted prevalent misconceptions within the community and emphasised the critical importance of SRH services for adolescents.

The subsequent quotations reflect the definitions of SRH as articulated by adolescent participants in the focus group discussions.

An 18-year-old female adolescent from the Lemmu Bilbilo district expressed her opinion:

> "… SRH service is how to prevent HIV and STI through test and knowing status." (G2P2)

Another 17-year-old female adolescent from Digalu Tijo district explained her understanding of SRH as follows:

> "… SRH service is preventing age-disproportionate marriage and GBV." (G3P2)

A community leader also shared his thoughts about what SRH services are, according to their understanding, he said:

> "The perception of SRH services as taboo can largely be attributed to a lack of awareness. It is incorrect to regard the utilisation of SRH services as taboo because these services are natural and essential. I have engaged in open discussions with my daughter to ensure she grows up informed about this topic." (KIIP12)

As a healthcare worker clearly articulated, adolescent SRH is not merely a specialised concern but a fundamental component of overall well-being. A healthcare worker explained:

> "Adolescent SRH is about the health of reproductive organs like other basic health, and it is equally necessary to lead healthy life. Reproductive health is basic for other health." (KIIP8)

The majority of adolescents engaged in the Focus Group Discussion lack sufficient information regarding SRH services. This outcome aligns with the findings of a study conducted in Namibia, which indicated that adolescent awareness of SRH is limited (Ashipala & Katjimune 2025:1). These findings confirm earlier studies, like one in Kajiado County, Kenya, where many adolescents lacked understanding of SRH services (Aluda, Mapesa & Njoroge 2025:4). Another similar study result revealed that there is limited knowledge about SRH among adolescents in Kigali city, Rwanda (Nyirarukundo et al 2025:1).

Sub-theme 1.2: Adolescents' perception of the importance of SRH education

Adolescents' perception of the importance of SRH education refers to their perceptions of SRH education's significance. A segment of the adolescent population perceives SRH services as a crucial strategy to mitigate the risk of these services being underutilised. Both adolescents and key informants highlighted the critical importance of SRH education. According to the participants, the advantages of SRH education include the ability to prevent unintended pregnancies, STIs, and other complications that may lead to mortality, as well as to acquire comprehensive knowledge about SRH prior to

encountering such issues. Notwithstanding this recognition, certain adolescents continue to harbour negative perceptions of SRH services. The adolescents articulated the perceived necessity of SRH service education for adolescents as follows:

A 19-year-old female adolescent from Digalu Tijo district stated that:

> “If adolescent get awareness about SRH they can prevent risky sex before engaging into it and prevent from having children that cannot raise …” (G3P8).

A 17-year-old male adolescent from Digalu Tijo district explained that:

> “It is important for adolescents to learn about SRH. Knowing about SRH is important for adolescents to prevent pregnancy and control the number of children.” (G4P7).

In addition to immediate access, the lack of essential information, especially about disease prevention, poses a serious threat.

A 19-year-old male adolescent from Lemmu Bilbiolo district explained:

> “… SRH awareness, information is necessary for adolescents. If adolescent did not know the ways of HIV transmission, he/she can be infected and transmit to other finally death.” (G2P6).

A teacher serving as the school's gender focal shared his perspective on the significance of SRH awareness (education) for adolescents. She mentioned adolescent education on SRH is very important.

The teacher articulated that:

> “As to me, educating adolescents is very important because human being should be aware of about the challenges going to experience for self-prevent having awareness about the issue. Understanding the benefit and risk is important before experiencing the problems of SRH services.” (KIIP9)

Studies have shown that education in SRH assists adolescents in navigating their initial relationships and sexual encounters more securely (Whitfield, Lantos & Manlove 2022:1). A study conducted in the Volta Region, Ghana, revealed that adolescents have a low perception of the importance of SRH education (Klu et al 2023:2-12).

The participants in the study shared their perspectives on the advantages and potential risks of providing SRH education to adolescents, both at the individual level and in terms of national implications.

Their viewpoints were articulated by two male adolescents from Lemmu Bilbilo district as follows:

> "If an adolescent lacks knowledge about pregnancy conditions and becomes pregnant at an early age, her uterus may sustain damage before it is adequately prepared for pregnancy. She may experience psychological issues due to societal stigma. Additionally, she may forgo educational opportunities during a period when she might otherwise excel. This situation could bring distress to her family and pose challenges to the nation's progress." (G2P1)

> "… SRH awareness, and information is necessary for adolescents. If adolescent did not know the ways of HIV transmission, he/she can be infected and transmit HIV to other and finally death." (G2P6)

The two female adolescents, aged 19 and 17, from Digalu Tijo district, shared their thoughts in the following manner, respectively:

> "It is important for adolescents to know about SRH, to protect adolescents from STI, and unwanted pregnancy" (G3P8)

> "If adolescents are informed about the risks associated with early childbearing, they are likely to take preventive actions. Adolescence is a challenging stage; therefore, it is imperative to raise awareness before they encounter potential issues ..." (G3P6)

A study conducted in Zambia by Chibuye & Kumatongo (2022:2) revealed that SRH education or CSE is important for adolescents since it helps to prevent early sex and

unwanted pregnancy among adolescents. Education about sexual health is a central component of the Government of South Africa's strategy to promote SRH of adolescents, reduce pregnancy rates among students and prevent sexual infections, including HIV (Adekola 2023:1).

Implementing comprehensive SRH education for teenagers often encounters significant resistance, stemming from deeply entrenched community values and societal norms. The prevailing argument is that such education could prompt early sexual engagement, thereby jeopardising the educational and future aspirations of young people. This perspective, which views SRH education as detrimental rather than beneficial to adolescents, receives strong backing from the statement of a female community leader:

> "Education about SRH service is not for adolescent, early initiation of sexual practice will be a difficulty that discontinues children's carrier and life path. It's a disgusting experience which will make them fail in life ..." (KIIP3)

Sub-theme 1.3: Sources of SRH information

This describes sources from which adolescents obtain information concerning SRH and their perceptions of these sources. Participants identified various sources and demonstrated differing levels of awareness about this subject. Among the sources identified by the participants were educational institutions, community networks, peers, social media platforms, health facilities, and online search engines such as Google.

A 17-year-old adolescent from Lemmu Bilbilo district said:

> "… there is a gender club in our school, they advise us not to engage in early sex because there is an unplanned pregnancy. If adolescent, try to abort traditionally (unsafe abortion) you may acquire different types of disease like cervical cancer. They told us, the risk is up to loss of life due to bleeding." (G1P1)

An adolescent, aged 18 years from Lemmu Bilbilo district, alluded to his source of SRH information being:

> "… The gender club at our educational institution facilitates a weekly session every Friday, focusing on topics related to SRH issues." (G2P8)

Two 19-year-old Male adolescents from Digalu Tijo district added respectively:

> "I can get SRH information and education from our school, social media, and Google search." (G4P2)

> "… I obtained SRH information and education through our school, social media, Google search.'' (G4P5)

A study by Mcharo et al (2021:4) in higher education institutions in Mbeya, Tanzania, supports the current study, which found that adolescents' sources of SRH information included parents, friends, the media/websites, and schools. The current study's results are also in line with a study conducted in the Andaman and Nicobar Islands, where schools (teachers) and friends were mentioned as sources of SRH information(Yadav & Kumar 2023:1).

Adolescents frequently opt for private healthcare institutions to obtain SRH services, including information, to preserve confidentiality and avert exposure to others.

An 18-year-old male adolescent residing in the Lemmu Bilbilo district reported:

> "… I learn SRH education from school, sometimes in Secret from private health facilities." (G2P4)

Similar results were obtained from a study conducted in Uganda, where many adolescents prefer private health facilities for SRH services due to fear of community judgment and lack of privacy (Guttmacher Institute 2025:2). A study conducted in Osun State, Nigeria, corroborates the findings of the current study, indicating that adolescents exhibit a preference for obtaining SRH services from private healthcare facilities. This preference is primarily attributed to the enhanced privacy offered by these private establishments (Omopariola, Oladosu, Fajobi & Adetoogun 2025:8-9).

Sub-theme 1.4: Attitude towards seeking SRH services

Some adolescents who participated in the focus group discussion maintained the belief that SRH services are inappropriate for adolescents, as they perceive that these services are exclusively designed for adults. This reflects a prevalent misunderstanding among adolescents concerning SRH services. The participants in this study generally believed that adolescent SRH services are not for adolescents since SRH service utilisation should be after marriage.

An 18-year-old male adolescent from Lemmu Bilbilo district confirmed that:

> "I have never been to the health facility. It is believed no one went there for education or illness rather for family planning or abortion service, I did not go because I was not old enough to go there …" (G2P2)

A 19-year-old male adolescent from Digalu Tijo district shared his attitude:

> "Adolescent including me did not use SRH services, SRH service not necessary before marriage, if engage in that pre-sex of is mandatory otherwise they may be exposed to various disease." (G4P5)

Adolescents often perceive that the utilisation of SRH services is primarily necessary for individuals who are experiencing health problems or have contracted a disease. They frequently believe that the appropriate occasion for visiting a healthcare facility is during instances such as menstrual cycle disorders.

A 15-year-old female adolescent from Digalu Tijo district shared her thoughts as follows:

> "I have not previously encountered any SRH issues that necessitated visiting a healthcare facility. However, I may consider seeking counselling at a health facility regarding issues related to the menstrual cycle. In our community, premarital pregnancy is regarded as a crime or taboo. If individuals see someone at a health facility, they often assume the person is seeking family planning or abortion services and may report this to the family or develop a negative perception. This perception underlies my apprehension about accessing SRH services at a healthcare facility." (G3P5)

Adolescents' attitudes towards SRH services are a crucial factor in increasing their utilisation among this demographic. The perception among adolescents that SRH services are exclusively for adults aligns with the findings of the systematic review of sub-Saharan African studies conducted by Sidamo et al (2023:1). The findings of this study agree with the results obtained by Nyirarukundo et al (2025:12), derived from research conducted among adolescents and young adults in Kigali City, Rwanda. The study revealed that a substantial proportion of adolescents exhibited a negative attitude towards SRH services.

The key informant teachers who participated in this study advocate utilising SRH services. This shows they have better awareness of adolescent SRH services utilisation and mentioned that SRH services help to prevent some SRH-related risks among adolescents.

A female teacher affirmed that:

> “If awareness raising session is done, it does not initiate sexual practice. For example, if you tell the adolescent the way of HIV transmission, they will learn about HIV transmission and take care or avoid risky sexual intercourse. If you teach adolescents about the risk of early initiation of sexual intercourse, they save in their mind that I may acquire HIV, Cervical Cancer, I am at risk of poverty and unwanted pregnancy. For example, in my school, previously adolescent used to wear short wearing, Female students’ hair is in the styles, they wear T-shirt that can show their breast and umbilicus. After awareness creation programme they are changing this behaviour, especially female students.” (KIIP2)

This finding is in line with the results of previous studies, including a study conducted in Zambia, where a considerable proportion of teachers perceived CSE as a preventative measure against early sexual initiation and adolescent pregnancies (Chibuye & Kumatongo 2022:1).

Some adolescents are not interested in using a condom. Participants perceive using a condom as not joyful.

An 18-year-old male adolescent from Lemmu Bilbilo district expressed his idea as follows:

> "… adolescents perceive that sex using condoms is not joyful it decrease sexual pleasure …" (G2P5)

A study carried out in KwaZulu-Natal, South Africa, supports the findings of the current study by showing that adolescents engage in unprotected sex to satisfy their partners (Govender et al 2020:7).

Educated community groups share similar perspectives with uneducated community groups, as they are embedded within the same cultural and normative frameworks. Mostly, their perspective is negative on adolescent utilisation of SRH services. It is challenging for adolescents to access health facilities for SRH services due to the perception that all adolescent visits to such facilities are indicative of misbehaviour and mostly linked with abortion services, since pregnancy before marriage is believed to be a crime. In particular, the situation of females is often disproportionately emphasised, and minor issues are given greater prominence.

A 16-year-old female adolescent from Lemmu Bilbilo districts stated:

> "… Even educated group of the community available will not understand you. If female go to health facility for other SRH services, they think she is pregnant ..." (G1P4)

A 19-year-old male adolescent from Lemmu Bilbilo district mentioned that:

> "… mixed of perception about SRH services, our community live in rural and does not support SRH services utilisation. The attitude is more of negative, they think giving birth is natural and using family planning is not supported ..." (G2P8)

A similar study conducted in Ghana found that the majority of adolescents' parent had a favourable attitude towards engaging in discussions about SRH issues with adolescents. However, most respondents disagreed with the issue that talking to adolescents about sexuality would lead to increased promiscuity (Azie, Enge, Bagrmwin, Setordzi, Ndanu & Aniteye 2023:4).

Adolescent and young women face numerous challenges that significantly affect their social and psychological well-being. They are not only confronted with health-related risks but also with societal perceptions and judgments that exert substantial pressure. This pressure is particularly pronounced in relation to sensitive subjects such as sexual assault and unintended pregnancies. The prevailing attitudes within the community and their subsequent impact on individuals' lives are notably influential, as evidenced by the account of a 17-year-old female adolescent from the Lemmu Bilbilo district:

> “When a woman experiences sexual assault and the issue becomes known to the community, she often suffers psychological consequences. Even when her family empathises with her situation, the broader community may lack understanding. If the act was consensual and results in pregnancy, she may bear the consequences alone, impacting her ability to achieve her goals. This may impede her academic advancement and economic development compared to her peers. Women are often perceived metaphorically as **'white paper'** signifying that societal scrutiny of their actions is intense and their experiences are readily visible.” (G1P1)

An 18-year-old female adolescent from Lemmu Bilbilo district expressed her idea about attitudes to seek SRH services as follows:

> “… Since we are students, we must avoid unnecessary acts that lead to pregnancy and if happens better to take the service from health institution not from traditional healer because traditional healer may use different material that can transmit disease” (G1P5)

Community leaders exhibit mixed views on adolescent SRH services. During key informant interviews, one male community leader expressed that family planning should help couples achieve their desired family size, yet he also believed it could lead to infertility. He emphasised the significance of family planning in managing the number of children. He added:

> “If you have balanced number of children with your economy, you can send them to school and care enough. Most of the time after marriage families use family planning to delay childbearing till develop economically this may end with infertility. On the other hand, when age increases then they could not give birth, absence of

> children then leads to family breakdown. There are friends who cannot have children due to repeated use of family planning. If there is no awareness on SRH to the community or teenagers, they may consider menstruation as something abnormal. Our community promotes early marriage, then early childbirth following may cause fistula to adolescent ...” (KIIP11)

Comparable outcomes were observed in a study conducted in the Adaklu district of Ghana's Volta Region. The study found adolescents' perceptions regarding the pursuit of SRH services were inadequate (Klu et al 2023:1). A similar study carried out in Kigali city, Rwanda, indicated that youth-friendly SRH services enhance some service uptake; however, their utilisation remains low due to a lack of awareness about these services (Nyirarukundo et al 2025:1).

Sub-theme 1.5: Perceived vulnerability to problems related to SRH

The adolescents have responded concerning their susceptibility to SRH issues, with a particular emphasis on the impact on female adolescents. This demographic is disproportionately affected by SRH challenges, including unintended pregnancies, unsafe abortion practices, associated medical complications, societal stigma, and gender-based violence. The participants elaborated their experiences and perceptions regarding the vulnerability of adolescents to these SRH problems as follows:

A 19-year-old male adolescent from Digalu Tijo district said that:

> “Adolescents, particularly females facing SRH issues such as pregnancy, may experience significant challenges. Post-pregnancy, if adolescents resort to unsafe traditional abortion methods, they are at risk of severe complications. For instance, they may be susceptible to developing fistula, encountering infertility, or even facing mortality.” (G4P6)

A 17-year-old female adolescent from Digalu Tijo district mentioned that:

> “... adolescents are exposed to a multiple problem. They often exhibit a belief in their own comprehensive understanding. The repercussions of adolescent behaviour may result in unintended parenthood, which presents challenges for

> both the family unit and society at large. Therefore, it is imperative to provide education to address these issues." (G3P1)

Adolescents face greater challenges when they do not utilise SRH services than adults do. Female adolescents are particularly affected compared to their male counterparts. According to focus group discussion reports, this issue can indirectly affect both families and the nation.

A 17-year-old female adolescent from Lemmu Bilbilo district also stated that:

> "… female adolescents are more affected by SRH problems because if female raped and became pregnant, she may detach from family, she will withdraw school, go for street, and finally she may lose her life. Therefore, female affected more by SRH problems." (G1P1)

A 17-year-old male adolescent from Digalu Tijo district mentioned that:

> "… adolescents are mostly affected by SRH problems and the family of adolescents are also the victims …" (G4P3)

This finding is supported by a study conducted in Southeast Nigeria, which revealed adolescents' belief of their vulnerability to SRH problems like unwanted pregnancy and STI (Okeke, Mbachu, Agu, Ezenwaka, Arize, Agu, Obayi & Onwujekwe 2022:6). The current finding agrees with a comparable study conducted in Godawari Municipality, Nepal, which revealed that a significant number of adolescents did not think SRH services are important for adolescents (Gautam, Maharjan, Bhattarai & Gautam 2025:8).

Theme 2: Motivating factors to risky sexual practice

The participants mentioned various factors that contribute to adolescents engaging in unsafe or risky sexual behaviours. The present study demonstrates that inadequate utilisation of SRH services is associated with several determinants, including peer influence, substance use, reliance on Internet-based information, and a lack of comprehensive SRH education. These factors subsequently contribute to adolescents

engaging in high-risk sexual behaviours, encountering unintended early pregnancies, and facing restricted reproductive autonomy.

Sub-theme 2.1: Peer influence

Peer influence is identified as one of the contributing factors motivating adolescents to engage in risky sexual behaviours. It can lead adolescents towards participating in unsafe sexual practices instead of utilising SRH services. Furthermore, participants shared their experiences concerning peer influences in the following quotations.

One male community leader commented:

> "Adolescent age physical change and mental change effect is both on male and female to have relationship with opposite sex. It is mandatory to identify the changes to manage. Peer influence exerts a substantial impact, as associations with individuals who display positive orientations are likely to reinforce beneficial behaviours. Conversely, interactions with individuals characterised by negative orientations can contribute to the adoption of harmful behaviours. An adolescent who has not started sexual activity is considered as '**foolish**' and those who has start is considered as **smart or 'arada'** in the local context and regarded as equal to their peers. Environmental factors can significantly influence adolescent behaviour, particularly when the surroundings include hospitality establishments such as hotels and nightlife venues. The presence of such venues may expose adolescents to certain social models, potentially prompting them to emulate observed behaviours." (KIIP11)

Another male community leader said:

> "What adolescents observe around them, their peers, being reluctant about their own life and achieving through their education will destroy their future. Failing to endeavour earlier in their life and hopelessness will lead them to get stuck in life." (KIIP3)

Adolescents in the Arsi Zone of Ethiopia also reported experiencing peer pressure to participate in risky sexual activities.

A 19-year-old male adolescent from Digalu Tijo district said:

> “I have no experience of visiting the health facility, my seniors also did not visit health facility.” (G4P2)

These findings confirm those of earlier studies, done in Injibara Northern Ethiopia where peer influence reported as a motivating factors for adolescent to involve in risky sexual practice (Adal, Abiy, Reta, Asres & Animut 2024:5). The current finding also agrees with the study conducted in KwaZulu-Natal, South Africa (Govender et al 2020:1) where low family supervision, alcohol use, peer pressure, and media influence the risky sexual practices.

Sub-theme 2.2: Substance abuse

Substance abuse is involved because the use of substances undermines adolescents' judgment and decision-making capabilities, increasing the likelihood of their involvement in unprotected sexual activity. Additionally, it heightens susceptibility to peer influence and environments with elevated risks, where unsafe sexual behaviours are more prevalent. Addiction to different substances like alcohol and drug herbs was listed as a substance that can motivate adolescents to engage in risky sexual practices.

The two community leaders, male and female respectively, confirmed that:

> “… motivating factors to unsafe sex are bad friend, alcohol use, and drug herbs can motivate unsafe sex.” (KIIP12)

> “Addiction to different substances will motivate the adolescent to practice unsafe sex. Peer influence or peer who involved in unsafe sex practice will motivate other to practice sex. Social media, social videos (pornography) also motivate adolescent to practice this ...” (KIIP10)

These results are in line with those obtained from a study conducted in Aksum Town, Tigray, Ethiopia, where substance use-related factors were reported as a motivating factor of unsafe sex (Srahbzu & Tirfeneh 2020:3). Another similar study conducted in

Bangkok, Thailand, confirmed that substance abuse is one the reasons why adolescents engage in risky sexual practices (Thepthien & Celyn 2022:10-11).

Sub-theme 2.3: Exposure to sexually initiating sources

This discussion pertains to the determinants or factors that influence adolescents to engage in unsafe sexual behaviours. Participants identified several initiating factors, including the use of smartphones by students, adolescents' access to pornographic content, and the impact of social media platforms such as Facebook and TikTok, as well as the influence of single-parent family structures. Key informants, drawing from their experience, reported instances where they unexpectedly inspected students' mobile devices and discovered open pornographic content.

A 17-year-old female adolescent from Lemmu Bilbilo district said:

> "… male adolescent sometimes does risky activities to revenge female students. Currently, most of students have mobile phone and visiting different pornographic video, peers influence, addiction to different substances (substance abuse) ..." (G1P1)

When interviewed, the female teacher shared the following:

> "Mobile will motivate unsafe sex practices of adolescents because students watch pornographic videos on their mobiles in class. If a student's mobile phone is suddenly opened, a pornographic video may be found, as such content is often circulated on social media platforms like Facebook and TikTok. Lack of awareness and single-family effect are also exposing the adolescent, for example, if there is a woman whose husband died around, the men will go to that woman for sexual interest, and children will see this practice and try to repeat as the family did traditionally called '**sigebaa'**…" (KIIP2)

A study conducted in Drobo Ghana corroborates the present findings, indicating that adolescents who engage with at least one social media platform exhibit a significantly higher propensity to partake in risky sexual behaviour compared to their counterparts who abstain from such platforms (Gyane, Gmayinaan & Osei 2025:1). A study conducted in

Zambia confirmed that mobile and internet-based videos like pornography initiates adolescent for risky sexual practices (Mukanga et al 2024:1).

Sub-theme 2.4: Poor awareness of SRH services

A limited awareness among adolescents and their parents concerning SRH services negatively affects the utilisation of these services. Considering that familial guidance plays a critical role in supporting adolescents during their developmental stages, this lack of awareness about SRH services is linked to the absence of CSE.

A female teacher stated that:

> "The predominant factors contributing to engagement in unprotected sexual activities include the age of sexual initiation and a deficiency in awareness among responsible entities regarding the risks associated with SRH. There is a notable absence of transparent dialogue with family and community stakeholders. Additionally, the lack of comprehensive sexuality education (CSE) for adolescents exacerbates this issue." (KIIP9)

A female community leader added:

> "If adolescents lack goals and family support, they may engage in risky behaviours. The most crucial influence is not the school but the family. Families need to guide them correctly, especially those orphans who work in others' homes without family support. Adolescents often imitate each other and observe how the world operates, leading many astray. Education about SRH may initiate adolescents to initiate early sexual activity which can disrupt their careers and life paths. Such experiences can negatively impact their future success." (KIIP 3)

This concept is similarly endorsed by adolescents who participated in the focus group discussion.

A 17-year-old female adolescent from Digalu Tijo district mentioned that:

> "… lack of awareness about risk of unsafe sexual practice is motivating factor to engage in unsafe sexual practice. Our community have no idea about unsafe sex; it is taboo to discuss about SRH at early age with parents." (G3P1)

Two other adolescents, 19-year-old male and 16-year-old female, respectively added:

> "Lack of awareness-raising session from healthcare workers about ways of preventing unwanted pregnancy for adolescent is the reason why adolescent involve in unsafe sexual practice." (G4P5)

> "… due to lack of awareness, early initiation of relationship with opposite sex force adolescent to practice sexual intercourse before 18 years old then, unwanted pregnancy will occur. Our community and family did not like SRH service abortion service …" (G1P5)

This result aligns with the study done in Tema metropolis of Ghana where female adolescents face similar challenges due to under estimation of SRH problems and inaccurate information (Agbenu, Kyei & Naab 2024:2). The study conducted in Brazil highlighted the fact that poor awareness about SRH leads to adolescent initiation of sexual life unprepared and vulnerable to unplanned pregnancy and STIs (Arruda et al 2020:7). The current result also agrees with findings of the study done in Kogi state Nigeria by Adione et al (2023:1) where adolescent awareness about SRH was poor.

Theme 3: Barriers to the utilisation of SRH service

Following parental instruction, the community functions as the principal educational setting in which adolescents acquire knowledge. These factors could determine the adolescent utilisation of SRH services. Data collected from key informant interviews (KIIP) and focus group discussions revealed that most community groups possess a negative attitude towards engagement with adolescent SRH services.

In South-East Ethiopia, teenagers encounter various obstacles when accessing SRH services. Insights gathered from participants in focus group discussions and key informant interviews participants (KIIP) reveal these difficulties categorised as: insufficient

access to SRH information, cultural taboos and stigma, fear of parental and community disapproval of using SRH services; fear of side effects, inconvenient health facility operating hours, inadequately equipped facilities, costs associated with services, and insufficient privacy and confidentiality.

Sub-theme 3.1: Lack of comprehensive SRH education

Lack of comprehensive SRH education describes the effect of comprehensive SRH education on adolescent utilisation of SRH services. The lack of comprehensive education regarding SRH results in the underutilisation of these services or presents obstacles to their access. The subsequent quotations substantiate this claim.

A male community leader stated:

> "I counsel my children; there is a clear discussion in the family. They discuss more with their mother. In school, I counsel my students on sexual harassment, psychological problems, and on other conflicts with family and classmates. In our community sometimes we discuss in **'Edir'** about adolescent behaviour and counselling methods. It is not allowed in our community to discuss SRH service utilisation. It is considered as bad behaviour when adolescents raise SRH issue in our community. Due to this adolescent are facing unwanted pregnancy, STI, physical, psychological and mental problem. I belief there is no SRH education in our area and communities are not benefited from SRH service awareness session." (KIIP11)

Research conducted in Namibia found that the use of SRH services by adolescents was low because they lacked information about the availability of these services for them (Ashipala & Katjimune 2025:6). This result is consistent with the findings obtained by Sidamo et al (2023:1), where inadequate information about the service, and incorrect perception about the adolescent SRH service were the barriers to adolescent SRH service utilisation.

Sub-theme 3.2: Cultural taboo and stigma

Cultural taboos and societal stigmas are identified as the primary barriers to the utilisation of SRH services by adolescents. Participants elucidated the factors influencing SRH service utilisation among adolescents, such as the perception of awareness-raising sessions on SRH as taboo, the criminalisation of abortion services, and the view that visiting health facilities for SRH services is indicative of inappropriate behaviour within the community. The study indicated that discourse on SRH topics with adolescents predominantly occurs when parents have attained a certain level of education. For numerous families, engaging in discussions about SRH matters with adolescents remains a societal taboo. The experiences of the study participants are illustrated through the following quotations.

A male community leader confirmed:

> "The discourse surrounding SRH services is not actively encouraged within our community. This can be attributed to the absence of awareness-raising sessions, and it is further compounded by the cultural taboo associated with the subject of SRH services." (KIIP10)

Another female teacher mentioned that:

> "In our community, discussing SRH is considered taboo due to a lack of awareness on the subject. For instance, if I conduct lessons on adolescent SRH, the students comprehend the material. However, mentioning sexual organs is uncommon within the community. Conversations regarding the transmission and prevention of STIs and engaging in safe sexual practices are not typically held. These matters are dealt with privately, and there is a cultural tendency to conceal problems. Discussions about adolescent issues among families and within the community are rare." (KIIP2)

A similar study carried out in both Namibia and Gambia supports the present findings, indicating that community and family norms, along with cultural and/or religious beliefs, were against sexual activity and the utilisation of adolescent SRH services (Ashipala & Katjimune 2025:6-9; Jallow et al 2025:9).

In the study, discussing adolescent SRH issues with parents and other relevant parties is considered taboo. Healthcare professionals often hold this view as well, rather than educating the community they reside in.

A female community leader affirmed that:

> "If adolescent discuss about SRH issue it is taboo '**safuu'**. Especially in rural communities, it is taboo to discuss SRH issues with family. Healthcare workers sometimes share culture since they are also from the community rather than trying to breaking this culture of taboo. Low awareness on this issue sometimes includes issues which are not taboo in the community to avoid the services." (KIIP 9)

Adolescents conveyed congruent perspectives with key informants regarding the utilisation of SRH services. Specifically, adolescents in the Arsi Zone of Ethiopia reported challenges in accessing abortion services in the event of an unintended pregnancy.

An 18-year-old male adolescent from Lemmu Bilbilo district said:

> "It is taboo in our community to use SRH services. If women get unplanned pregnancy, they prefer to give birth than abortion." (G2P5)

Another 18-year-old male adolescent from Lemmu Bilbilo district stated:

> "SRH issue is taboo in our community and difficult to talk about SRH services. Getting family (father or mother) or neighbours in the health institution is very difficult so that I will not try it." (G2P7)

The result agrees with the study conducted in Rwanda, where cultural taboo and community stigma were raised as significant barriers for adolescents to use SRH services (Ndayishimiye et al 2020:10-11). Cultural taboos are a primary barrier for adolescents to access SRH services. This result is in line with the study conducted in Addis Ababa, Ethiopia (Yibrehu & Mbwele 2020:1).

There are deep-rooted stigmas and social pressures that influence young women's access to SRH services within the community. Despite recognising the potential benefits of seeking counselling for menstrual health, the fear of being misjudged or labelled,

particularly in relation to premarital pregnancy, family planning, or abortion, creates a significant barrier. The speaker's experience highlights how community perceptions and the threat of social repercussions discourage individuals from utilising essential SRH services, underscoring the urgent need for culturally sensitive education and supportive health systems. Furthermore, adolescents explained their perceptions and experiences regarding cultural taboos and stigma in the Arsi Zone of Southeastern Ethiopia.

A 15-year-old female adolescent from Digalu Tijo district said:

> "I did not face SRH problem earlier to go health facility. I may go to health facility for counselling on menstrual cycle problem. In our community pregnancy before marriage is crime or taboo. If somebody gets you there, they directly think you are there for family planning or abortion service and may tell family or they create a negative attitude for you. This is my fear to go health facility for SRH services." (G3P5)

A 19-year-old male adolescent from Lemmu Bilbilo district mentioned:

> "Once when I tried to ask a question about SRH issue my father said that "you are child this issue is not necessary for you …" (G2P6)

There are cultural restrictions on SRH education in society, especially regarding adolescents' communication on this matter. The utterer points out an unfortunate general opinion that if SRH is touched upon, the result will be early sexual activity; hence, there is silence and avoidance around the issue in both family and school settings. Even subjects in school, such as biology, do not provide thorough talks about sexual anatomy because of the discomfort in society. Consequently, a lot of people are ignorant and are forced to carry out SRH practices secretly, thus emphasising the need for open, informed, and age-appropriate communication as a matter of urgency.

A 17-year-old female adolescent from Digalu Tijo district also said:

> "… discussion of SRH with children is taboo, if you try to raise this issue, they think it will create chance to practice it. Lack of awareness, for example on biology course we did not discuss about sexual organ in detail there is a taboo. Most of us have taboo of world but practice in secret." (G3P1)

A 19-year-old female adolescent from Lemmu Bilbilo district added:

> "… I discuss SRH issue with my mother, sometimes family advise me not have boyfriend at this stage and not to engage in early sexual activity." (G1P7)

Similar findings from a study done in Tikur Anbessa specialised hospital, Ethiopia, revealed fear and stigma as barriers to SRH service use (Tilahun, Yilak, Amena, Abebe & Ayele 2024:7). Psychological, sociocultural, and economic factors have been identified as the main obstacles to the use of SRH services by adolescents (Onuh & Pacial 2024:13). Another barrier to adolescent utilisation of SRH services is a lack of communication with family members and key others to get more information about SRH services due to cultural issues. This finding is also in line with a study conducted in southern Ethiopia (Habte et al 2022:1).

Sub-theme 3.3: Religious beliefs

The factors related to religious beliefs that influence the utilisation of SRH services within the study area, as reported by the key informant interviews with participants (KIIP), are significant. A substantial proportion of participants hold the belief that SRH services, including family planning, may induce infertility among users. Furthermore, certain community group members do not align with the tenets of SRH, instead adhering to the belief that all aspects of life are governed by divine will. Additionally, participants noted that religious leaders frequently possess unfavourable perceptions concerning adolescents' access to SRH services.

A female community leader stated:

> "The utilisation of family planning is not advocated even for individuals in lawful marriage within my community. Our community holds diverse perceptions; for instance, the use of family planning is wholly unaccepted within the Muslim community. Due to insufficient awareness on this matter, most of the community believes that family planning is unfavourable. Personally, I do not believe that family planning induces infertility." (KIIP9)

This perspective was affirmed by a female community leader who said:

> "I do not want adolescents to use media; I need them to hear only voices to get information /education from it. I will not be comfortable with it. It's my preference if they only use it to hear preaching and religious songs. As a result, we do not put on TV. I wish that adolescent will remain safe if they be afraid of God's words. I don't think media is helpful for adolescents. I am hearing that they speak about what they get it helpful by seeing in medias. I do perceive that they can distinguish good or bad. I don't want them to see/use. Medias will distract them from their career." (KIIP3)

This result is in line with the studies conducted by Christian aid international and Faith to action networks in Kenya where the study participants reported negative perception of most religious leaders about adolescent use of SRH services (Christian Connections for International Health [CCIH] 2025:7; Faith to Action Networks & Health Action International 2024:5). The finding of the current study is also consistent with results from research conducted in Southeast Nigeria, where it was observed that various religious groups in the area opposed the utilisation of SRH services, such as family planning, by adolescents (Ezenwaka et al 2020:6).

Sub-theme 3.4: Fear of parents and the community to use SRH services

Concerns about family and community perceptions represent a substantial obstacle to adolescents' access to SRH services in the examined region. The challenges adolescents face in accessing suitable SRH services are supported by evidence from focus group discussions.

A 19-year-old female adolescent from Digalu Tijo district said:

> "… I have interest to visit health facility, but I fear our community perception and there is no Health facility nearby, it is far from our home." (G3P8)

The adolescent fear of being recognised at the health facility reflects a strong influence of community surveillance and stigma, which operates as a social control mechanism limiting adolescents' SRH choices. This fear is not simply an individual concern but emerges from broader socio-cultural norms that equate SRH service use with sexual

activity, especially for unmarried girls. This aligns with SRH studies in a similar context, which shows that perceived community judgement significantly suppresses service utilisation (Nmadu et al 2020:1). The finding maps directly onto the health belief's "perceived barriers" construct and shows how social stigma reduces adolescents' confidence in seeking care (self-efficacy). It also suggests that intervention must address not only the individual knowledge gap but also the community-level norms and facility privacy weakness.

A 17-year-old female adolescent from Digalu Tijo district stated that:

> “I discuss with my mother and brothers. Mother told me the story of a girl in our village who faces serious problems after getting pregnant without marriage before completing secondary school. She advised me how to avoid unplanned pregnancy and unsafe sex.” (G3P6)

These findings confirm those of earlier studies, conducted in the pastoralist settings, northeastern Ethiopia, where fear of being known by parents was the barrier (Zepro et al 2023:1). The findings of a study conducted in the Kinondoni Municipality, Dar es Salaam, Tanzania, agree with the present result, indicating that fear of being seen by parents during a clinic visit is the factor affecting adolescents' use of SRH services (Mwandali et al 2020:2).

Sub-theme 3.5: Perceived impact of the use of SRH services

The perceived consequences of SRH services utilisation, particularly those related to family planning and abortion, may contribute to female infertility due to limited awareness. A significant proportion of study participants regard the ramifications of SRH services as obstacles to both the advancement and adoption of these services within the examined region. Several community leaders have documented experiences from a considerable segment of the population that resists the use of SRH services, citing concerns about their potential effects on future reproductive health. These perspectives are substantiated by statements from adolescents and community leaders.

A female teacher said that:

> "… I do not have enough information on this topic. There is a cultural thought family planning can cause infertility." (KIIP7).

A 15-year-old female adolescent from Lemmu Bilbilo district shared her perception as follows:

> "I did not ever think of using SRH service. In our community there is no awareness raising session about SRH, and the community Perceive family planning can cause infertility." (G1P6)

The key informants shed light on perceptions and ongoing misconceptions about family planning within a specific local community. Historically, discussing family planning has been met with apprehension and viewed as a taboo topic. However, recent trends show a gradual but subtle acceptance of its practices. Despite this progress, deeply ingrained beliefs, such as the misconception that family planning leads to infertility, continue to influence attitudes and behaviours. These concerns, expressed by both a male educator and a community leader, highlight the necessity for targeted educational programmes and counselling to dispel myths and enable informed reproductive health decisions.

A male teacher said:

> "… Within the community, it has been observed that the use of family planning was previously met with fear and remains a taboo topic. However, there has been a shift in attitudes, with some individuals now utilising family planning methods secretly. There is a prevailing belief that family planning can result in infertility." (KIIP6)

A male community leader shared a similar concern as follows:

> "… It is true, our community partially belief family planning will cause infertility, they can get the service and counselling from healthcare workers. Family planning is important to our community therefore we must educate them." (KIIP10)

SRH services are characterised by complexities largely clinical in nature. Nevertheless, they also highlight personal narratives of decision-making, unexpected outcomes, and enduring health concerns that span generations. The challenges faced in SRH are not merely theoretical; they are tangible issues that impact individuals' lives, their families, and their futures. The emotional, psychological, and physical costs of dealing with SRH matters are significant, affecting various facets of a person's life, including education, financial status, and overall health.

A female community leader narrated that:

> “The challenges linked to SRH services are a major concern, as evident from personal experiences, especially with family planning proving to be particularly troublesome. Individuals might encounter difficulties with these services due to either a lack of awareness or intentional decisions, aiming for seemingly temporary solutions. Sometimes, family planning interventions can result in infertility, a situation that I have personally experienced. After having my first child, I decided to undergo a termination procedure to postpone having more children. Unfortunately, this led to my inability to conceive again, despite my strong wish for more children and my doctor's diligent efforts being hindered by issues related to excessive medication use. Moreover, my daughter deals with menstrual problems, including delayed periods. I actively support her by counselling her on these issues and accompanying her to the clinic to determine if they are pregnancy related. I encourage her to communicate openly, especially when starting a new relationship. I've shared my personal experiences with her to foster understanding and awareness.” (KIIP12).

Adolescent pregnancy, along with its outcomes such as abortion, is very challenging not only from a health perspective but also for the individual, family, and the country's development. The situation is made more severe by the risk of reproductive health problems, social stigmatisation, and loss of education and job opportunities.

This critical point where personal health and socio-economic vulnerability meet is well expressed by the statement of one 18-year-old adolescent from Lemmu Bilbilo district:

> “An adolescent girl's pregnancy followed by an abortion may lead to complications impacting her future reproductive capability. Discrimination may arise if a girl

> becomes pregnant prior to marriage, which could potentially result in her withdrawal from educational institutions and the risk of physical harm in the event of an attempted abortion. These situations may culminate in the forfeiture of benefits for both her family and the nation." (G2P4)

This finding aligns with the antecedent research undertaken in San Francisco, California, which identified concerns regarding the side effects of SRH services as a significant barrier to their utilisation (Nathan, Berglas, Kaller, Mays & Biggs 2023:1). This result is likewise consistent with a comparable study conducted in Southeast Nigeria, in which the apprehension regarding side effects was identified as one of the obstacles to the utilisation of SRH services (Ezenwaka et al 2020:1).

Sub-theme 3.6: Operational timetable of health facilities

The timing requirements for adolescents to access SRH services are pivotal and pose significant challenges for service provision infrastructure. Adolescents prefer to access these services outside conventional operating hours, primarily to avoid detection by parents or community members. Interviews with key informants among healthcare workers reveal that the current scheduling of SRH services at healthcare facilities fails to adequately meet adolescents' specific needs. The key informants confirmed that the majority of adolescents require access to SRH services on weekends and public holidays, early mornings before the commencement of standard working hours, and late afternoons following the conclusion of regular working hours. The following quotation supports the above concept.

A healthcare worker confirmed that:

> "Adolescents need the SRH service, the need is high but service is not constant due to shortage of staff (day off), the service not given on weekends and after 11:30 local time." (KIIP4).

Another female healthcare worker lamented:

> "Adolescents have some awareness about SRH. They need a convenient person and time to tell their issue. The time when the number of clients decreases from

> the institution; during lunch time, after 5:00 pm, and on weekends. We are not providing the services during the mentioned time due to staff shortage …" (KIIP8)

The literature supports this outcome, indicating that adolescents are deterred from utilising SRH services due to the absence of dedicated spaces, fundamental equipment, and essential SRH services. Furthermore, most facilities do not operate at times convenient for adolescents (Arije et al 2022:1; Envuladu et al 2021:1). The results of the current study, supported by a systematic review conducted in sub-Saharan Africa, indicated that health facilities' operating hours were barriers to adolescents' use of SRH services (Sidamo et al 2023:6).

The concern about uncomfortable service hours suggests a structural barrier embedded in the organisation of health services. Instead of reflecting the lack of motivation among adolescents, the results reveal an imbalance between health system schedules and adolescents' daily obligations (school, work, restricted mobility). This barrier shows how the system inadvertently disadvantages young people, a well-documented part of adolescents' service assessments. It also highlights the importance of opportunity structures (COM-B) in behaviour modelling and suggests that restructuring service hours could address inequalities in access.

Sub-theme 3.7: Facility readiness to provide SRH services

The SRH service-providing facility's readiness regarding medications and equipment availability was explored. Adolescents need quality services, clean and improved service delivery environments, and working conditions, staff, equipment, and medications. The healthcare workers working at a youth-friendly centre, from their experience, mentioned that the adolescents will not come for service if the health facilities lack the necessary equipment and drugs to provide SRH services. This issue is explained as follows: healthcare workers are ready to provide services, but the facilities lack sufficient equipment; some healthcare workers are unsure whether the facilities have all the necessary materials.

A female healthcare worker stated that:

> “Healthcare workers are ready, but the available equipment is not adequately provided and is not being used effectively.” (KIIP5)

Another female healthcare worker said:

> “There is a conducive environment to provide the service; we have separate room, trained health worker, and the services are comprehensive if adolescent need SRH services like; family planning, abortion services, but the facility not 100% equipped ...” (KIIP8)

A male healthcare worker also narrated the health facility's readiness to provide adolescent SRH service as follows:

> “I do not think our health facility have100% of equipment used to provide SRH services, probably had 70 to 80% ...” (KIIP1)

Evidence from a study conducted in Ghana revealed that scarcity or unevenly distribution of resources is among the barriers for SRH service utilisation (Amenah, Novignon, Fenny, Agyepong & Ensor 2025:1). A comparable investigation conducted in Godawari Municipality, Nepal reported findings analogous to the present study, indicating that none of the evaluated health facilities conformed to the adolescent-friendly criteria established by the government (Gautam et al 2025:1). The study conducted in Plateau State, Nigeria, yielded similar findings where most facilities lacked specific equipment for adolescent SRH services (Envuladu et al 2021:5).

Sub-theme 3.8: Cost of services

This sub-theme pertains to the financial constraints influencing adolescents’ utilization of sexual and reproductive health (SRH) services, as described in interviews with key informants, including community leaders. Service-related costs were consistently identified as a significant barrier to adolescents’ access to SRH care. Key informants, particularly healthcare professionals, reported that fees associated with abortion services are prohibitively high for most adolescents. In addition, community education at the district

level is constrained by the need to allocate funds for professionals' travel, further limiting outreach and awareness-raising activities. The following quotations illustrate and substantiate these financial barriers.

A female healthcare worker at a youth-friendly clinic said:

> "The service payment may be a challenge, if adolescents need abortion service the total payment is up to 550ETB (card, HCG test, Ultrasound, and drug). Service is better to be free of charge because the adolescent may fall at risk due to shortage of money" (KIIP8).

The female community leader added:

> "… Family economy is one the obstacles because sending children for better education needs budget…" (KIIP12).

A male community leader said:

> "There is a financial shortage to educate all groups of the community on SRH. Low access of education and lack of awareness about SRH by community groups affect adolescent SRH services. There is a community group that still belief FGM is correct and a group who promote early marriage. Poor security system for survival can also affect SRH service utilisation, for example, there is not enough security coverage for victims of rape." (KIIP11).

This result is consistent with findings from a systematic review of sub-Saharan Africa (Ninsiima et al 2021:13), which revealed that service costs and clinic quality were identified as barriers to adolescents using SRH services. A study conducted in Rwanda corroborates the findings of the present investigation, indicating that the cost of SRH services constitutes a barrier to adolescents' utilisation of these services (Mukeshimana et al 2025:1).

Sub-theme 3.9: Lack of privacy and confidentiality

The insufficient provision of classes exclusively designated for YFS poses a significant challenge, as it compromises privacy by requiring the sharing of spaces with other

services. This investigation identified the lack of dedicated classes in health facilities as a critical factor that adversely affects adolescent SRH services. The primary issue stems from the utilisation of shared classes, which infringes upon privacy.

A male healthcare worker said:

> "I cannot say we respect privacy because classes are mixed, the time adolescents need the service is also out of working hours like weekends and in the evening." (KIIP 4).

A female healthcare worker shared a similar idea:

> "… It is mandatory to keep secret. There is a separate class, but the service is not separate, equipment not separate." (KIIP5).

A study conducted in Southeast Nigeria by Ezenwaka et al (2020:1) supports the current study's findings, identifying breaches of privacy and confidentiality as barriers to the utilisation of SRH services. Similar results were obtained in the study conducted in Namibia and Ethiopia, where the structures of health facilities did not allow privacy (Ashipala & Katjimune 2025:1-5; Tilahun et al 2024:4).

Theme 4: Enhancing adolescents' SRH service utilisation

The proposed strategies aim to enhance adolescent SRH service utilisation. The participants posited that implementing CSE, strategically using social media platforms, modifying service delivery, and integrating SRH into school curricula could significantly enhance adolescent engagement with SRH services.

Sub-theme 4.1: Comprehensive sexual education (CSE)

The pivotal role of CSE in mitigating health risks and addressing the issues adolescents face. Moreover, participants highlighted the significance of family engagement in shaping adolescents' responses after they receive education from health extension workers (HEWs). Strategies such as community-wide awareness campaigns, panel discussions, and the utilisation of social media platforms were mentioned as crucial for educating

adolescents about SRH services. Participants articulated the importance of comprehensive sexual education as follows:

A 16-year-old male adolescent from Digalu Tijo district stated:

> “Awareness-raising sessions hold significant importance within the community. For instance, when a girl experiences her initial menstrual cycle and is unaware due to her mother's lack of observation, she might misconstrue menstruation as an ailment upon first encounter. Therefore, it is crucial for the mother to inform adolescent that this physiological process is natural, as failure to do so may lead to psychological distress.” (G4P8).

Another 16-year-old female adolescent from Lemmu Bilbilo district presented the concept of enhancing awareness regarding SRH services for adolescents and other community groups via social media platforms. Her explanation proceeded as follows:

> “… educating only family, and young people is not enough. As females age increase challenge increase starting from age 11, so this education should start at early age to prepare females to prevent challenges. (G1P3)

A 19-year-old male adolescent from Lemmu Bilbilo district mentioned that:

> “HEW and other health worker should create regular awareness to our community. Adolescent females should get awareness because they are giving birth to child and throw away on the road and in the forest.” (G2P6)

Community leaders articulated a strategy to disseminate comprehensive awareness of SRH services. Covering all community groups and using an attractive approach, such as drama, suggested by participants, to enhance SRH services.

Consequently, a male community leader stated that:

> “Mass awareness creation campaign in all places where adolescents are found in attractive ways using technology, rewarding, using drama to educate adolescents. This way we can improve the service utilisation.” (KIIP10).

Another male community leader also explained as follows:

> "It is mandatory to create SRH services awareness to community with follow up because to avoid misuse of the information. Family should follow children on social media. There should be clear rules and regulations on the utilisation of social media for responsibility not to promote unacceptable acts. Prepare panel discussion online, teach in the form of recreating adolescent. To promote SRH services in the media, there should be manpower assigned for this purpose from the government to teach in an organised and regular manner." (KIIP11).

The literature suggests that CSE is an important factor in adolescent SRH service utilisation (Mukeshimana et al 2025:2). Improving community awareness of SRH services is mentioned as one of the most valuable strategies to enhance service utilisation. In a study conducted in Rwanda, participants similarly advocated for increased community awareness of SRH services to enhance their utilisation (Mukeshimana et al 2025:2).

This finding is supported by a study conducted in Northern Thailand, which revealed that SRH education should be advocated by all stakeholders (Leekuan et al 2022:1). The study participants indicated a deficiency in community awareness of adolescent SRH. These findings are corroborated by an earlier study conducted in eastern Ethiopia, which identified enhanced community awareness and involvement as a pivotal factor in improving service utilisation (Abdurahman et al 2022:1).

Sub-theme 4.2: Use of social media platforms

The use of social media platforms explores the strategic use of social media to augment the adoption of SRH services among adolescents by capitalising on its capacity to engage a substantial segment of this population. Currently, adolescents spend significant time on social media platforms. These platforms, in conjunction with educational websites, play a pivotal role in disseminating information regarding SRH services to adolescents, as these resources are conveniently accessible, according to most study participants. Further elucidation of this subject is provided through the following quotations.

A male community leader advocates for the utilisation of social media platforms to facilitate effective engagement with adolescents, as evidenced by the following narrative:

> “Use of media is good to promote SRH service because in the current world social media can be easily accessible by most of adolescents ...” (KII10)

A female community leader added:

> “It is very important to teach adolescent through social media. Currently, adolescents are fast in accessing all things through face book, telegram, imo, TikTok, etc and even can teach us sometimes if mentored properly.” (KII12).

In an era defined by digital interconnectivity, it is imperative to identify innovative methodologies for conveying SRH information to adolescents. Social media platforms and television, due to their widespread reach and accessibility, present a significant opportunity to engage the youth with crucial health-related communications. However, the unregulated nature of these platforms necessitates a careful and strategic approach.

A female educator also confirmed this by stating:

> “It is very important to use social media to promote SRH if it is done by educated and responsible body because there are a lot of wrong promotions on social media. Easily reaching a few adolescents, and they can also read it in secret. They can read when necessary.” (KII9)

The two female teachers respectively stated that:

> “Education only from teachers (school) cannot change adolescents; if they hear from different social media sources the adolescent can get enough knowledge about SRH services.” (KIIP7)

> “I suggest if there is someone to promote adolescent SRH service on Facebook and TikTok because, these platforms are very good. I didn't see on TV and other medias promoting adolescent SRH, I have also planned to teach students on social media.” (KIIP2)

These results are also in line with those from a study in sub-Saharan Africa, which found a positive effect of social media on awareness creation (Chipako et al 2024:1). A study

conducted in South Africa by Adekola (2023:7) found that social media was the best method for teaching adolescents about sexuality. A study conducted in Drobo, Ghana, which aligns with the present findings, indicated that utilising social media platforms under the supervision of appropriate authorities is crucial for adolescents to access improved SRH services (Gyane et al 2025:1).

Sub-theme 4.3: SRH service modifications

The modification of sexual health services is one of the methods proposed by study participants to augment adolescent utilisation of SRH services. Participants recommended several policy modifications, including addressing gender-based violence, increasing comprehensive community awareness of issues related to adolescent SRH services, enhancing the standards of SRH service rooms in adolescent- and youth-friendly services (AYFS) centres, extending the operational hours of facilities providing SRH services, and eliminating the costs associated with SRH services.

An 18-year-old male adolescent from Lemmu Bilbilo district said:

> *"*It is imperative for healthcare professionals to enhance public awareness concerning family planning. Sexual violence, frequently committed by males, is initially addressed within the judicial system and subsequently handled through the conventional arbitration practice called **'Jaarsummaa,'** which rarely accounts for the ramifications endured by the female victim. These matters necessitate timely correction ..." (G2P8)

A 17-year-old female adolescent from Lemmu Bilbilo district shared her idea as follows:

> "Often, when discussing female education, it's more effective to focus on educating males, as many issues stem from them. Addressing male education can be the quickest way to solve challenges females face regarding SRH. It's important to raise community awareness for everyone. Healthcare workers possess superior knowledge about SRH services and should ideally provide education according to a schedule in schools." (G1P1)

A comparative study carried out in Ghana indicated similar recommendations, suggesting that policymakers and stakeholders should prioritise investment in addressing sexual

abuse among adolescents to achieve sustainable improvements in health outcomes (Kumah, Ahiale, Afakorzi, Obot & Dzodzodzi 2025:2).

Facility operating hours pose obstacles to the provision of SRH services to adolescents. Enhancing adolescent SRH service utilisation can be achieved by providing services at facilities that offer privacy and are available 7 days a week.

A male healthcare worker said:

> "Regarding our institution, we face a shortage of classroom space as we are currently utilising all available rooms. Though these spaces may not meet the ideal standards, we continue to offer services with the facilities we possess. Ideally, enhancing the appeal of SRH services to adolescents would be beneficial. We offer these services every day of the week in a private space set aside for adolescents, provided by staff trained in adolescent SRH service delivery, and I am personally involved in delivering these services ..." (KIIP1)

A study conducted in north-western Nigeria also found that inconvenient facility opening hours and a lack of service rooms are factors that obstruct adolescent SRH services. Adjusting service hours was suggested as a solution (Nmadu et al 2020:1).

It is often necessary for adolescents to seek services from healthcare providers of the same gender, as discussing SRH topics with male providers remains a cultural taboo for female adolescents.

One 19-year-old female from Lemmu Bilbilo district said:

> "… SRH advocacy or education and service better to be given by females because we afraid to tell secret to male and it is simple to tell women." (G1P7)

A similar study conducted in Mbeya, Tanzania, corroborated that both female and male participants preferred receiving SRH services from adults of their respective sex (Mcharo et al 2021:1-2).

Sub-theme 4.4: Incorporation of SRH education in the school curriculum

Incorporating SRH education in school curricula is crucial. Focus group discussions and key informant interviews suggest strategies to improve SRH education, advocating its inclusion in school settings to boost adolescent engagement with SRH services. Schools are prime venues for increasing adolescent awareness and integrating SRH into the biology curriculum.

The two healthcare workers, female and male, respectively, mentioned their suggestions as follows:

> "Integrate the SRH service with school curriculum and work continuously without interruption." (KIIP4)

> "School based SRH education is important because we can get majority of the adolescents at school to create awareness on SRH service utilisation." (KIIP5)

A female healthcare worker advised:

> "My advice is better to include CSE as chapter to biology book/include to education curriculum." (KIIP2)

A study carried out in Mwanza, Tanzania, supports the current findings and emphasises the need for a broader information infrastructure. Alongside this, an enhanced delivery system is essential to equip students with the skills required to effectively engage with SRH issues (Ngissa, Sanga, Nsanya, Kweka, Malindisa & Mwaipopo 2024:8).

A study suggests that adolescents lacking adequate knowledge in SRH are more likely to engage in behaviours that pose significant risks to their well-being. Implementing comprehensive SRH education within school curricula provides students with the necessary understanding to make informed and safe decisions, thereby reducing the incidence of unintended pregnancies, unsafe abortions, and STDs.

A female health professional articulated the following:

> "SRH education at school is very important because its aware adolescents about the issue can save their life before they are making mistakes. For example, using family planning can prevent unnecessary abortion and they can be prevented from STIs." (KIIP 8)

The efficacy of the proposed school-based approach to teaching SRH services is corroborated by analogous findings from a study conducted in the Andaman and Nicobar Islands (Yadav & Kumar 2023:1).

Enhancing awareness about adolescent SRH is not solely an individual's responsibility. It requires collective effort, as the study participants suggested.

A female teacher mentioned:

> "… It is not only by one or two people, but we all need to work on this by involving healthcare workers to raise awareness on adolescent SRH services. It is a lack of personal goal for majority of adolescents who practice risky sex and if she is a girl, she can be engaged in unsafe sex through rape ..." (KIIP7)

A male community leader presented a similar proposition, asserting that they are fulfilling responsibilities by providing counselling to adolescents through various methods.

The community leader recounted his experiences as follows:

> "We educate students through different techniques; there is HIV club, gender club, and girls club. There is also a mini media in school through which we transmit messages for students and educate their peers. There is also a SRH book to distribute for students to learn." (KIIP10)

A comparable investigation was conducted in South Africa, involving participants from three distinct townships. The results of this study corroborate the recommendations, advocating the incorporation of risk-reduction awareness principles into the educational curriculum for adolescents (Planer, Milford Kutywayo, Naidoo & Mullick 2022:1-2).

Educating adolescents is not simply about imparting knowledge but about developing curiosity, trust, and a sense of ownership. In areas where knowledge distribution is unequal and prevailing customs may limit open discussion, particularly on subjects like SRH, the teaching method should be deliberate and accommodating. When educators begin their work with the most motivated, a cascading effect occurs, with informed adolescents becoming ambassadors of change who share knowledge not only with their peers but also with families and entire communities.

A female teacher said:

> "I am Interested to teach adolescents and dedicating my time with them. Teaching should not be by force; we must raise interest first. Start to teach those who are interested first then, he or she will teach others at home in the community and friends. If you work for those who are interested, this will attract others not interested." KIIP2)

A male teacher shared his experience as follows:

> "As a teacher, it is my obligation to teach my students without a taboo to protect them from danger…" (KIIP6)

The study conducted in Zambia supports this conclusion, showing that teachers have a positive view of CSE for adolescents. The teacher's belief in adolescent education about SRH is important for increased awareness of the subject (Chibuye & Kumatongo 2022:2).

Many adolescents question the value of education given the high unemployment rate among graduates. In response, dedicated leaders offer support through private meetings and gender clubs, addressing academic and SRH issues.

A female teacher shared her experience that educating adolescents is challenging.

> "It is challenging that students are not interested in education at all. They respond that even graduates are at home without work. I consult students in private and in gender clubs on their SRH and academic issues. I tell girls that if they catch a friend prematurely, they can throw them into the streets anywhere." (KIIP7)

On the other hand, a focus group discussion participant proposes integrating SRH education into the curriculum to address existing obstacles. It is recommended that the SRH component be included as a distinct subject within the curriculum.

The two female adolescents, 17-year-old and 15-year-old, from Digalu Tijo district said:

> "... For example, in the textbooks we study, we learn how to prevent pregnancy. Adolescent behavioural change education must be included in detail in curriculums that help young people not get involved in risky behaviour. Our people are predominantly religious, and it should be taught in churches. I am Orthodox; my religion does not allow premarital sex. Most young people are subordinate to the family and better to create awareness for family first." (G3P3).

> "Aware families to educate their children. Prepare awareness raising programmes in school 1 or 2 times per year for students in school." (G3P1).

The current finding is in line with the result of a scoping review of studies in sub-Saharan Africa (Chipako et al 2024:1). The findings of the current study confirm those of earlier studies, such as studies done in Andaman and Nicobar Islands and Mbeya, Tanzania, indicating that the enhancement of comprehensive community SRH education and skills should be reinforced in the existing school curriculum (Yadav & Kumar 2023:1; Mcharo et al 2021:1).

4.5 INTEGRATION OF QUANTITATIVE AND QUALITATIVE RESULTS

Integration and synthesis of quantitative and qualitative data ensure a comprehensive understanding of research problems (Sharma et al 2023:5). A crucial component of mixed-methods research is deliberately integrating quantitative and qualitative methodologies to foster interdependence and synergy between the two approaches. Ultimately, this integration allows for the synthesis of findings from both data types, facilitating a more comprehensive understanding of the subject under investigation (McLeod 2024:3-5).

The study of SRH services among adolescents in the Arsi Zone of Ethiopia used a mixed-methods framework, combining quantitative and qualitative data. The quantitative component involved data collection from 651 participants, whereas the qualitative component involved data obtained from 44 participants across six rural secondary schools and communities. The synthesis of quantitative and qualitative research findings in this study effectively addresses the limitations typically associated with a singular methodological approach. Consequently, this synthesis furnishes a comprehensive understanding of adolescents' utilisation of SRH services, as perceived by adolescents themselves, healthcare providers, teachers, and community leaders.

The research examined the utilisation of SRH services by adolescents in the Arsi Zone of Ethiopia, employing a mixed-methods research design. This methodological integration of quantitative and qualitative data provides an exhaustive understanding of adolescents' awareness, utilisation patterns, barriers, associated factors, perceptions, and socio-cultural determinants affecting their engagement with SRH services. By synthesising these findings, the researcher can identify effective strategies to improve service utilisation within this study group.

4.5.1 Adolescent awareness and utilisation of SRH services

The quantitative data indicated that 80.8% of adolescents were aware of SRH services. This high level of awareness suggests that adolescents recognise their susceptibility to issues related to SRH. A considerable proportion of the study participants exhibited limited comprehension of the availability of SRH services, which directly contributed to a low utilisation rate of 23.5%. More specifically, the findings indicated that adolescents with a history of prior SRH issues are more likely to seek out these services, underscoring the pivotal role of personal experience in influencing health-seeking behaviours. Nevertheless, overall engagement with SRH services remains suboptimal, underscoring a critical awareness gap that warrants urgent attention and intervention.

In contrast, the qualitative phase yielded an enhanced understanding of the underlying factors contributing to the limited awareness observed. Focus group discussions elucidated that a significant number of adolescents lacked awareness regarding the specific services available at YFS centres. Participants expressed confusion about the appropriate avenues for assistance and the services available to them, underscoring the

need for enhanced communication and outreach. This qualitative evidence augments the quantitative data by demonstrating that while a subset of adolescents may engage with services in response to health concerns, a pervasive lack of awareness significantly hinders access to necessary care.

4.5.2 Barriers to accessing SRH services

The present study employed an integrative approach, combining quantitative and qualitative research methodologies, to elucidate the critical impediments adolescents face in accessing SRH services. The quantitative component of the analysis clearly underscores social stigma as a predominant barrier, manifested in adolescents' apprehension of judgment from peers and community members. The apprehension was quantitatively assessed using survey data, which indicated that a significant proportion of respondents reported a tendency to avoid utilising SRH services due to concerns about stigmatisation or social exclusion.

The qualitative findings further elaborated on these barriers, revealing that fear of parental discovery was another significant obstacle. Many adolescents expressed anxiety about their parents finding out about their visits to SRH services, which prevents them from seeking help. Cultural taboos surrounding discussions of SRH also emerged as a critical barrier, with participants noting that such topics were often considered taboo in their communities. This qualitative insight underscores the need for culturally sensitive approaches to health education and service delivery. These barriers can prevent adolescents from acting on their awareness and perceived benefits, indicating a critical area for intervention. The quantitative data support this by showing that the convenience of service hours is a factor, with adolescents who found the hours suitable being 3.19 times more likely to utilise services

4.5.3 Associated factors influencing utilisation

The study further examined a range of factors that influence adolescents' engagement with SRH services. Quantitative analysis revealed that the operational hours of YFS centres significantly influenced service utilisation. Adolescents who perceived the operational hours as accommodating were more inclined to seek assistance, underscoring the critical role of accessibility in fostering health-seeking behaviours.

Adolescents who engaged in dialogues concerning SRH topics with parents, educators, or healthcare practitioners were utilising SRH services more than double that of their counterparts who did not participate in such discussions. Additionally, adolescents who did not experience fear from family members or community groups perform better than those who fear them (Table 4.9).

The qualitative data corroborated these findings, demonstrating that a significant number of adolescents are unable to access YFS centres during standard operating hours due to educational commitments or other responsibilities. This misalignment between service availability and adolescent schedules represents a significant obstacle to service access. The qualitative evidence suggests that extending operational hours or providing services on weekends could significantly increase utilisation rates among this population cohort.

4.5.4 Perceptions of SRH services

Another important domain within the study encompassed adolescent perceptions of SRH services. The quantitative data showed that adolescents with favourable perceptions of these services were more likely to engage with them. This indicates that adolescents perceive benefits in having open discussions about SRH, which can lead to increased service utilisation. This outcome implies that fostering a constructive image of SRH services is crucial for enhancing utilisation rates among adolescents. The qualitative insights suggest that adolescents understand the potential consequences of not accessing SRH services, such as unintended pregnancies or sexually transmitted infections (STIs). This understanding may vary among individuals, influenced by cultural beliefs and personal experiences, which were not fully captured in the quantitative analysis.

The qualitative data elucidate the underlying factors influencing these perceptions. Female adolescents demonstrated a marked preference for receiving SRH information from female healthcare providers, as this engendered a sense of comfort and security. A significant proportion of the adolescent cohort indicated an increased likelihood of seeking services if female providers were accessible. This preference underscores the critical role of gender dynamics in the utilisation of health services and suggests that employing more female healthcare professionals could enhance adolescents' propensity to engage with SRH services.

4.5.5 Socio-cultural determinants

The socio-cultural environment in which adolescents live greatly impacts their use of SRH services. Quantitative research indicates that cultural beliefs and norms strongly influence adolescents' willingness to seek care. Many participants noted that cultural taboos regarding discussions on sexual health fostered an atmosphere of silence and embarrassment, further hindering their access to services.

Qualitative findings highlighted the importance of community involvement to tackle these socio-cultural factors. Participants recommended engaging community leaders and families in awareness initiatives to reduce stigma and promote an environment that supports access to SRH services. This qualitative viewpoint aligns with quantitative results, suggesting that overcoming socio-cultural barriers is crucial to enhancing service use.

4.5.6 Strategies to enhance utilisation of SRH services

Based on the collective findings, several strategies can be suggested to improve adolescent use of SRH services. Firstly, incorporating comprehensive SRH education into school curricula is essential. This educational strategy can increase awareness and understanding of available services, enabling adolescents to seek assistance when needed. Secondly, expanding the operational hours of YFS centres can greatly enhance accessibility. By aligning with adolescents' schedules, health services can become more reachable and convenient.

Thirdly, launching community awareness initiatives that engage local leaders and families can help reduce stigma and foster a supportive environment for candid discussions about SRH topics. These initiatives should aim to normalise dialogue around SRH, thus motivating adolescents to pursue the care they require without fearing judgment.

Increasing the number of female health professionals strategically trained and employed in YFS centres is believed to enhance trust and comfort among female adolescents accessing SRH services. By systematically tackling the identified barriers and leveraging

factors that promote service use, stakeholders can foster an environment that is both accessible and welcoming for adolescent populations.

The quantitative phase demonstrated a relatively high level of awareness (80.8%) of SRH services among adolescents. However, the qualitative findings revealed that numerous adolescents continue to encounter substantial barriers to accessing these services, including cultural taboos and stigma. This discrepancy indicates that awareness alone does not necessarily lead to service utilisation, thereby underscoring a critical gap between knowledge and behaviour.

In terms of behaviour, the quantitative analysis showed that adolescents who discussed SRH topics with their parents were more likely to utilise SRH services (COR = 3.22). In contrast, the qualitative interviews suggested that many adolescents feared that their parents would discover their use of SRH services, which could discourage them from seeking care. This apparent contradiction highlights the complexity of family dynamics and the powerful role of prevailing social norms in shaping adolescents' health-seeking behaviour.

Furthermore, the quantitative data underscored the significance of the operational hours of Youth-Friendly Service (YFS) centres in promoting access to care, while qualitative insights emphasised that community engagement and education are essential for addressing and overcoming cultural barriers. Taken together, these meta-inferences point to the need for a multifaceted intervention strategy that integrates structural modifications (e.g., extending or adapting service hours) with community-based educational and sensitisation initiatives to improve SRH service utilisation among adolescents.

4.6 SUMMARY

The study of SRH services among adolescents within the Arsi Zone of Ethiopia provides essential insights into both the quantitative and qualitative dimensions of service utilisation. The study's findings indicate that the level of awareness regarding SRH services among adolescents is relatively low, which has a direct relation with their rates of utilisation. Adolescents who have previously encountered SRH-related issues were more likely to utilise available services. The data indicated that convenience in the operational hours of YFS centres played a crucial role in this utilisation. Adolescents who

found the service hours accommodated were more inclined to seek help, highlighting the importance of accessibility in promoting health-seeking behaviour among young people. However, the overall commitment remains constrained by inadequate knowledge of available resources. These findings underscore the pressing need for educational programmes to enhance awareness and understanding of SRH services among adolescents.

The study identified substantial socio-cultural determinants that obstruct adolescents' access to SRH services. Predominant barriers included social stigma, the fear associated with potential parental detection, and deeply formed cultural barriers, SRH service payment, which collectively contributed to the formation of an environment characterised by hesitancy. Furthermore, qualitative data revealed adolescents' preference for information from female health professionals, highlighting the critical role of trust and comfort in health-related communication. These findings underscore the imperative to address the socio-cultural barriers surrounding adolescents to enhance their access to SRH services effectively.

The study proposes a comprehensive approach to enhance the utilisation of SRH services among adolescents. This approach encompasses integrating comprehensive SRH education into school curricula, extending operational hours for YFS centres, and implementing community awareness initiatives. Involving local leaders and families in these efforts is critical to reducing stigma and cultivating an environment conducive to open dialogue about SRH issues. By addressing the identified barriers and capitalising on factors that enhance service utilisation, stakeholders can establish a more accessible and accommodating context for adolescents seeking SRH care.

This study highlights the complex interrelationships among awareness, utilisation, barriers, perceptions, and socio-cultural factors that impact adolescents' engagement with SRH services. By focusing on these dimensions, targeted interventions can be developed to empower adolescents, potentially leading to improved health outcomes and a more informed adolescent. Both focus group discussions and key informant interviews (KIIP) highlighted the imperative for collaborative efforts to diminish stigmatisation and improve access to accurate information and SRH services. The results of the study are comparable to those of other studies conducted in Ethiopia and elsewhere in the world. The next chapter, Chapter 5, presents the proposed strategy to enhance adolescent engagement with SRH services.

CHAPTER 5

STRATEGY TO ENHANCE UTILISATION OF ADOLESCENTS' SRH SERVICES IN SOUTH-EAST, ETHIOPIA

5.1 INTRODUCTION

Enhancing the utilisation of adolescent SRH services supports the development of healthy adolescents. Adolescents' use of SRH services reduces teenage pregnancies and infections and strengthens their knowledge and ability to exercise SRH rights. Such utilisation of SRH by adolescents should inform decision-making on care-seeking behaviour (Agbenu et al 2024:14). In light of the above, developing an appropriate strategy is essential to improve adolescent SRH service utilisation. This chapter describes the strategy that has been developed based on evidence from the study where adolescent SRH service utilisation is only 23.5% and fear of parent and community, cultural taboo and stigma, service payment, and facility operating hours were the barriers to adolescent SRH service utilisation, therefore, signalling why, who, why and what to consider in order to improve the SRH services utilisation by adolescents in South-East Ethiopia.

Investing in enhancing SRH services for adolescents is a strategic and transformational approach to ensure health, strengthen capacity, and secure future prosperity. These services have made significant improvements in health, education, social justice, and equality, and have supported individual and collective progress at the national level. To break the cycle of poor health, inequality and poverty, the next generation must be equipped with the knowledge, resources, and autonomy they need to prosper.

Objectives of the study were:

- To explore and describe the adolescents' awareness of SRH service utilisation in the Arsi Zone of Ethiopia.
- To identify and describe SRH services for adolescents in the Arsi Zone of Ethiopia.
- To establish and describe barriers to adolescents' access to SRH services in the Arsi Zone of Ethiopia.
- To explore adolescents' perceptions about SRH services in the Arsi Zone of Ethiopia.

- To explore and describe socio-cultural determinants of adolescents' SRH in the Arsi Zone of Ethiopia.
- To develop a strategy that enhances adolescents' SRH service utilisation in the Arsi Zone of Ethiopia.

Based on the objectives above, the first to the fifth objectives of the study were addressed in Chapter 4 under sections labelled respectively as follows: to explore and describe the adolescents' awareness of SRH service utilisation in the Arsi Zone of Ethiopia, section 4.4.1.2; to identify and describe SRH services for the adolescents in the Arsi Zone of Ethiopia section 4.4.1.3; to establish and describe barriers to adolescents' access to SRH services, section 4.4.1.4; to explore adolescents' perceptions about SRH services in the Arsi Zone of Ethiopia, section 4.4.1.5 and to explore and describe socio-cultural determinants of adolescents' SRH in the Arsi Zone of Ethiopia, section 4.4.1.6. The sixth objective, namely, to develop a strategy to enhance adolescents' utilisation of SRH services in the Arsi Zone of Ethiopia, is addressed in Chapter 5. The researcher believes that all the research objectives have been achieved.

This chapter presents the main findings from the combined quantitative and qualitative approaches, outlines the strategy to improve adolescents' use of SRH services in Arsi Zone, Ethiopia, and reports the validation process.

5.2 MAIN FINDINGS OF THE STUDY

Strategies were proposed based on the study's findings on barriers to adolescents' use of SRH services and related factors. The study found that SRH service utilisation was markedly low among adolescents in the selected secondary schools, with a utilisation rate of 23.5% (n=153). This motivated the researcher to develop a strategy to improve adolescents' use of SRH services. Utilisation was higher among adolescents who had previously experienced SRH problems, discussed SRH issues with parents, teachers, or healthcare workers, found service hours convenient, and did not fear negative reactions from family or the community.

Moreover, the research highlighted obstacles to obtaining SRH services. The primary obstacles noted were social stigma, fear of parental discovery, and entrenched cultural barriers, which together fostered a reluctance.

5.3 STRATEGY DEVELOPMENT

5.3.1 An overview

The strategy comprises a detailed blueprint to achieve distinct long-term objectives. The formulation of strategic concepts involves contributions from an array of scholars and practitioners (Porter 1996:61-68). Strategies can thus be regarded as an organised approach to positioning organisations within their surroundings, ensuring alignment among missions, visions, and actions. Furthermore, the evolution of strategic thinking has led to the recognition of dynamic and emergent strategies, emphasising the importance of flexibility and adaptability in addressing the complexities of today's environment (Mintzberg 1993:108-109).

Objective to be addressed: The objective of developing this strategy is to explain the techniques for filling gaps and minimising the challenges adolescents face in utilising SRH services.

Purpose of the strategy: The purpose of developing this strategy is to provide an evidence-based, well-prepared document to support the improvement in adolescent utilisation of adolescents' SRH services in Arsi Zone, Oromia region, south-east Ethiopia.

5.3.2 Rationale of the proposed strategy

Adolescent use of SRH services helps prevent unintended pregnancies, STIs, and other SRH problems, improving their reproductive health and supporting a more productive generation. This strategy can be used by multiple bodies, including the Ministry of Health, the Ministry of Education, the Ministry of Women, Children and Youth Affairs, the Oromia Regional Health Department, the Arsi Area Health Department, and health professionals in similar areas nationwide.

5.3.3 SWOT analysis

A SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) is a strategic tool that helps researchers and programme designers assess a programmes or organisation's internal strengths and weaknesses and external opportunities and threats (Institute of

International Sociology of Gorizia 2009:1; United States Department of Agriculture, Risk Management Agency 2008:1). SWOT analysis helps prioritise interventions, tailor services to adolescents, and build responsive systems for SRH service uptake (Katkalo, Veselova & Smeltsova 2022:11).

A SWOT analysis is essential for improving adolescents' access to and use of SRH services. It identifies and manages internal and external factors affecting the accessibility, quality, and utilisation of these services, summarising key elements from the research below.

Strength

The strengths identified in this study are the internal factors within the selected schools and health facilities that contributed to increasing adolescent use of SRH services. The study found that about 80.8% of adolescents had heard of SRH services (see Figure 4.9), and approximately 44.7% had a positive attitude towards these services (see Figure 4.6), which could aid strategies to boost adolescent SRH service utilisation.

Additionally, the study revealed that healthcare workers are trained in adolescent-friendly SRH services and that peer educator training is provided in some schools, both of which support improvements in SRH services. The study also noted that some health facilities have YFS rooms, though these sometimes lack privacy. Moreover, the findings highlight that international and local donors provide essential technical and financial support.

Weaknesses

This study identified several internal barriers within the selected schools and health facilities that adversely affect adolescents' utilisation of SRH services, and these factors are therefore conceptualised as weaknesses in this analysis. Quantitative findings demonstrated a lack of CSE in schools, limited family engagement, and minimal parental involvement, with cultural discomfort and insufficient communication tools further constraining family support.

Qualitative data also indicated that healthcare workers are insufficiently trained to provide adolescent-friendly SRH services, and that SRH programme implementation is frequently

fragmented and poorly coordinated across sectors such as health, education, and youth affairs, thereby reducing overall programme effectiveness. Moreover, qualitative results showed that restricted service hours, inadequate adolescent-specific infrastructure in health facilities, and financial constraints limit adolescents' access to services such as abortion care and treatment for STIs.

Opportunities

Opportunities identified were external elements that could boost adolescent engagement with SRH services in the Arsi Zone of Ethiopia, focusing on selected schools and health facilities. The qualitative data revealed the presence of community healthcare worker frameworks, such as HEWs, that facilitate SRH education and services. Additionally, qualitative insights highlighted that deploying HEWs to support the community and involving NGOs to aid the programme in meeting governmental objectives significantly enhances adolescent SRH services. Moreover, digital tools such as mobile devices, mobile apps, and social media are crucial for SRH education and referrals.

Threats

External threats to selected schools and health facilities may limit adolescents' use of SRH services in Ethiopia's Arsi Zone. The study's findings indicate that stigma and taboos remain prevalent, particularly in rural, conservative areas. SRH programmes are at risk due to funding changes. Girls and adolescents in challenging-to-reach facilities in distant or conflict areas face greater access barriers. In underserved areas, poverty and service fees discourage adolescents from seeking SRH services.

Table 5.1 Summary of SWOT analysis

Strength	**Weakness**
• Healthcare workers trained on adolescent-friendly SRH service provision. • Availability of YFS at health facilities. • Some adolescents are aware of SRH services and have a positive attitude toward them.	• No CSE at school. • Restricted service hours and infrastructure tailored for adolescents. • Insufficient training for providers on confidentiality and respectful care. • Despite efforts to increase awareness, cultural taboos and stigma continue to exist. • Weak parent-adolescent communication channels. • Adolescents face financial barriers when seeking SRH services.
Opportunity	**Threat**
• Government initiatives, such as assigning HEWs to assist community members from home to home. • Involvement of NGOs in supporting the programme to aid the government's strategic objectives. • Availability clubs in school. • Availability of digital platforms (e.g. social media).	• Long-standing societal norms and the apprehension of being judged by family and society. • Opposition from traditionalist factions or authorities. • Constraints in funding to cover services like safe abortion and sexually STI treatment. • Shortage of infrastructure, like a class shortage. • Impact of conflicts and displacement.

5.3.4 Steps of strategy development

The development of strategic processes consists of eight interconnected tasks (Thompson & Strickland 1996:4). Figure 5.1 illustrates the eight steps involved in formulating the strategy.

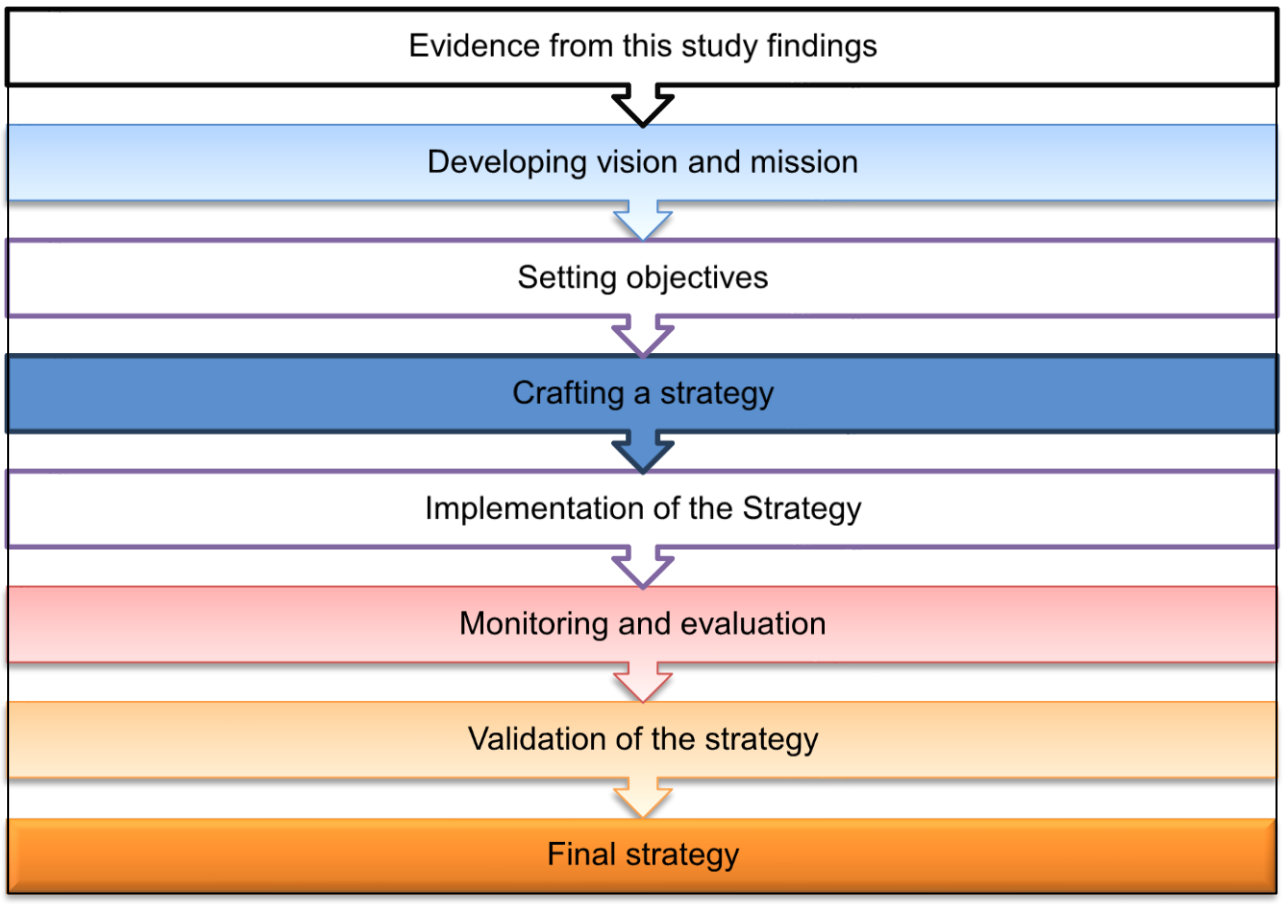

Figure 5.1 Steps of strategy development

(Adapted from Thompson & Strickland 1996:4)

Vision: Access to the highest possible level of integrated SRH services for all Ethiopian adolescents.

Mission: Ensure that adolescents can easily access SRH services that are safe, respectful, informative, equitable, confidential, and culturally sensitive.

5.4 GOAL

To increase the utilisation of SRH services from 29.79% to 50% by 2032 to reduce preventable adolescent illness and deaths associated with sexuality and reproductive health.

5.4.1 Guiding principles

The core principles of the envisaged strategy centre around ensuring access to, acceptance of, and the proper facilitation of adolescents' various needs regarding SRH services, as guided by the Ethiopian National Adolescent and Youth Health Strategy (2021-2025) and adolescent and youth health standards, implementation guidelines (MoH 2021b:24, 2022a:10).

The envisaged strategy further aligns with the Global Accelerated Action for Adolescent Health (AA-HA) 2023 and WHO 2018 recommendations on adolescent SRH, with national priorities, enhancing services and development through supportive policies (WHO 2023b:17-22; WHO 2018:7-12). In that spirit, the envisioned strategy will be directed by the following guiding principles:

- Every adolescent in the Arsi Zone must have access to complete information and services.
- Adolescents must actively and meaningfully participate in the design, implementation, governance, and evaluation of their SRH services.
- Healthcare providers must ensure adolescent privacy and confidential access to SRH services.
- Approach adolescents with respect, understanding, and cultural sensitivity, avoiding judgment or stigma.
- SRH services should be comprehensive and integrated into broader adolescent health platforms.
- Services should meet national standards, follow global best practices, and include continuous quality improvements.
- Health systems should ensure accountability to adolescents through feedback, grievance mechanisms, and performance monitoring.
- Collaborative activities should be undertaken with different sectors, including education, agriculture, NGOs, and media, to enhance adolescent SRH services.
- Adolescent SRH services should be provided in such a way that the cost of these services is not a barrier.
- Promote new technologies to use to enhance adolescent SRH services.

5.5 PROPOSED STRATEGY TO ENHANCE ADOLESCENT UTILISATION OF SRH SERVICES IN ARSI ZONE, SOUTH-EAST ETHIOPIA

5.5.1 Strategic objectives

The proposed strategy presents six strategic objectives to enhance the use of SRH services among adolescents in the Arsi Zone, Ethiopia. These objectives address the study's main finding: each is linked to operational objectives and detailed implementation measures in Table 5.2.

Table 5.2 Strategic objectives which are aligned with major findings

Identified problems	Strategic objectives	Core activities
Lack of awareness	Enhancing adolescent SRH understanding via inclusive education and outreach.	• Incorporate SRH into educational programmes and for youth organisations. • Make use of peer educators and adolescent-friendly media. • Develop multi-lingual, culturally relevant Information, Education and Communication (IEC) materials.
Fear of parental and community judgment	Offer confidential and AFS environments.	• Provide continuous training on confidentiality and respectful care to providers. • Set up adolescent and youth-only service hours or mobile clinics. • Engage parents and community leaders in awareness activities.
Cultural taboo and stigma	Promote SRH discussions through community involvement and advocacy support.	• Enable intergenerational (children, adults, and seniors) dialogues through forums. • Collaborate with religious and cultural representatives. • Use stories and local heroes to change perceptions on the SRH.
Limited parent-adolescent communication	Enhance the communication and support mechanisms between parents and adolescents regarding SRH	• Organise seminars for parents regarding adolescent SRH. • Disseminate the conversation guide and the toolkits. • Promote togetherness in adolescent health activities.

Identified problems	Strategic objectives	Core activities
Inconvenient facility SRH service providing hours	Adapt service delivery to fit adolescent time schedules.	• Expand clinic operating hours to evenings and weekends and implement flexible appointment systems.
Financial barrier	Ensure adolescents have access to SRH services without financial constraint.	• Partner with NGOs/government to provide free or subsidised SRH services for adolescents using vouchers or sliding-scale fees.

5.5.1.1 Objective 1: To enhance adolescent SRH services understanding via inclusive education and outreach

Operational/Implementation strategies

Incorporate SRH into educational programmes and youth organisations: Lack of awareness was the major obstacle for adolescents accessing SRH services, as per reports from the current study. To meet the needs of adolescents and increase teachers' competence and confidence, comprehensive SRH education and skills training must be strengthened in school SRH curriculum (Mcharo et al 2021:9). CSE teaches adolescents the cognitive, emotional, physical, and social aspects of sexuality. It equips young people with the knowledge, skills, attitudes, and values needed for health, well-being, dignity, respectful relationships, informed choices, and rights protection (United Nations Educational, Scientific and Cultural Organization (UNESCO) 2018:6). Sexual health education, counselling, and consistent birth control promotion can enhance ASRHR and prevent adverse outcomes (Meherali et al 2021:23). This education should be given in school and outside of school (UNFPA 2022:22). Incorporate CSE in curriculum of all levels of school and training in pre-service for graduating college students.

Make use of peer educators and adolescent-friendly media: Peer educators play an important role in raising awareness of SRH among adolescents and young people in their respective communities, ultimately improving their knowledge of the availability and use of SRH services. Most reports indicate that while peer-educator training is conducted in schools, additional efforts are necessary to apply peer educator strategies to engage adolescents who are not attending school in Ethiopia (Kereta, Belayihun, Hagos & Asnake 2021:7). Digital tools can enhance SRH education for adolescents in sub-

Saharan Africa by making information accessible, engaging, and tailored to their needs (Alhassan, Haggerty, Fapohunda, Affan & Anto-Ocrah 2025:1; Ackah, Esia-Donkoh, Amponsah, Agbemavi, Bediako & Tettey 2024:1). Integrate print materials like posters, comics, and flipcharts with digital media such as videos, SMS, and radio. Incorporate scripts for peer educators, interactive games, and visual aids (Ackah et al 2024:2-4). E-health has the potential to enhance sexual health among adolescents in sub-Saharan Africa by tackling challenges related to infrastructure, training, and cultural factors (Adekola & Ikhile 2025:12).

Develop multilingual, culturally relevant Information, Education and Communication (IEC) materials for SRH service improvement. It is better to use participatory design, local languages, and visual narratives grounded in global and national frameworks to improve adolescents' understanding of SRH services (Mcharo et al 2021:9).

5.5.1.2 Objective 2: To offer confidential and adolescent-friendly service environments for adolescents

Operational/Implementation strategies

Provide training on confidentiality and respectful care for providers: Fear of parental and community judgment during service was reported as a challenge for adolescents seeking SRH services. Train providers on confidentiality and respectful care of adolescents with sexual violence, using participatory and rights-based modules focusing on trust, non-judgmental communication and legal/ethical standards. Training alone is not enough to sustainably improve healthcare worker performance. A holistic approach combining interactive training, on-the-job assistance, support supervision, and collaborative learning is more effective in enhancing skills, attitudes, and motivation. This also applies to teachers and CSE facilitators (UNFPA & UNICEF 2022b:24). Promoting adolescent SRH self-care and the development of digital health tools is crucial. WHO promotes adolescent SRH self-care and digital health tools (WHO 2021b:1-3).

Set up adolescent- and youth-only service hours or mobile clinics: Facilities' operating hours were reported as a barrier to adolescents' use of SRH services in the present study and other similar studies. As per the Ethiopian adolescent and youth

health standards implementation guideline for 2022, it is important to establish suitable operating hours for adolescents and youth, along with strategies to minimise waiting time (MoH 2022c:32-38). To increase young people's access to SRH, facilities must have convenient working hours and flexible appointment procedures (Samoa Ministry of Health [MoH] 2023:15). This study found that adolescents prefer using SRH services on weekends, outside regular working hours, and during holidays. Furthermore, the researcher would like to recommend the following activities:

- Allocate specific time for adolescents and youths at health facilities to ensure privacy and comfort.
- Establish mobile clinics to offer adolescent-friendly reproductive health services in remote or underserved areas.
- Train health staff to care for adolescents with respect, confidentiality, and without judgment.
- Promote services through schools, youth clubs, and community networks to boost awareness and uptake.
- Ensure the services align with Ethiopia's ASRH strategy and the WHO's (2023b:1) accelerated action for the health of adolescents (AA-HA) standards for equity and accessibility.

Engage parents and community leaders in awareness activities: Local authorities, teachers, parents, and healthcare providers can encourage adolescents to address their health needs (Mutea et al 2020:15). Engage religious leaders, elders, and educators to advocate for SRH, combating stigma and misinformation. Integrate SRH into community platforms like school-parent associations, women's groups, and local committees.

5.5.1.3 Objective 3: Promote SRH discussions through community involvement and advocacy support

Operational/Implementation strategies

Enable intergenerational (children, adults, and seniors) dialogues through forums: Equip parents and caregivers with tailored information to fit cultural contexts. Engage community healthcare workers and peer educators in conducting home or group sessions

to facilitate discussions about SRH in familiar places (Sidamo et al 2024b:15). Build trust across generations through storytelling, role-playing, and facilitated discussions.

Collaborate with religious and cultural representatives: The integration of religious leaders into youth reproductive health programmes constitutes a pivotal strategy for enhancing awareness and facilitating informed decision-making regarding SRH among young individuals (Ashriady, Salim, Widodo & Ruhardi 2024:1). Research carried out in Ethiopia supports the engagement of religious leaders in encouraging conversations about SRH, as they are respected figures in the community and adolescents are receptive to their guidance (Sidamo et al 2024b:14). Moreover, the benefits of partnering with religious and cultural leaders include:

- Promote adolescent SRH by fostering positive norms, reducing stigma, and encouraging family communication.
- Connect health systems and communities through accurate SRH education, culturally sensitive messaging, and trust-building.
- Enhance YFS and policies by creating safe spaces, guiding adolescents, and aligning with national and global strategies.

Use stories and local heroes to change perceptions about SRH: Narratives and local champions effectively shift community viewpoints and support adolescent SRH by making messages relatable and emotionally engaging. The Heroes for the Gender Transformative Action programme (heroes4GTA) in Uganda focuses on young people and women, providing them with CSE, SRHR knowledge, and life skills. This initiative results in significant improvements in health and justice outcomes, such as lowering adolescent birth rates, increasing the use of skilled birth attendants (SBA), preventing most unwanted pregnancies, and ensuring justice for those in need (Wasswa, Mugisha, Kagurusi, Muyonga, Ajok & Sara 2024:10-13).

5.5.1.4 Objective 4: To enhance the communication and support mechanisms between parents and adolescents regarding SRH

Operational/Implementation strategies

Organise seminars for parents regarding adolescent SRH: discuss issues of SRH with families and other educators, as this was found to be the determining factor affecting SRH service utilisation in the current study. Seminar preparation makes parents more aware of their adolescent children's SRH needs and difficulties and enhances honest, polite dialogues between parents and adolescents. Open parent-adolescent discussions on SRH can improve adolescents' health by reducing unsafe sexual activities, encouraging condom and contraceptive use, and boosting decision-making confidence (Gatheru, Wao, Alamdo, Kwarteng, Kwashie, Kabiru, Ogum, Torpey & Manu 2024:2). Overcoming obstacles to communication about SRH between parents and young people is essential for improving health outcomes. Parents need to be motivated to engage in open dialogue with their children from a young age (Gizaw, Muktar, Wondimagegn, Abayneh, Sefere, Tareke & Yilma 2025:1).

Disseminate the conversation guide and toolkits: The dissemination of a conversation guide and toolkit to enhance parent-adolescent communication in Ethiopia requires a strategic approach that is culturally sensitive and uses multiple communication channels. This offers well-structured approaches and example questions for parents to begin discussions about SRH with adolescents (IAWG 2022:9; Plan International 2019:45-50).

Materials for education and communication for varied audiences include:

- Prepare the material in both hard and soft copy formats.
- Prepare in different formats in local languages.
- Prepare in different versions for parents, facilitators/teachers, and adolescents.

Dissemination methods

Community and institutional: school, health facilities, youth centres, religious and community leaders.

Digital platforms: WhatsApp, Telegram, Facebook, TikTok, radio, and TV.

Employ the guide for structured dialogues between parents and adolescents. Implementing monitoring and feedback mechanisms is essential for the iterative refinement of the material.

Promote togetherness in adolescent SRH services: To unify adolescent SRH services, programmes should foster inclusive partnerships among adolescents, parents, providers, and communities, ensuring youth participation in service design, trust-building, and collaborative decision-making (Mbachu, Eze & Onwujekwe 2025:1).

Activities:

- Adolescent-adult partnership: co-create services with adolescents having real influence.
- Integrate AFS: Provide comprehensive SRH services in schools, health facilities, youth centres, and outreach programmes.
- Community engagement and norm shifting: Engage religious leaders, elders, and parent organisations to normalise discussions on adolescent SRH.
- Highlight the shared objectives: families and communities celebrating healthy, empowered youth.

5.5.1.5 Objective 5: To adapt the delivery of SRH services to fit adolescent time schedules

Operational/Implementation strategies

Expand clinic operating hours to evenings and weekends and implement flexible appointment systems: Facility operating hours were among the barriers to adolescents' use of SRH services, according to the current study's findings. A strategic decision to expand clinic operating hours to evening and weekend slots, as well as to introduce flexible appointment systems, aims to make SRH services for adolescents more accessible, equitable, and adolescent-friendly. The study conducted in Edmonton, Canada and New York, USA, has identified the modification or flexibilisation of working hours as a pivotal intervention that significantly enhances the utilisation of SRH services

among adolescents. The studies indicate that the ideal operating hours for adolescents should encompass evenings and weekends to ensure they do not have to miss school (Abu Lekham, Catalano, Abueed, Hey, Wang & Khasawneh 2025:10; Vass, Bhanji, Adewale & Meherali 2022:8). Moreover, the expanding clinic working hours and other flexible appointment activities are explained:

Some of the options for expanded working hours

- The facility stays open after school hours.
- Offer service on weekends when adolescents are free.
- Beginning earlier would be ideal for adolescents with work commitments.

A flexible working system allows adolescents

- Book via mobile SMS or online portal.
- Reschedule without penalty.
- Choose a schedule from the available list.
- Peer-facilitated appointments.

5.5.1.6 Objective 6: To ensure adolescents have access to SRH services without financial constraints

Operational/Implementation strategies

Collaborate with NGOs/government to offer adolescents free or subsidised SRH services through vouchers or sliding-scale fees: According to this study and reports of several studies, financial constraint is a prominent barrier for adolescents to choose SRH services (Alemu, Norman, Gu, Tamrat, Belay, Dantas, Pereira & Tessema 2022:1; Sanyang, Sanyang, Ladur, Cham, Desmond & Mgawadere 2025:12; Vass et al 2022:7). Partnering with NGOs and government agencies to offer free or subsidised adolescent SRH services can strategically reduce cost barriers and promote equity using vouchers or sliding-scale fees.

A study in Ethiopia found that partnering with the HEWs programme is cost-effective for implementing youth-friendly SRH services at health posts. Utilising HEWs to scale YFHS provides a transformative, cost-effective approach to enhance adolescent SRH equity and achieve UHC in Ethiopia (Assefa, Muluneh, Abebe, Addisu & Yeshanehe 2025:13). Finally, the researcher proposed the establishment of additional adolescent-friendly SRH centres, the systematic use of digital and online platforms for service provision and health education, and strategic collaboration with private healthcare facilities, in order to reduce access barriers such as geographical distance and associated financial constraints.

5.6 IMPLEMENTATION OF THE PROPOSED STRATEGY AT ADMINISTRATION LEVELS

5.6.1 An overview

The MoH, through regional health bureaus nationwide and at the district-level health management, will administer the adolescent SRH service enhancement strategy. Education offices, women and children's affairs offices, and the Ministry of Justice will also be involved. Implementation will be carried out by health professionals from various facilities, development partners in health, and community stakeholders. Because adolescent SRH service use is low in Ethiopia's Arsi Zone (23.5%), the proposed alternative strategy will first be implemented there and then scaled up to other regions based on study findings.

The Ethiopian government is taking steps to improve adolescent SRH services to align them with the WHO global strategy and SDG 3.7. Nevertheless, major SRH challenges remain, including teenage pregnancy, early marriage, STIs, limited availability of youth-friendly SRH services, low contraceptive use alongside a high unmet need for contraception, obstacles to open SRH communication, and persistent gender-based violence.

Implementing strategies to improve adolescent SRH services requires prioritising technical interventions according to the national scale of the problem and available resources, as outlined in the proposed strategy. Collaboration across all levels of the administrative system is also essential for this strategy to succeed. In Ethiopia's administrative structure, strategies are implemented from the MoH down through the

regional, zonal, woreda, health centre, and health post levels. In Arsi Zone, Ethiopia, the researcher identified gaps in adolescent SRH services and proposed an alternative strategy to be implemented across all levels of healthcare service delivery institutions and schools.

5.6.2 Ministry of Health

- Allocate budget for adolescent SRH services and room renovation or construction when necessary.
- Updated training modules for healthcare workers and continuous training regarding adolescent-friendly care.
- Develop training modules for teachers and for community awareness-raising on SRH services.

5.6.2.1 Region/zone

- Oversee the establishment of adolescent-friendly corners in hospitals and health centres.
- Collect and share disaggregated data (by age, gender, and service type) to monitor how adolescents use SRH services.
- Work together with educational authorities to incorporate health services into schools.

5.6.2.2 Facility level

- Adolescent-friendly spaces should be established, staffed by trained personnel, ensure confidentiality, and offer flexible hours of operation.
- School-based outreach services, such as mobile clinics and health education sessions, should be made available.
- Healthcare services for adolescents should routinely address SRH during regular checkups.

5.6.3 Ministry of Education

- Embed SRH topics within existing subjects such as biology, civics, and life skills.

- Develop a national policy framework to support the delivery of age-appropriate, culturally sensitive SRH education.
- Allocate dedicated budget lines for SRH clubs, peer educators, and teacher training.
- Integrate adolescent SRH into the community-based training programme (CBTP) and team training programme (TTP) modules. These modules provide graduating students with opportunities to engage with peers in school and community settings.

5.6.3.1 Regional/Zone Education Bureaus

- Adapt the national guidelines to the regional context, including language, cultural norms, and rural versus urban settings.
- Organise training sessions for school principals and supervisors centred on monitoring the quality of SRH programmes.
- Contact NGOs to collaborate on SRH initiatives in schools.

5.6.3.2 School level (administrators and teachers)

- Create secure, private settings where individuals can discuss SRH freely and confidentially.
- Connect schools with nearby health centres so that students can be referred for contraception, STI testing, and counselling services.
- Arrange a private, hygienic room where female students can rest during menstruation.

5.6.4 Non-governmental organisations

- Support awareness-raising sessions, such as blended healthcare worker training, mentoring, and coaching at different levels.
- Broaden access to SRH services for adolescents in areas where government services do not adequately meet their needs.
- Building renovations and construction to solve the issue of privacy and confidentiality.

5.6.5 Role of adolescent

- Active participation in designing, implementing, monitoring and evaluating of SRH programmes to ensure adolescent needs are met.
- Engage as peer educators to share accurate SRH information with their friends and families, helping to reduce stigma among their peers.
- Create SRH seeking behaviour among their peers.
- Assist adolescents in adhering to SRH services and practice safe behaviour.
- Adolescent-led organisation advocate issues of adolescent SRH to get attention.

5.6.6 Role of parents and community

- Shape community culture and norms that oppose adolescent SRH by fostering open community dialogue.
- Religious leaders and community leaders provide guidance for adolescents.
- Parents challenge harmful traditions and traditional practices.
- Parents practice healthy relationships and model open discussion of SRH with adolescents.
- Parents encourage adolescents to seek SRH services like counselling and testing of STI/ HIV, contraceptive use, which reduces fear and shame.

5.6.7 Cross-sector collaboration

- Establish a formal referral between the school and health facilities.
- Engage parents, faith leaders, and youth organisations in efforts to reduce stigma.
- Monitor progress at every administrative tier using well-defined indicators.
- Collaborate with the Ministry of Justice to ensure that adolescents are protected under the law.
- Incorporate adolescent SRH service in supervision checklists at all levels.

5.7 MONITORING AND EVALUATION

The monitoring and evaluation (M&E) of a strategy are essential components for assessing its implementation. It also guarantees the effective execution of the planned

activities, keeping track of outputs and outcomes to make the necessary adjustments to reach the strategic goals and ensure accountability, provides opportunities to learn, and yields evidence that can be used to make decisions (Ravi 2023:1-5).

This strategy is monitored through a structured approach that includes defining key performance indicators (KPIs), collecting and analysing data, and conducting regular reviews during the implementation phases. The zonal health department will be responsible for tracking and monitoring the implementation of the strategy. The regional health bureau will provide technical support for the zonal health department.

The evaluation of the strategy will be conducted at both the mid-term and end-of-implementation stages. The mid-term evaluation will focus on progress in implementing the strategy and on executing necessary adjustments to ensure the strategic goals are achieved efficiently. The final evaluation assesses the strategy's overall effectiveness and impact, determines goal accomplishment, and offers insights for future planning. The main indicators to monitor and evaluate progress in SRH services include improved health, informed decisions, and reduced unintended pregnancies, STIs, and other SRH-related adolescent issues.

- Percentage of adolescents who understand how to access SRH services.
- Percentage of adolescents using SRH services in the day prior to the survey.
- The current rate of contraception use (modern methods) by adolescents.
- The percentage of adolescents who were tested for HIV and received results.
- Percentage of adolescent mothers with at least 8 ANC visits in their last pregnancy.
- Percentage of health facilities offering adolescent-friendly SRH services in line with national standards.
- Percentage of adolescents reporting fear or stigma as a barrier to use SRH services.
- The percentage of healthcare workers who have been trained to provide adolescent-responsive SRH care.
- The supply of essential SRH commodities (e.g., contraceptives, STI treatment).
- The percentage of marginalised adolescents (out of school, living in rural areas, or displaced) using SRH services.
- Percentage of facilities offering adolescent-friendly convenient hours (after school/weekend/evening/holidays) SRH services.

- Regulations ensuring confidentiality and non-discrimination in adolescent SRH.
- Adolescent pregnancy rate (per 1,000 females aged 15-19).
- Number of schools having SRH clubs.
- Number of school-based and community-based SRH awareness-raising sessions conducted.
- Percentage of facilities offering subsidised or free SRH services.
- Funding for adolescent SRH programmes.

5.8 VALIDATION OF THE STRATEGY

5.8.1 Validation of the review forms

Formulating a strategy is generally a collaborative effort. Selecting the right people to validate and implement major plans and decisions is challenging. In this case, specialists in adolescent SRH, who also had experience in strategy and policy formulation, contributed critical insights and comments that helped refine the draft alternative strategy during two consultation meetings. The process required not only identifying experts but also ensuring that they represented a range of viewpoints, were dependable, worked effectively with others, could propose innovative ideas, were open to change, and consistently demonstrated integrity. As a result, the strategic objectives and activity set presented in Table 5.2 were finalised to enhance adolescents' access to SRH services in Ethiopia's Arsi Zone.

5.8.2 Demographic profile of sexual and reproductive health experts

Table 5.3 Demographic details of sexual and reproductive health experts (SRHE)

S. No	Pseudonym	Qualification	Current assignment	Year of experience	Evaluation method
1	SRHE1	PhD	Assistant Prof at Arsi University	15+	Electronically/online
2	SRHE2	MPH	Consultant and Coach/mentor for WHO (MD, MSc, MPH, PhD Candidate)	20+	Electronically/online
3	SRHE3	PhD Candidate	Senior Monitoring, Evaluation, Accountability and Learning (MEAL) specialist at Save the Children International, Ethiopia	20+	Electronically/online
4	SHRE4	MPH	Expert at Oromia Regional Health Bureau	20+	Electronically/online
5	SHRE5	MPH	Arsi ZHD adolescent SRH expert	15+	Electronically/online

5.8.3 Criteria for validation of the indicators for the proposed strategy

The validation criteria presented in Table 5.4 were applied to ensure the methodological rigour and transparency of the developed strategy. The proposed strategy was evaluated against internationally recognised standards derived from World Health Organisation (WHO) sources. The indicators were systematically assessed in terms of clarity, relevance, acceptability, applicability, feasibility, effectiveness, and sustainability, thereby confirming their consistency with global standards and their appropriateness for adolescent health service utilisation in the Ethiopian context. This structured validation process enhances the credibility of the strategy and evidences its adherence to the WHO endorsed evaluation principles.

A five-point Likert scale was employed, with response options defined as 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly agree. To encourage active engagement and reduce non-committal responses, the neutral category was not made available to participants in this validation exercise.

Table 5.4 Criteria for the validation of the proposed strategy

Validation criteria	Strongly Disagree	Disagree	Agree	Strongly Agree
Clarity: The strategy is simple to apply to enhance adolescent utilisation of SRH services.				
Relevance: The strategy focuses on addressing the priority needs related to (SRH) among adolescents.				
Acceptability: The strategy is acceptable and inclusive for all. It reflects the cultural appropriateness and inclusiveness of adolescents, parents, and providers.				
Applicability: The strategy's goals are practical and actionable.				
Feasibility: The strategic plan can be executed utilising the currently available resources and operational systems.				
Effectiveness: The strategy can achieve the intended outcome.				
Sustainability: If the strategy can be maintained over time without external support.				

(WHO 2023a; WHO 2021c; WHO 2018)

5.8.4 Outcome of the validation

The validation procedure was conducted electronically via private email communication. The formulated strategy was disseminated to selected experts in adolescent SRH, with specific attention paid to their feedback on each point to finalise the proposed strategy. The results of the validation criteria are detailed in Table 5.5.

Table 5.5 Results of the validation by experts on the proposed strategy

Strategy	Reviewers' score out of 5					Total score out of 25
	SRHE1	SRHE2	SRHE3	SRHE4	SRHE5	
1	5	5	5	5	5	25
2	5	5	5	5	5	25
3	5	4	5	4	5	23
4	5	4	5	5	5	24
5	5	4	5	4	5	23
6	5	5	5	5	5	25

The researcher reviewed the experts' recommendations and incorporated some of their ideas into the final proposed strategy, drawing on their diverse comments and the issues they raised. In the end, after these suggestions and viewpoints were considered, the updated document was submitted to the review committee.

5.9 SUMMARY

This chapter delineates a range of strategic objectives designed to augment the utilisation of SRH services among adolescents. These strategic objectives are predicated on empirical findings from the study and an extensive review of relevant literature. Consequently, for this strategy to be implemented effectively, there is potential to significantly enhance the utilisation of adolescent SRH services within the Arsi Zone of South-east Ethiopia.

The following chapter (Chapter 6) will outline the study's conclusions and recommendations.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.1 INTRODUCTION

In the prior chapter, the investigator outlined the process for developing a plan to improve the use of SRH services among young people in the Arsi Zone of the Oromia Region, Ethiopia. Then, measures were formulated to turn the strategy into action. The strategies devised are grounded in the recent research findings.

This chapter presents the study's main findings and proposes ways to increase adolescents' use of SRH services in the Arsi Zone, Ethiopia. It underlines the need for a coherent, youth-centric, and equal SRH service provision to enhance young people's life chances. The chapter further discusses the study's strengths, contributions, and limitations, and points out new research topics in adolescent SRH clinics.

6.2 RESEARCH DESIGN AND METHODS

This study used a mixed-method sequential explanatory design. Quantitative data were first collected and analysed, followed by qualitative data collection. Participants were adolescents from six districts in Arsi Zone, Ethiopia, as well as teachers, healthcare workers, and community leaders. A statistician used SPSS version 30 to conduct descriptive, bivariate, and multivariate analyses to identify factors influencing adolescents’ use of SRH services. Qualitative data were gathered through focus groups and key informant interviews with six groups, including male and female adolescents, using interview guides. The mixed-methods approach enriched quantitative findings with qualitative insights and proceeded in three phases: quantitative analysis, qualitative analysis, and integration.

6.3 SUMMARY OF THE STUDY FINDINGS

The report revealed that the SRH services for adolescents in the Arsi Zone of Ethiopia are alarmingly low at 23.5% which means many youngsters are exposed to risky sexual

conduct. The situation arises from several factors that influence the adolescents, such as peers, drugs, and media (YouTube) that promote sexual activities. Another reason for this is poor understanding of SRH services and the non-existence of SRH education inclusively at the schools, which makes the problem more complicated. Moreover, adolescents fear discussing or seeking SRH care due to cultural taboos, religious beliefs, and fear of judgment from parents and community members. Misconceptions about the perceived impact of using SRH services also act as deterrents by reinforcing stigma and avoiding the cause.

However, structural challenges, in addition to these behavioural and social issues, significantly hinder access to SRH services. Health facilities with inconvenient hours, limited AFS, high costs, and poor privacy and confidentiality cause adolescents to lose faith in the system. In extreme cases, fear of being noticed by family members or neighbours while visiting health facilities stops the adolescent from going there, indicating the strong impact of stigma in the community. Such challenges put together have formed a situation where adolescents have no access to timely and appropriate SRH care, although the necessity is very high.

Despite these challenges, research identifies factors that positively influence the use of SRH services. Adolescents who have a history of SRH problems are more likely to seek medical treatment, indicating a tendency to reactive rather than preventive involvement. In addition, those who discuss their concerns with their parents, teachers, or friends use services more frequently, again highlighting the importance of communication and supportive relationships.

6.4 RECOMMENDATIONS

This research shows low use of SRH services among adolescents in the Arsi Zone, increasing their risk of engaging in risky sexual behaviours. Therefore, it is important to integrate SRH in adolescents into the entire health and social service system. To achieve this successfully, the following recommendations will be directed at the relevant agencies to address gaps to improve SRH services for adolescents in the Arsi Zone in Ethiopia and similar settings elsewhere in the country.

6.4.1 Ministry of Health

- Develop manuals that require flexible service hours and privacy measures that meet industry standards.
- Devote funds specifically for the provision of SRH services that are friendly to adolescents.
- Set national goals for adolescents' access to and use of SRH services.
- Implement national subsidisation programmes to eliminate cost barriers to adolescents using SRH services.
- Implement and supervise the system that partners with private facilities to provide SRH services for adolescents.

6.4.2 Oromia Regional Health Bureau and Arsi Zonal Health Department

- Adapt national SRH strategies to the region's cultural context.
- Extend working hours to implement SRH for adolescents and verify compliance and support from facilities.
- Parent-adolescent communication should be normalised through coordinated awareness campaigns.
- Regional misinformation and low awareness of SRH should be addressed through information campaigns aimed at adolescents.
- Adolescent SRH uptake should be regularly and continuously monitored.

6.4.3 Health facilities

- Build places for adolescents that prioritise confidentiality and a safe atmosphere.
- Arrange the hours of operation to include after-school, evening and weekend services.
- Introduce the system through which teenagers can share their concerns about fear, stigma, or bias (think box).
- Make services accessible to adolescents by either counselling or covering the costs.
- Collaborate on the facility upgrade by creating private consultation rooms to ensure confidentiality.
- Closely collaborate with private health facilities in the area.

6.4.4 Healthcare providers

- Commit to continuous professional education in the field of adolescent SRH and rights to avoid fear, to equip oneself with the skills of respectful and non-judgmental communication.
- Confidential counselling and follow-up services will be provided to adolescents with SRH problems.
- Encourage active adolescent participation in the process of providing friendly services to them.
- Overcome providers' bias by giving refresher courses on cultural sensitivity and stigma reduction.
- Establish and coordinate an adolescent advisory group of community and religious leaders, teachers, adolescents, and administrators.

6.4.5 Education office and schools

- Incorporate comprehensive SRH education not only into the curriculum, but also in extracurricular activities through clubs.
- Train teachers and counsellors to support and guide students in their discussions about SRH.
- Referral and awareness sessions should be established as one of the areas of school health facility linkages to be strengthened.
- Establish peer-led SRH clubs that allow adolescents to discuss SRH issues openly.
- Life skills education should be the main channel to address SRH issues and counter the cultural taboo around them.

6.4.6 Adolescents

- Join peer education and youth clubs to enhance one’s knowledge of SRH.
- Use available adolescent services and advocate for more adolescent-friendly improvements.
- Have discussions with parents, teachers, healthcare workers, and friends who are willing to eliminate stigma.
- Create adolescent advisory groups that will provide input on SRH services.

- Oppose peer pressure and drug use by showing good role models.

6.4.7 Parents

- Engage in unrestricted and supportive communication with adolescents on SRH.
- Assist the adolescent in getting services without concern or disgrace.
- Join community initiatives that normalise open discussion about SRH.
- Act as a good example regarding the right approach to SRH services.
- Eliminate fear barriers by walking with adolescents to the health facility when appropriate.

6.4.8 Community and leaders

- Challenge and eliminate negative taboos about adolescent health and establish positive norms.
- Facilitate adolescent initiatives and peer education programmes.
- Work with decision-makers to create safe spaces for adolescent dialogue.
- Work with spiritual leaders to share the SRH messages in culturally appropriate ways.
- Hold public meetings to reduce stigma and fear of being seen using the facilities.

6.4.9 Academic institutions

- Conduct research to identify the most effective communication approaches between parents, teachers, and young people.
- Assess how extended service hours influence the number of service users.
- Ensure that future health professionals receive training in optimal adolescent SRH practices.
- Integrate adolescent SRH services education in TTPs and community-based training programmes (CBTP).

6.4.10 Legal institutions

- Strengthen the enforcement of laws protecting adolescents from early or forced marriage, sexual violence, and exploitation.

- Ensure confidential, accessible SRH services for adolescents.
- Incorporated adolescents' legal rights to privacy, confidentiality, and communication into health laws.
- Ongoing monitoring of community system adherence.

6.4.11 Health professional associations

- Defend policies that prioritise child and adolescent health and provider training.
- Help members maintain adolescent SRH expertise through ongoing education and mentoring.
- Address provider bias and confidentiality concerns in academic settings.

6.4.12 Media

- Take medical ethics training on promoting adolescent SRH services.
- Promote campaigns on open communication between parents and adolescents.
- Share positive stories of adolescents using SRH services without fear.
- Use television, radio and social media to normalise SRH discussions.
- Ensure that the services are low-cost and strictly confidential so that adolescents feel comfortable using them.
- Counter misinformation by producing evidence-based SRH information.

6.4.13 Donors

- Fund activities that extend facility hours and lower service fees.
- Support initiatives that strengthen communication between parents and adolescents and increase community participation.
- Invest in monitoring and evaluation systems to track progress.
- Prioritise sustainable community-led SRH projects for adolescents.
- Help upgrade infrastructure to improve facility readiness and privacy.

6.5 LIMITATIONS OF THE STUDY

The current study sought to develop generalisations supported by diverse scientific views. Nevertheless, it is susceptible to the following limitations:

- One limitation of the cross-sectional research design is that it hinders the identification of causal relationships between the factors and the establishment of SRH.
- Self-reported data are prone to recall bias or social desirability bias, especially for sensitive topics like sexual behaviour.
- The geographical scope was limited to the Arsi Zone; therefore, the findings cannot be generalised to all areas of Ethiopia.
- Service quality was not evaluated; the study measured use of SRH services but did not assess their quality.
- The influence of digital media was explored to a limited extent. Although exposure to sexually encouraging sources was mentioned, the study did not conduct an in-depth analysis of the influence of social media or online platforms.

6.6 SUGGESTIONS FOR FUTURE RESEARCH

- Assess the case of private schools and out-of-school adolescents.
- Longitudinal and comparative studies should be conducted across various geographic locations to identify long-term use patterns and barriers in each area.
- Assess the impact of utilising SRH services by evaluating targeted interventions, such as extended facility hours, fee waivers, and adolescent-friendly corners.
- Investigate parental-adolescent and educator-adolescent communication models to evaluate the role of structured dialogue in reducing fear, stigma, and barriers to service adoption.

6.7 STRENGTHS AND CONTRIBUTIONS OF THE STUDY

6.7.1 Study strengths informing the standard of care

Data collection and analysis in the proper manner are the study's backbone and, at the same time, provide the opportunity to uncover the very deficiencies in the current use of

SRH services for adolescents, thus enabling the issuance of evidence-based recommendations aimed at enhancing the care standard in general. The study's comprehensive method covers many aspects of improving adolescent SRH services and is considered the minimum requirement for capacity-building programmes in the Arsi Zone and Ethiopia. The highlighted strengths show that the study gradually improves SRH service quality, helping prevent deaths and morbidity from SRH problems and improving adolescents' reproductive health overall.

6.7.2 Strengths of the study regarding its contribution at the methodological level

Methodologically, the study used an explanatory sequential mixed methods design with three phases (quantitative, qualitative, and integration), guided by the HBM as the conceptual framework. The initial quantitative phase analysed data from adolescents to identify barriers to their use of SRH services and the determinants of these barriers. The second qualitative phase was conducted with the help of adolescent focus group discussions and key informant interviews with participants (healthcare workers, teachers, and community leaders). The respondents provided real-world experiences of adolescent utilisation of SRH services. The two phases were subsequently integrated to form Phase 3, which consists of developing a strategy. A team of SRH experts validated the proposed strategy.

The researcher believes the methodology enabled access to diverse population subgroups and enriched the data. Qualitative data were used to explain the quantitative findings. Expert validation indicates the strategy is likely to succeed in this research area.

6.7.3 Strengths of the study and contributions at a policy level

This strategy will help national youth health policymakers improve adolescent SRH services in Ethiopia. It will be distributed to health facilities, schools, health managers, the Arsi Zonal Health Department, the Oromia Regional Health Bureau (ORHB), the Ministry of Health (MoH), and development partners engaged in SRH for adolescents in Ethiopia. The researcher's key findings served as the basis for a new strategy that better aligns with the national adolescent and youth strategy to improve the quality, accessibility, and affordability of SRH services for adolescents in the Arsi Zone. The study strengthens

policy implementation by providing evidence to pinpoint challenges in SRH services for adolescents and to inform interventions that address the main determinants and barriers.

6.8 OVERALL CONCLUSION

This study assessed factors influencing adolescents' use of SRH services in south-east Ethiopia to develop strategies to increase utilisation. Adolescent use of SRH services reduces preventable morbidity and mortality, yet the study found low utilisation. Key barriers included inadequate or misleading SRH information, religious and cultural taboos, fear of parents, inconvenient facility hours, service fees, service unavailability, distance, and provider bias. Utilisation was higher among adolescents who discussed SRH issues with parents or other educators, had previous SRH problems, found facility hours convenient, and did not fear seeking SRH care.

The researcher formulated a strategy comprising six strategic objectives by synthesising the results from both the quantitative and qualitative phases. The proposed strategic objectives were to improve understanding of adolescent SRH, offer confidential, adolescent-friendly SRH services, facilitate SRH discussions through community involvement, improve SRH discussions within families, adapt service delivery to fit adolescents' schedules, and ensure adolescents have access to SRH services.

This sixth chapter presented the study's findings, offered recommendations to relevant stakeholders, discussed its limitations, proposed directions for future research, and highlighted the study's contributions. The researcher considers that the study's objectives are aligned with the research hypotheses. Accordingly, the researcher calls on stakeholders, including the Ethiopian government, NGOs, healthcare professionals, educators, community leaders, and parents of adolescents, to implement the proposed strategy in the study area.

Finally, to meet Ethiopia's commitment to adolescent health goals and SDGs, SRH services must be extended to disadvantaged adolescents currently excluded, including those with disabilities, street adolescents, orphans, those in conflict areas, and household workers/maids. We recommend mobile outreach, disability-friendly facilities, and cross-sectoral partnerships to ensure equity. Investing in these groups improves adolescent SRH, social cohesion, and economic productivity.

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INTERNET SOURCE

https://www.researchgate.net/figure/Map-of-Ethiopia-Oromia-Region-and-Arsi-Zones – Map of the Arsi Zone, Oromia region, Ethiopia.

APPENDICES

APPENDIX 1: Ethical clearance certificate from the Research Ethics Committee, College of Human Sciences, University of South Africa

UNISA university of south africa

COLLEGE OF HUMAN SCIENCES RESEARCH ETHICS REVIEW COMMITTEE

26 May 2023

NHREC Registration # :
Rec-240816-052
CREC Reference # :
17171555_CREC_CHS_2023

Dear Ms Derese Teshome Demissie

Decision:
Ethics Approval from 26 May 2023 to 26 May 2024

Researcher(s): Name: Ms. D. T. Demissie
Contact details: 17171555@mylife.unisa.ac.za
Supervisor(s): Name: Prof. R. Mmusi-Phetoe
Contact details: emphetrm@unisa.ac.za

Title: A Strategy to enhance utilization of Adolescents' Sexual and Reproductive Health services in south-east Ethiopia.
Degree Purpose: PHD

Thank you for the application for research ethics clearance by the Unisa College of Human Science Ethics Committee. Ethics approval ***is conditionally granted for one year, subject to ethical approval from the study country's local ethics committee. DATA CANNOT BE COLLECTED UNTIL A FINAL ETHICS CERTIFICATE IS ISSUED BY CREC.***

The ***low risk application*** *was reviewed by* College of Human Sciences Research Ethics Committee, in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the College Ethics Review Committee.

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3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.
7. No fieldwork activities may continue after the expiry date **(26 May 2024).** Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

*The reference number **17171555_CREC_CHS_2023** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Yours sincerely,

Signature: 

Prof. KB Khan
CHS Research Ethics Committee Chairperson
Email: khankb@unisa.ac.za
Tel: (012) 429 8210

Signature: PP

Prof ZZ Nkosi
Acting-Exécutive Dean: CHS
E-mail: nkosizz@unisa.ac.za
Tel: 012 429 6758

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APPENDIX 2: Request for permission from Arzi Zone Education Office to conduct the study

Request for permission to conduct research at Arsi Zone, Ethiopia

A Strategy to enhance utilisation of Adolescents' Sexual and Reproductive Health services in south-east Ethiopia

October,2022

Researcher: Derese Teshome Demissie
Email: teshderese@gmail.com
P.O.Box: 126
Telephone: +251911997454

To: **Arsi Zone Education Office**

Dear Sir/Madam,

I, **Derese Teshome Demissie** am doing research with **Professor Rose Mmusi-Phetoe**, in the Department of Public Health towards a Doctor of Philosophy in Public Health at the University of South Africa. We are inviting you to participate in a study entitled a Strategy to enhance utilisation of Adolescents' Sexual and Reproductive Health services in south-east Ethiopia.

The aim of the study is to develop a strategy to enhance utilisation of Adolescents' Sexual and Reproductive Health services in south-east Ethiopia.Your organisation has been selected because majority of the adolescent is at school.

The study will entail adolescents age between 15-19 from Digalu Tijo, Lemmu Bilbilo, Tiyo, Hetosa, Lode Hetosa, and Diksis woredas for the Phase 1 and 2. This study has no direct benefit to the participants; its benefit is enhancing adolescents sexual and reproductive health utilisation.

Please be assured of my utmost integrity in this project, which will not be invasive whatsoever; neither will I cause any harm to any participants because there is no treatment nor medication of any kind. I will carry out the study in strict accordance with

the approved proposal requirements of the ethics policy of UNISA, and trust that my application will be favourably considered.

I promise that will inform the participants about the extent of utilisation of the data derived from the research and share the results with of this study with your organisation. If you have any questions regarding this study to ask other than the researcher, you can call my supervisor and mentor with the contact of: **Professor Rose Mmusi-Phetoe, email: emphetrm@unisa.ac.za,phone or Tel: 012 429 6021.**

Yours sincerely

Derese Teshome Demissie

Researcher

APPENDIX 3: Support letter from University of South Africa Ethiopia Reginal Office

UNISA university of south africa

31 May 2023
UNISA-ET/KA/ST/29/31-05-23

OROMIA REGIONAL HEALTH BUREAU
ADDIS ABABA

Dear Madam/Sir,

The University of South Africa (UNISA) extends warm greetings to you and the staff members of your esteemed hospital. By this letter, we want to confirm that Mr. Derese Teshome Demissie (student number 17171555) is a PhD student in the Department of Health Studies at UNISA. Currently, he is at the stage of data collection on his doctoral research entitled "***Strategy to enhance the utilization of Adolescents' Sexual and Reproductive Health services in south-east Ethiopia***.".

This is therefore to kindly request your cooperation in assisting the student in any way that you can. We would like to thank you in advance for all the assistance that you would provide to the student. Attached, please find the ethical clearance that the student received from the Department of Health Studies.

Sincerely,

Dr. Tsige GebreMeskel Aberra

Director

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University of South Africa
Regional Learning Center
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Telephone: +251 11 435 2244 / +251 11 435 0078
Facsimile: +251 11 435 1242/ 43/ 44
Mobile: +251 912 19 1483
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APPENDIX 4: Support letter from Arsi Zonal Health Department

Lakk Z/H/F/G/A/D72/7986

Guyyaa 5/12/2015

Waajjira Barnootaa Godina Arsii tiif

Asllaa

Dhimmi :- Deeggarsa hojii qorannoo ilaallata

Akkuma mata duree irratti ibsamuuf yaalametti BFO irraa Obboo Darasaa Tashomaa waraqaa qorannoo mata duree " **A STRATEGY TO ENHANCE UTILIZATIO OF ADOLLESCENTS SEXUAL AND REPORODUCTIVE HEALTH SERVICE IN SOUTH-EAST ETIOPIA** ." jedhu irratti Godina Arsi keessatti qorannoo akka gaggessan /hojjatan BFO irra xalayaa lakk BFO/HRTFH/1-16/62 guyyaa 7/11/2015 barresan nugahee jira.

Haaluma kana gamakeessaniinile deeggarsi barbaachisaata''e akka godhamuuf ni ibsina.

Nagaa wajjin!

Haliimaa Muhaammed Alii

I/A/I/G Waajjira Fayyaa Godina Arsii fi G/A/H. ittisa, Too'annoo fi Kunuunsa dhukkubaa fi Tajaajila Fayyaa

G/G

Obboo Darasaa Tashomaa

Asalla

Caffee Mootummaa Naannoo Oromiyaa Biiroo Eegumsa Fayyaa Oromiyaatti Qajeelcha Eegumsa Fayyaa Godina Arsii

The Council of Regional State of Oromiya Health Bureau Arsi Zonal Health Department

APPENDIX 4a: Information sheet for adolescents

UNISA university of south africa

APPENDIX 4 (a)

INFORMATION SHEET FOR ADOLESCENTS

REQUEST TO PARTICIPATE IN THE STUDY

Ethics clearance reference number:

Research permission reference number (if applicable):

November 3, 2022

Title: **A Strategy to enhance utilization of Adolescents' Sexual and Reproductive Health services in south-east Ethiopia.**

Dear Prospective Participant

My name is Derese Teshome Demissie, and I am doing research with Professor Rose Mmusi-Phetoe in the Department of Public health toward a Doctor of Philosophy in Public Health at the University of South Africa. We are inviting you to participate in a study entitled a Strategy to enhance utilization of Adolescents' Sexual and Reproductive Health services in south-east Ethiopia.

WHAT IS THE PURPOSE OF THE STUDY?

I am conducting this research to find out important information that could help improve adolescents' SRH services utilization in the Digalu Tijo,Lemmu Bilbilo,Tiyo,Hetosa,Lode Hetosa,and Diksis districts.

WHY AM I BEING INVITED TO PARTICIPATE?

You are selected expecting you can give us much detail and important information about adolescents SRH services utilization. This would be through gaining insight into the awareness, utilization and barriers of adolescents' SRH services utilization. It is hoped

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that with your participation, an understanding of what influences the access and utilization of adolescent sexual and reproductive health services will be elicited which can help improve such services in the local government area. Your information is totally confidential. You are not the only participant, there is 695 selected participants on this study.

WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?

You will be asked to participate in an interview with the researcher. During the interview/discussion you will be asked to share your opinions and experiences about what makes it easy or difficult for adolescents to access and utilize SRH services and how you think these services can be improved. During the interview we will be taking notes of our discussion and will also use an audio tape recorder to adequately collect all the information that is needed for the study. The interviews will not take more than 60 minutes and the interviews will take place in a private room in your class at break time.

CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Your participation is voluntary and that there is no penalty or loss of benefit for non-participation.

Participating in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason. To help protect your confidentiality, your real name will not be used during the interview or on any documents related to the research, but instead we will use a pseudonym. This pseudonym will be used by the researcher to link the transcript to your identity and no one other than the researcher will have access to this information. The transcripts will be kept in a lockable filing cabinet, and we will use password protected computer files. The audiotapes will be kept under lock and key no one other than the researcher and the transcriber will have access to them. If we write a report or article about this research project, your identity will be protected to the maximum extent possible.

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WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

This research is not designed to help you personally or we will not pay you, but the results may help the researcher learn more about adolescents' awareness, perceptions, and determinants of SRH services utilization. We hope that, in the future, other people might benefit from this study from developed strategy to enhance adolescents' utilization of SRH services. We hope that the information we will gain from you may help in improving ASRH service delivery for all adolescents in the local government area and contribute to improving the health status of adolescents in your community.

ARE THEIR ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?

All human interactions and talking about self or others carry some number of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. The possible risk of participating in the study might be that of discomfort, also embarrassment when you disclose certain information which you might consider personal, which could raise unwanted emotions or sensitivities. You may refuse to answer any question or not take part in a portion of the interview if you feel the question(s) are too personal or if responding to them makes you uncomfortable.

WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

You have the right to insist that your name will not be recorded anywhere and that no one, apart from the researcher and identified members of the research team, will know about your involvement in this research or your name will not be recorded anywhere, and no one will be able to connect you to the answers you give *anonymity*. Your answers will be given a code number, or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings will be communicated.

Your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Review Committee. Otherwise, records that identify you will be available only to

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people working on the study, unless you give permission for other people to see the records.

The anonymous data may be used for other purposes, such as research reports, journal articles, and/or conference proceedings. In all writings, pseudonyms will be used to keep privacy in any publication of the information. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report. I advise the group of FGD not to discuss sensitive issues since confidentiality is not guaranteed.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

Hard copies of your answers will be stored by the researcher for a minimum period of five years in a locked cupboard/filing cabinet for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. Hard copies will be shredded and/or electronic copies will be permanently deleted from the hard drive of the computer through the use of a relevant software program.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

There will not be a payment or reward for participating in this research. You will not cost any financial for participating in this study except few minutes.

HAS THE STUDY RECEIVED ETHICS APPROVAL

This study will receive written approval from the Research Ethics Review Committee of UNISA. A copy of the approval letter can be obtained from the researcher if you so wish.

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If you would like to be informed of the final research findings, please contact Derese Teshome Demissie at +251911997454 or teshderese@gmail.com.

The findings are accessible after two months. Should you require any further information or want to contact the researcher about any aspect of this study, please contact the above address.

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Should you have concerns about the way in which the research has been conducted, you may contact my supervisor Prof. Rose Mmusi-Phetoe on 012 429 6021 emphetrm@unisa.ac.za . Contact the research ethics chairperson of the CREC, Dr KJ Malesa, maleskj@unisa.ac.za, 012 429 6054 if you have any ethical concerns.

Thank you for taking time to read this information sheet. If you are willing to participate in this study, kindly complete the consent form below.

Kind regards

Derese Teshome Demissie

_____

Researcher

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APPENDIX 4b: Information sheet for key informants

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APPENDIX 4 (b)

INFORMATION SHEET FOR KEY INFORMANTS

REQUEST TO PARTICIPATE IN THE STUDY

Ethics clearance reference number:

Research permission reference number (if applicable):

November 3, 2022

Title: **A Strategy to enhance utilization of Adolescents' Sexual and Reproductive Health services in south-east Ethiopia**

Dear Prospective Participant

My name is Derese Teshome Demissie, and I am doing research with Professor Rose Mmusi-Phetoe in the Department of Public health toward a Doctor of Philosophy in Public Health at the University of South Africa. We are inviting you to participate in a study entitled a Strategy to enhance utilization of Adolescents' Sexual and Reproductive Health services in south-east Ethiopia.

WHAT IS THE PURPOSE OF THE STUDY?

I am conducting this research to find out important information that could help improve adolescents' SRH services utilization in the Digalu Tijo,Lemmu Bilbilo,Tiyo,Hetosa,Lode Hetosa,and Diksis districts.

WHY AM I BEING INVITED TO PARTICIPATE?

You are selected expecting you can give us much detail and important information about adolescents' SRH services utilization. This would be through gaining insight into the perceptions and socio-cultural determinant factors of adolescents' SRH services utilization. It is hoped that with your participation, an understanding of what influences the

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access and utilization of adolescent sexual and reproductive health services will be elicited which can help improve such services in the local government area. Your information is totally confidential. You are not the only participant, there is 695 selected participants on this study.

WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?

You will be asked to participate in an interview with the researcher. During the interview/discussion you will be asked to share your opinions and experiences about what makes it easy or difficult for adolescents to access and utilize SRH services and how you think these services can be improved. During the interview, we will be taking notes of our discussion and will also use an audio tape recorder to adequately collect all the information that is needed for the study. The interviews will not take more than 60 minutes and the interviews will take place in a private room in your class at break time.

CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Your participation is voluntary and there is no penalty or loss of benefit for non-participation.

Participating in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason. To help protect your confidentiality, your real name will not be used during the interview or on any documents related to the research, instead, we will use a pseudonym. This pseudonym will be used by the researcher to link the transcript to your identity and no one other than the researcher will have access to this information. The transcripts will be kept in a lockable filing cabinet, and we will use password-protected computer files. The audiotapes will be kept under lock and key no one other than the researcher and the transcriber will have access to them. If we write a report or article about this research project, your identity will be protected to the maximum extent possible.

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WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

This research is not designed to help you personally or we will not pay you, but the results may help the researcher learn more about adolescents' awareness, perceptions, and determinants of SRH services utilization. We hope that, in the future, other people might benefit from this study from a developed strategy to enhance adolescents' utilization of SRH services. We hope that the information we will gain from you may help in improving ASRH service delivery for all adolescents in the local government area and contribute to improving the health status of adolescents in your community.

ARE THEIR ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?

All human interactions and talking about self or others carry some number of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. The possible risk of participating in the study might be discomfort, also embarrassment when you disclose certain information which you might consider personal, which could raise unwanted emotions or sensitivities. You may refuse to answer any question or not take part in a portion of the interview if you feel the question(s) are too personal or if responding to them makes you uncomfortable.

WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

You have the right to insist that your name will not be recorded anywhere and that no one, apart from the researcher and identified members of the research team, will know about your involvement in this research or your name will not be recorded anywhere, and no one will be able to connect you to the answers you give *anonymity*. Your answers will be given a code number, or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings will be communicated.

Your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Review Committee. Otherwise, records that identify you will be available only to

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PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

people working on the study, unless you give permission for other people to see the records.

The anonymous data may be used for other purposes, such as research reports, journal articles, and/or conference proceedings. In all writings, a pseudonym will be used to keep privacy in any publication of the information. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report. I advise the group of FGD not to discuss sensitive issues since confidentiality is not guaranteed.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

Hard copies of your answers will be stored by the researcher for a minimum period of five years in a locked cupboard/filing cabinet for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. Hard copies will be shredded and/or electronic copies will be permanently deleted from the hard drive of the computer using a relevant software programme.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

There will not be a payment or reward for participating in this research. You will not cost any financial for participating in this study except few minutes.

HAS THE STUDY RECEIVED ETHICS APPROVAL

This study will receive written approval from the Research Ethics Review Committee of UNISA. A copy of the approval letter can be obtained from the researcher if you so wish.

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If you would like to be informed of the final research findings, please contact Derese Teshome Demissie at +251911997454 or teshderese@gmail.com.

The findings are accessible after two months. Should you require any further information or want to contact the researcher about any aspect of this study, please contact the above address.

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Should you have concerns about the way in which the research has been conducted, you may contact my supervisor Prof. Rose Mmusi-Phetoe on 012 429 6021 emphetrm@unisa.ac.za. Contact the research ethics chairperson of the CREC, Dr KJ Malesa, maleskj@unisa.ac.za, 012 429 6054 if you have any ethical concerns.

Thank you for taking the time to read this information sheet. If you are willing to participate in this study, kindly complete the consent form below.

Kind regards

Derese Teshome Demissie

_____

Researcher

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
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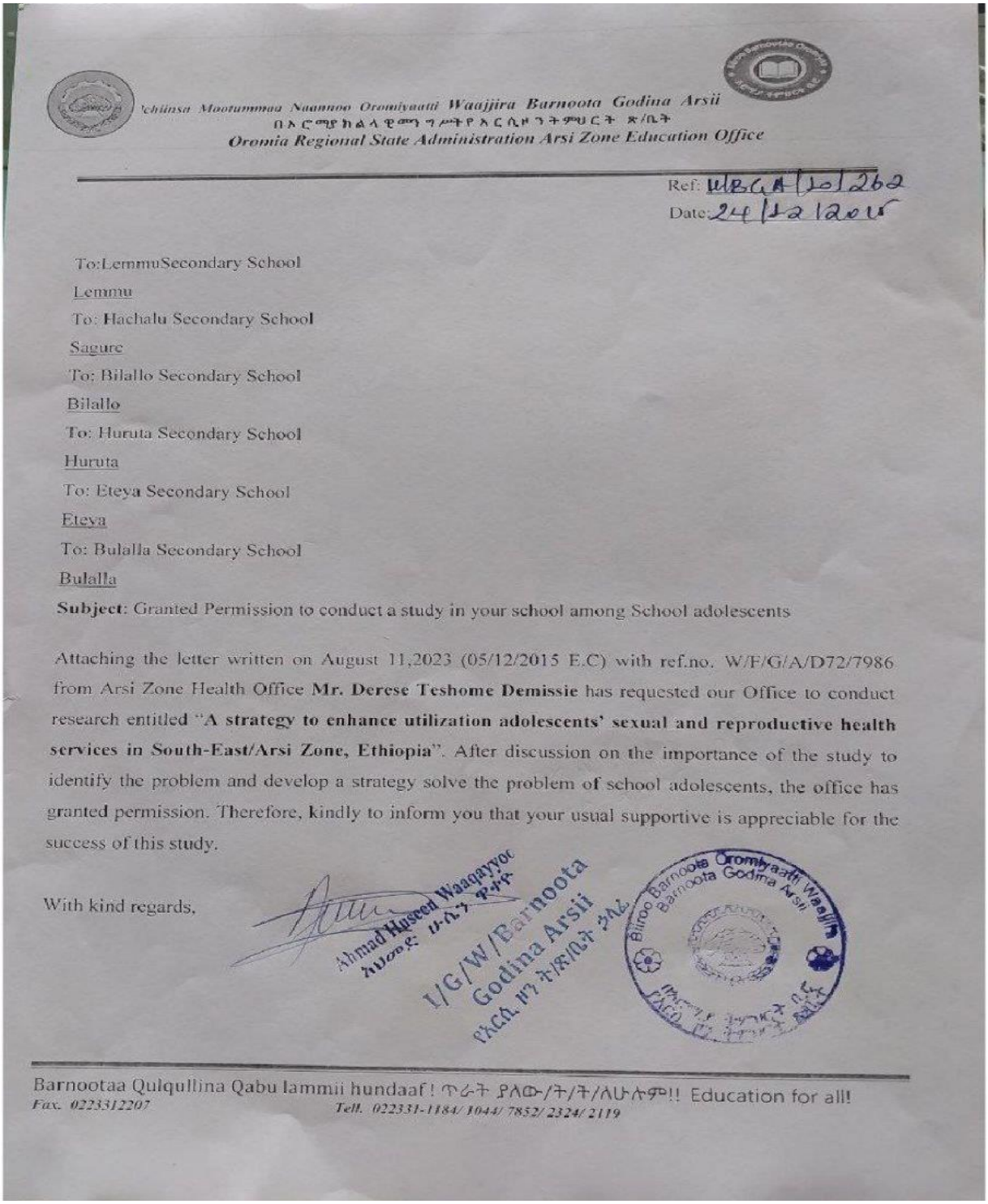
APPENDIX 5: Permission letter from Arsi Zone Education Office to conduct the study



'chiinsa Mootummaa Naannoo Oromiyaatii Waajjira Barnoota Godina Arsii
በኦሮሚያክልላዊመንግሥትየአርሲዞንትምህርት ጽ/ቤት
Oromia Regional State Administration Arsi Zone Education Office

Ref: ሠዞBG/A/10/262
Date: 24/12/2015

To:LemmuSecondary School
Lemmu
To: Hachalu Secondary School
Sagure
To: Bilallo Secondary School
Bilallo
To: Huruta Secondary School
Huruta
To: Eteya Secondary School
Eteya
To: Bulalla Secondary School
Bulalla

Subject: Granted Permission to conduct a study in your school among School adolescents

Attaching the letter written on August 11,2023 (05/12/2015 E.C) with ref.no. W/F/G/A/D72/7986 from Arsi Zone Health Office **Mr. Derese Teshome Demissie** has requested our Office to conduct research entitled "**A strategy to enhance utilization adolescents' sexual and reproductive health services in South-East/Arsi Zone, Ethiopia**". After discussion on the importance of the study to identify the problem and develop a strategy solve the problem of school adolescents, the office has granted permission. Therefore, kindly to inform you that your usual supportive is appreciable for the success of this study.

With kind regards,

Ahmad Huseen Waaqayyoo
አህመድ ሁሴን ዋቃዮ
I/G/W/Barnoota Godina Arsii
የአርሲ ዞን ት/ጽ/ቤት ኃላፊ

Barnootaa Qulqullina Qabu lammii hundaaf! ጥራት ያለው/ት/ት/ለሁሉም!! Education for all!
Fax. 0223312207 Tell. 022331-1184/ 1044/ 7852/ 2324/ 2119

APPENDIX 6: Permission letter from Oromia Health Bureau to conduct the study

Biiroo Eegumsa Fayyaa Oromiyaa
Oromia Health Bureau
Saarbet (Calcalii) - Finfinnee

የኦሮሚያ ጤና ጥበቃ ቢሮ
ሳርቤት(ጨልጨሊ) – ፊንፊኔ

Lakk/Ref.NO BFO/DHDTRA/1x6/61
Guyyaa/Date 21/11/2015

Wajjira Fayyaa Godina Arsii tiif

Assallaa

Dhimmi: **Xalayaa Deggersa Kennuu Ilaala.**

Akkuma beekamu Biiroon Keenya Ogeyyii, dhabbile akkasumas namoota qorannoo fi Gamaggama jalqabaa fi Xumuraa geggessuuf propozaala dhiyeffatan propoozaala isaanii madaaluun akkasumas iddoo biratti ilaalchisani fudhatama argatan (approved) dhiyeffatanif propoozaala isaanii ilaaluudhaan waraqa deggersa ni kenna.

Haaluma kanaan **Abbo/Addee Darasaa Tashomaa** kan jedhaman qorannoo mata duree" **A STRATEGY TO ENHANCE UTILIZATION OF ADOLESCENTS' SEXUAL AND REPRODUCTIVE HEALTH SERVICES IN SOUTH-EAST ETHIOPIA".** jedhuu irratti godina keessan keessatti qorannoo gaggessudhaaf propoozaala isaani koree "Health Research Ethical Review Committee" Biiroo keenyatti dhiyeffatani jiru.

Haaluma kanaan koreen "Health Research Ethical Review Committee" Biiroo keenya piropoozaalaa kana ilaaluun mirkanesse qorannoon Kun akka geggeeffamuu murtesse jira. Kanaafuu, hojii qorannoo kana irratti deggersa barbaachisa akka gootaniif isin beeksisaa, **Abbo/Addee Darasaa Tashomaa** qorannoon Kun qacceffamee eerga xumuramee booda firii isaa koppii tokko BFO tiif akka galii godhan galagalcha xalayaa kanaan isaan beeksifna.

Anis, **Abbo/Addee Darasaa Tashomaa** wayitti qorannoon Kun qaaceffame xumuramu firii isaa koppii tokko BEFO tiif galii gochuuf mallattoo kootiin ni mirkanessa.

Nagaa Waijin

Birhaanuu Qanaatee (BSc, MPH)
Qindeessaa Garee Qorannoo fi
Qo'annoo Fayyaa Hawwasaa

GG

Maqaa: - **Abbo/Addee Darasaa Tashomaa** (PI)

Mallattoo ________ for Deresa

Bilbila; - 0911997454

Email: teshderese@gmail.com

011-371-72-77 befokom2008@gmail.com *or* ohbhead@telecom.net.et Tin NO 0001298233
011-371-72-27 *Oromia Regional Health Bureau* 24341 www.orhb.gov.et

APPENDIX 7: Statistician confirmation letter

Tajaajila Gorsa Qorannoo fi Leenjii Wiizdom
Asalla, Itoophiiyaa

Wisdom Research &Training Consultancy-CPD Center
ዊዝደም የምርመርና ስልጠና ማማከር አገልግሎት

Ref.No/ቁጥር: WRTC/05/18
Date/ቀን:16/03/2018

To whom it may concern

Dear Madam/Sir,

I had checked and consulted all statistical data analysis of the research entitled with **"A strategy to enhanc utilization of adolescents' sexual and reproductive health services in Arsi Zone, South-east Ethiopia'** conducted by a PhD student **Derese Teshome Demissie** at the University of South Africa(UNISA). There was a close monitoring during all steps of data analytical procedures, data handling, and interpretation o results in accordance with accepted statistical standards.

The following key elements were verified:

- Assumptions underlying each method were appropriately assessed and addressed.
- Data cleaning, coding, and transformation steps were transparently documented.
- Results were interpreted with appropriate use of confidence intervals, effect sizes, and significanc levels.

I affirm that the statistical approach is sound and supports the conclusions drawn in the study.

With best regards,

Tajaajila Gorsa Qorannoo fi Leenjii Wiizdom
Wisdom Research and Training Consultancy

Mesfin Tafa Segni (Asst. professor)
G/Manager

Mobile: +2519-11-84-06-09/09-65-65-82-82; Office Tel: 0222383241 PO.Box:234
Email: wisdomrtc20@gmail.com Website: www.wisdomrtc.com

Wisdom for better decision!

Asella, Ethiopia

APPENDIX 8: Data collection tools

QUANTITATIVE DATA COLLECTION TOOL

For adolescents less than 18 years old the permission will be asked from family/guardian.
Instruction: Please answer all the following questions to the best of your ability, by circling to the right answer and or enter number where necessary.

Name of the high school_____

Section 1: Socio-Demographic and Economic Characteristics			
Ser.no	**Questions**	**Choice**	**Skip**
1.1	What is your age?	1. 15-17 2. 18-19	
1.2	Your gender is?	1. Female 2. Male	
1.3	Which grade are you in?	1. Grade 9 2. Grade 10 3. Grade 11 4. Grade 12	
1.4	What is your religion?	1. Orthodox 2. Muslim 3. Protestant 4. Others 5. Specify_____	
1.5	What is your ethnic group?	1. Oromo 2. Amhara 3. Other: _____	
1.6	What is your current marital status?	1. Single 2. Married 2. Divorced 3. Other_____	
1.7	Whom do you live with?	1. Both Parent 2. Mother Only 3. Father Only 4. Guardian/Relative 5. Alone	
1.8	Highest level of education of your father	1.No Formal Education 2.Primary (1-8) 3.Secondary (9-12) 4.College (Diploma And Above)	

1.9	Highest level of education of your mother	1. No Formal Education 2. Primary (1-8) 3. Secondary (9-12) 4. College (Diploma And Above)	
1.10	Occupations of your father?	1. Private/Merchant 2. Government Or NGO 3. Farmer 4. Daily Labourer 5. Other	
1.11	Occupations of your mother?	1. Private/Merchant 2. Government Or NGO 3. Farmer 4. Daily Labourer 5. Other	
1.12	Do you get pocket money for your daily expense?	1. Yes 2. No	
1.13	How much do you think your family income in a month? Both father and mother in ETB.	_____	

SECTION 2: Awareness of Sexual and Reproductive Health Services			
2.1	Have you ever heard about sexual and reproductive health (SRH) services?	1. Yes 2. No	If no skin to Q 2.7
2.2	About which sexual and reproductive health services did you hear? (tick all applicable).	1. Contraception/Family planning counselling and provision 2. Treatment of STIs 3. /AIDS prevention and care 4. Safe abortion care service 5. ANC, delivery, and PNC services 6. Comprehensive sexuality education and safe sex 7. Preventionand response to harmful traditional practices (child marriage and FGM/C) 8. Others (specify)_____	
2.3	If yes for Q2.1, What was your source of information? (tick all applicable)?	1. Healthprofessionals 2. Family 3. School/teacher 4. Media like TV and Radio 5. Peers	

		6. Social media like Facebook, telegram, and TikTok 7.other specify____	
2.4	Which source of information you prefer most?	1. Healthprofessionals 2. School/teacher 3. Social media 4. Media (Tv/Radio) 5. Parents 6. Peers 7. Other specify____	
2.5	In the last six months, have you discussed on one of the above topics?	1. Yes 2. NO	
2.6	With whom did you discuss the above topics? (tick all applicable)	1. Mother 2. Father 3. Brother 4. Sister 5. Religious leader 6. Health worker 7. Peer educator 8. Friend 9.Other____	
2.7	What are some the ways adolescent can avoid pregnancy?	1. Abstinence 2. Contraceptive 3. Other _____ 4. Do not know---99	
2.8	Does adolescents comfortable in looking for ASRH services in this community?	1. Yes 2. No	If yes skip to 2.10
2.9	If no for the above question, what would be the reason why adolescents are afraid or uncomfortable to seek ASRH services?	1. Stigma from peers 2. Fear of parents 3. Lack of support from partner/boyfriend 4. Provider bias 5.O ther_____	
2.10	Did you hear the availability of Contraceptives methods?	1. Yes 2. No	If no skip to 2.12
2.11	Which method did you hear about? (tick all applicable)	1. Condom 2. Emergency tablet 2. Tablet which taken daily 3. Injectable 4. Other specify____	
2.12	What SRH services do you know that adolescents and young people are often looking for? (tick all that applicable)	1. Comprehensive sexuality education (CSE) 2. FP/Contraceptive counsellingand provision	

		3. Antenatal care (ANC) 4. HIV counselling, testing and treatment. 5. STI counselling and treatment 5. Safeabortion service 6. Other_____	
2.13	What are the benefits of condom use? (tick all applicable)	1. Prevent pregnancy 2. Prevent STI 3. Has no benefit 4. Not sure 5. Other---------	
2.14	Have you ever used condom?	1. Yes 2. No	
2.15	Have you ever had sex?	1. Yes 2. No	If no skip to 2.17
2.16	At what age did you have sex for the first time?	_____	
2.17	Do you think unprotected sex have a risk?	1. Yes 2. No	
2.18	What is the risk/danger of involving in sexual intercourse at an early age? (tick all applicable)	1. School withdrawal 2. Pregnancy 3. Infected with STI/HIV/AIDS 4. Cervical Cancer 5. Other_____	
2.19	Did you ever hear about adolescent-friendly corners in health facilities?	1. Yes 2. No	
2.20	Husband beating wife is justifiable.	1. Disagree 2. Agree 3. Neutral	
2.21	What will you do, if you meet adolescent who face any forms of gender-based violence (GBV)?	1. Hospital for treatment and care 2. Police station to report 3. Report to family. 4. Keep quiet and forgive. 5. Other_____	
2.22	I am confident I can delay my marriage (if not yet)	1. Yes 2. No	
Section 3: Sexual and Reproductive Health (SRH) Service Utilisation			
3.1	Have you ever used any SRH service in the last 6 months?	1. Yes 2. No	If no skip to Q3.5
3.2	If yes for the above question, which type of SRH service you got? (tick all applicable)	1. CSE 2. Family planning	

		3. Treatment of STIs 4. VCT for HIV/AIDS 5. Abortion service 6. ANC, delivery, and PNC services 7. Others (specify)_____	
3.3	Where did you prefer, if you need ASRH services?	1. Government health facility 2. Privatehealth facility 3. Youth centre 4. Other, _____	
3.4	Whom do you prefer to get SRH services for a health professional?	1. Male 2. Female 3. No preference (both male and female)	
3.5	Who will decide when adolescent seek for ASRH service in your community?	1. Self 2. Partner 3. Parent 4. With discussion 5. Other_____	
3.6	What are some of the reasons why adolescents engage in risky sexual activity? (tick all applicable)	1. Community expert 2. Peer pressure 3. Influence of alcohol or drug 4. Forceful sex/Coercion 5. Pornographic film 6. To get money 7. Other _____	
3.7	Have you ever contracted any Sexually transmitted infections (STI)?	1. Yes 2. No	
3.8	Have you ever tested for HIV?	1.Yes 2.No	
3.9	Is there a class assigned for female student to change modes during menstruation?	1.Yes 2. No 3. Do not know	
3.10	Have you ever used contraceptive method?	1. Yes 2. No	If no skip to 3.12
3.11	If yes for the above question, which method, did you use? (tick all applicable)	1. Condom 2. Emergency tablet 3. COC/POP 4. Injectable 5. Implant 6. IUCD 7. Other specify_____	

3.12	Have you ever vaccinated for Cervical Cancer? (if you are male answer third choice not applicable)	1. Yes 2. No 3. Not applicable (Male)	If male skip to sect.4
3.13	Have you ever had unwanted pregnancy?	1. Yes 2. No	If no skip to sect.4
3.14	Have you ever had abortion?	1. Yes 2. No	If no skip to sect.4
3.15	Where did you get abortion service?	1. Government Health facility 2. Private health facility 3. Traditional healer 4. Not willing to mention.	
3.16	If yes for the above question, did you pay for abortion service	1. Yes 2. No	
SECTION 4: SRH service utilisation barriers			
4.1	Do you know any YFS/SRH service centres in your locality?	1.Yes 2. No	If no skip to 4.6
4.2	If yes for the above question, how long does it take on foot to arrive from your home in minutes?	_____minutes	
4.3	Does the working hours for the facility convenient for you?	1. Yes 2. No	
4.4	If not for Q4.3, what is appropriate time for you?	1. Early in the morning 2. Afternoon 3. Weekends/holiday 4. Other, specify_____	
4.5	Did the facility provides sufficient privacy for sexual and reproductive services (SRH)?	1.Yes 2. No	
4.6	Do your friends support you in the use of SRH services? (e.g., use of family planning)	1.Yes 2. No	
4.7	Does your parent support you in the use of SRH services? (e.g., use of family planning)	1.Yes 2. No	
4.8	Did you ever face challenge to get SRH service?	1. Yes 2. No	If no end the form
4.9	If yes for the above question, what do you face as obstacle hindering SRH services utilisation? (tick all applicable)	1. Service not available 2. Religious/cultural taboos 3. Lackof information 4. Can not afford service payment 5. Fear of parents 6. Distance to the health facility 7. Other_____	

QUANTITATIVE DATA COLLECTION TOOL AFAN OROMO VERSION/GAAFILEE RAGAAN LAKOOFSAA ITTIIN SASAABAMU KAN AFAAN OROMOO

Dargaggoota waggaa 18 gadi ta'aniif hayyamni maatii/guddistuu irraa ni gaafatama.

Qajeelfama: Mee gaaffilee armaan gadii hunda hamma dandeettii keessaniitti deebisaa, deebii sirrii ta'etti naanna'uudhaan ykn bakka barbaachisaa ta'etti lakkoofsa galchuudhaan.

Maqaa mana barumsaa sadarkaa lammaffaa_____.

Kutaa 1: Amaloota Hawaas-Dimoogiraafii fi Diinagdee			
Ser.lakk	**Gaaffilee**	**Filannoo**	**irra darbuu**
1.1	Umriin kee meeqa?	1. 15-17 irratti 2. 18-19 irratti	
1.2	Saala kee?	1. Dubartii 2. Dhiira	
1.3	Kutaa kam keessa jirta?	1. kutaa 9ffaa 2. kutaa 10ffaa 3. kutaa 11ffaa 4. kutaa 12ffaa	
1.4	Amantiin keessan maali?	1.Ortodoksii 2. Muslima 3. Pirootestaantii 4. kanneen biroo 5. Ibsi_____ .	
1.5	Sabni keessan maali?	1. Oromoo 2. Amaaraa 3.Kanneen biroo: _____.	
1.6	Haalli gaa'elaa keessan amma maali?	1. tokkicha 2. fuudhe 2. Hiikkaan 3. kanneen biroo_____.	
1.7	Eenyu waliin jiraatta?	1. lamaanuu warra 2. haadha qofa 3. abbaa qofa 4. eegduu/fira 5. qofaa	
1.8	Barnoota sadarkaa olaanaa abbaa keetii	1. barnoota idilee hin qabu 2. sadarkaa tokkoffaa (1-8). 3. sadarkaa lammaffaa (9-12). 4. kolleejjii (dippiloomaa fi isaa ol).	
1.9	Barnoota sadarkaa olaanaa haadha keetii	1. barnoota idilee hin qabu 2. sadarkaa tokkoffaa (1-8) 3. sadarkaa lammaffaa (9-12)	

		4. kolleejjii (dippiloomaa fi isaa ol)	
1.10	Hojii abbaa keetii?	1. dhuunfaa/Daldalaa 2. Mootummaa ykn Dhaabbata miti mootummaa 3. Qonnaan bulaa 4. Hojjetaa guyyaa guyyaa 5. Kanneen biroo	
1.11	Hojiiwwan haadha keetii?	1. dhuunfaa/Daldalaa 2. Mootummaa ykn Dhaabbata miti mootummaa 3. Qonnaan bulaa 4. Hojjetaa guyyaa guyyaa 5. Kanneen biroo	
1.12	Baasii guyyaa guyyaa keessaniif maallaqa kiishaa ni argattu?	1. eeyyee 2. lakk	
1.13	Galiin maatii keessan ji'a tokko keessatti meeqa argatu jettanii yaaddu? Abbaa fi haadha lamaan isaanii ETB keessatti.	_____ .	

KUTAA 2: Hubannoo Tajaajila Fayyaa Saalaa fi Walhormaataa			
2.1	Waa'ee tajaajila fayyaa saalaa fi walhormaataa (SRH) dhageessanii beektuu?	1. eeyyee 2. Lakk	Yoo gogaa hin qabne gara G 2.7
2.2	Waa'ee tajaajila fayyaa saalaa fi walhormaataa isa kam dhageesse? (waan barbaachisaa ta'e hunda irratti mallattoo kaa'i).	1. Gorsaa fi dhiyeessii ulfa ittisuu/Karoora maatii 2. Wal'aansa dhibee STI 3. Ittisaa fi kunuunsa HIV/AIDS 4. tajaajila kunuunsa ulfa baasuu nageenya qabu 5. Tajaajila ANC, kenniinsa, fi PNC 6. Barnoota saalqunnamtii bal'aa fi nageenya qabu walqunnamtii saalaa 7. Ittisaafi deebii gochaalee aadaa miidhaa geessisan (fuudhaa fi heeruma daa'immanii fi FGM/C). 8. Kanneen biroo (ibsu) _____ .	

2.3	Yoo G2.1f eeyyee ta’e, Maddi odeeffannoo keessan maal ture? (Deebiin tokkoo ol ta'uu danda'a)	1.Ogeessota fayyaa 2. Maatii 3. Mana barumsaa/barsiisaa 4. Miidiyaa akka Tv fi Raadiyoo 5. hiriyoota 6. miidiyaa hawaasaa kan akka Facebook, telegram, fi TikTok 7. kan biroo ibsu____ .	
2.4	Madda odeeffannoo kamtu caalaatti filatta?	1.Ogeessota fayyaa 2. Mana barumsaa/barsiisaa 3. miidiyaa hawaasaa 4. Miidiyaa (Tv/Raadiyoo) . 5. Warra 6. Hiriyyoota 7. kan biroo ibsu____ .	
2.5	Ji'oota jahan darban keessatti mata dureewwan armaan olii keessaa tokko irratti mari'attaniittuu?	3. Eeyyee 4. LAKKI	
2.6	Mata dureewwan armaan olii kana eenyu waliin mari'attaniittu? (Deebiin tokkoo ol ta'uu danda'a)	1. Haadha 2. Abbaa 3. Obboleessa 4. Obboleettii 5. Hogganaa amantii 6. Hojjetaa fayyaa 7. Barsiisaa hiriyaa 8. Hiriyaa 9. Kanneen biroo____ .	
2.7	Karaaleen dargaggeessi ulfa irraa fagaachuu dandeessu tokko tokko maali?	1. Irraa of qusachuu 2. Ulfa ittisuu 3. Kanneen biroo _____ 4. Hin beeku---99	
2.8	Dargaggoonni hawaasa kana keessatti tajaajila ASRH barbaaduutti mijataadhaa?	1. Eeyyee 2. Lakk	Yoo eeyyee ta'e gara 2.10tti darbi
2.9	Gaaffii armaan olii kanaaf lakki yoo ta’e, sababni dargaggoonni tajaajila ASRH barbaaduuf sodaataniif ykn mijataa hin taaneef maal ta’a?	1. Maqaa balleessii hiriyoota irraa 2. Sodaa warraa 3. Deeggarsa hiriyaa gaa’elaa/jaalallee irraa argachuu dhabuu 4. loogii dhiyeessaa 5. Kanneen biroo_____	
2.10	Malli Ulfa ittisuu jiraachuu dhageessanii?	3. Eeyyee 4. Lakki	Yoo hin taane gara 2.12tti darbi
2.11	Mala kam dhageessanii? (Deebiin tokkoo ol kennuu ni danda'ama)	1. Kondomii 2. Taableetii balaa tasaa	

		2. Taableetii kan guyyaa guyyaan fudhatamu 3. kan lilmoodhaan kennamu 4. kan biroo ibsu____ .	
2.12	Tajaajila SRH yeroo baayyee dargaggoonni fi dargaggoonni akka barbaadan beektu? (waan barbaachisaa ta'e hunda irratti mallattoo kaa'aa)	1. Barnoota saalqunnamtii hunda galeessa (CSE) . 2. FP/Gorsaafi kenniinsa ulfa ittisuu 3. Kunuunsa dahumsa duraa (ANC). 4. Gorsa, qorannoo fi wal'aansa HIV. 5. Gorsaa fi yaala STI 5.Tajaajila ulfa baasuu nageenya qabu 6. Kan biroo_____ .	
2.13	Faayidaan fayyadama kondomii maali? (deebii tokkoo ol ta'uu danda'a)	1. ulfa ittisuu 2. STI ittisuu 3. Faayidaa hin qabu 4. Mirkanaa'aa miti 5. kan biroo_____ .	
2.14	Kondomii fayyadamtanii beektuu?	1. Eeyyee 2. Lakk	
2.15	Walqunnamtii saalaa raawwattee beektaa?	1. Eeyyee 2. Lakk	Yoo hin taane gara 2.17tti darbi
2.16	Yeroo jalqabaaf umurii meeqatti walqunnamtii saalaa raawwatte?	_____ .	
2.17	Walqunnamtiin saalaa of eeggannoo malee raawwachuun balaa qaba jettanii yaaddu?	3. Eeyyee 4. Lakki	
2.18	Umurii xiqqaatti walqunnamtii saalaa keessatti hirmaachuu balaan/balaan maali? (Deebiin tokkoo ol ta'uu danda'a)	1. Mana barumsaa keessaa bahuu 2. Ulfa 3. Dhukkuba STI/HIV/AIDSiin qabame 4. Kaansarii Gadameessaa 5. kan biroo_____ .	
2.19	Dhaabbilee fayyaa keessatti waa'ee golee dargaggootaaf mijatu dhageessanii beektuu?	5. Eeyyee 6. Lakki	
2. 20	Abbaan manaa haadha manaa reebuun waanuma jirudha	1. walii galuu dhabuu 2. walii galuu 3. Giddu galeessa	

2.21	Maal goota, yoo dargaggeessa jeequmsa saalaa irratti hundaa'e (GBV) bifa kamiinuu mudatu waliin wal argite?	1. Hospitaala wal'aansaa fi kunuunsaaf 2. Waajjirri poolisii gabaasuuf 3. Maatiidhaaf gabaasa dhiyeessu. 4. Caldhisuu fi dhiifama gochuu. 5. Kanneen biroo_____.	
2.22	Gaa'ela koo harkifachuu akkan danda'u ofitti amanamummaa qaba (yoo ammatti hin taane).	1. Eeyyee 2. Lakk	
Kutaa 3: Itti Fayyadama Tajaajila Fayyaa Saalaa fi Walhormaataa (SRH) .			
3.1	Ji'oota 6n darban keessatti tajaajila SRH kamiyyuu fayyadamtanii beektuu?	7. Eeyyee 8. Lakki	Yoo hin taane gara G3.5tti darbi
3.2	Gaaffii armaan olii kanaaf eeyyee yoo ta'e, gosa tajaajila SRH kam argatte? (Deebiin tokkoo ol kennuu ni danda'ama)	1. CSE jechuun ni danda'ama 2. Karoora maatii 3. Wal'aansa dhukkuba STI 4. VCT HIV/AIDS 5. Tajaajila ulfa baasuu 6. Tajaajila ANC, kenniinsa, fi PNC 7. Kanneen biroo (ibsu)_____	
3.3	Eessatti filatte, yoo tajaajila ASRH barbaadde?	1. Dhaabbata fayyaa mootummaa 2. Dhaabbata fayyaa dhuunfaa 3. Giddugala dargaggootaa 4. kan biroo, _____	
3.4	Ogeessa fayyaa tokkoof tajaajila SRH eenyuun argachuu filatta?	1. Dhiira 2. Dubartii 3. Filannoo hin qabu (dhiiraa fi dubartii).	
3.5	Dargaggoonni umrii kurnanii keessa jiran hawaasa keessan keessatti tajaajila ASRH yoom akka barbaadan eenyutu murteessa?	1. Of 2. Miiltoo 3. Warra 4. Marii waliin 5. Kan biraa____	

3.6	Dargaggoonni umrii kurnanii keessa jiran saalqunnamtii jalqaba irratti akka hirmaatan sababoonni muraasni maal fa'a? (Deebiin tokkoo ol ta'uu danda'a)	1. Ogeessa hawaasaa 2. Dhiibbaa hiriyaa 3. Dhiibbaa alkoolii ykn qoricha sammuu hadoochu 4. Walqunnamtii saalaa humnaan/Dirqisiisuu 5. Fiilmii poornoogiraafii 6. Maallaqa argachuuf 7. Kan biraa_____	
3.7	Dhukkuba Walqunnamtii Saalaa (STI) kamiyyuu qabamtee beektaa?	1. Eeyyee 2. Lakk	
3.8	Qorannoo HIV gootee beektaa?	1. Eeyyee 2. Lakk	
3.9	Barattuun dubaraa yeroo laguu haala jijjiiruuf kutaan ramadame jiraa?	1. Eeyyee 2. Lakki 3. Hin beeku	
3.10	Mala ittisa ulfaa fayyadamtee beektaa?	1. Eeyyee 2. Lakk	Yoo hin taane gara 3.12tti darbi
3.11	Gaaffii armaan olii kanaaf eeyyee yoo ta'e, mala kam, fayyadamte? (Deebiin tokkoo ol ta'uu danda'a)	1. kondomii 2.Taableetii balaa tasaa 3. COC/POP jedhamuun beekama 4.Lilmoodhaan kan kennamu 5. Implant gochuu 6. IUCD jedhamuun beekama 7. kanneen biroo ibsu	
3.12	Kaansarii Gadameessaa qorattee beektaa? (yoo dhiira taate deebii filannoo sadaffaa hin raawwatu)	1. Eeyyee 2. Lakk 3. Raawwatiinsa hin qabu (Dhiira)	Yoo dhiiraa gara kutaa.4tti darba
3.13	Ulfa hin barbaachifne qabaattee beektaa?	1. Eeyyee 2. Lakki	Yoo hin jiru ta'e gara kutaa.4
3.14	Ulfa baastee beektaa?	1. Eeyyee 2. Lakki	Yoo hin jiru ta'e gara kutaa.4
3.15	Tajaajila ulfa baasuu eessaa argatte	1. Dhaabbata Fayyaa Mootummaa 2. Dhaabbata fayyaa dhuunfaa 3. Fayyisaa aadaa 4. Kaasuuf fedhii dhabuu	
3.16	Gaaffii armaan olii kanaaf eeyyee yoo ta'e tajaajila ulfa baasuu kaffalteettaa	1. Eeyyee 2. Lakki	
KUTAA 4: Gufuulee itti fayyadama tajaajila sirn walhormaata fayyaa dargagootaa (SRH)			

4.1	Giddugala tajaajila SRH naannoo keessan jiru beektu?	1. Eeyyee 2. Lakk	Yoo hin taane gara 4.6tti darbi
4.2	Gaaffii armaan olii kanaaf eeyyee yoo ta'e, daqiiqaa muraasa keessatti mana keessan irraa dhufuuf miilaan yeroo hangamii fudhata?	_____daqiiqaawwan	
4.3	Sa'aatiin hojii dhaabbatichaa siif mijataa?	1. Eeyyee 2. Lakk	
4.4	Yoo Gaaffii 4.3 lakki jette, yeroon siif mijatu kami?	1. Ganama barii 2. waaree booda 3. dhuma torbee 4. kan biroo, ibsi_____ .	
4.5	Dhaabbatichi tajaajila saalqunnamtii fi walhormaataa (SRH)f icciitii gahaa kenneeraa?	1. Eeyyee 2. Lakki	
4.6	Hiriyoonni kee itti fayyadama tajaajila SRH irratti si deeggaru? (fkn, itti fayyadama karoora maatii).	1. Eeyyee 2. Lakk	
4.7	Warri kee itti fayyadama tajaajila SRH irratti si deeggaraa? (fkn, itti fayyadama karoora maatii).	1. Eeyyee 2. Lakk	
4.8	Tajaajila SRH argachuuf qormaanni si mudatee beekaa?	1. Eeyyee 2. Lakk	Yoo dhuma hin qabne unka
4.9	Gaaffii armaan olii kanaaf eeyyee yoo ta'e, akka gufuu itti fayyadama tajaajila SRH gufachiisutti maaltu si mudata? (Deebiin tokkoo ol filachuun ni danda'ama)	1. Tajaajilli hin argamu 2. Taboo amantii/aadaa 3. Hanqina odeeffannoo 4. Kaffaltii tajaajilaa kaffaluu hin danda'u 5. Sodaa warraa 6. Fageenya dhaabbata fayyaa irraa 7. Kan biraa_____	

QUALITATIVE INTERVIEW GUIDE

2.1 Focus group discussion for adolescents

Thank you and welcome to take part in this discussion. As per your consent, here I am presenting the discussion questions for you.

Interview No: _____
Name of school_____
Date of Interview _____
Time of Interview_____ Start _____Finish_____

Background information	**Data**
Age	
Sex	
Marital status	
Ethnicity	
Religion	
Grade	

Let us discuss,

1. Have you ever heard of adolescents' SRH Service?

   Probing:
   If yes,

   a) What does it mean?

   b) Have you ever heard about contraceptives information & services, HIV/STIs screening and treatment?

   c) Do you think it is important for adolescent to know about SRH service? (If yes why?)

2. In your opinion, what are the adolescents related sexual & reproductive health?

   Probing:

   a) Do you know unsafe sexual practice?

   b) What motivate adolescents to practice unsafe sex?

   c) What do you know about unintended pregnancy?

   d) What are the causes of these health problems?

   e) Who are more affected by these health problems?

3. Do you and your parent discuss on SRH issue at home?

4. Is there SRH service in your school?

5. Have you ever visited health facility for SRH service?

   Probing:

   a) How about the service?

   b) If no, why?

6. How do you find the SRH service such as contraceptive, counselling, and sexual health education?

7. Did you face challenges when seeking SRH services?

8. Do you have any perceptions that influence your decisions to use SRH services?

9. What do you think should be modified to the existing SRH services to encourage more adolescents to utilise them?

10. Any more things, you want to tell us before summarising?

Thank you for taking your time to participate.

Name of investigator: _____Date _____Signature_____

C. Interview guide for Health workers, teachers, and community elders during IDIs

2.2 Interview guide for Health workers (KIIs)

Thank you and welcome to take part in this interview.

Interview No: _____

Name of Health facility_____

Date of Interview _____

Time of Interview_____ Start _____Finish_____

Background information	**Data**
Age	
Sex	
Marital status	
Level of education	
Profession	

1. What do understand by adolescents' SRH services?
2. Would you mention the types of SRH service you are providing at your health facility?
3. Would you describe the health seeking behaviour of adolescents at your health facility?
4. Do you think adolescent have adequate information about their SRH services?
5. Do you think your health facility is equipped with all necessary facilities to provide SRH services for adolescent?
6. In your opinion, did your facility respect privacy of adolescent for service?
7. Do you think school based SRH service important?
8. What can be done to address the above challenges to enhance adolescents' SRH service utilisation at your facility?

Thank you for taking your time with us!

2.3 Interview guide for teachers and community leaders (KIIs)

Thank you and welcome to participate in this interview.

Interview No: _____

Name of school/Kebele_____

Date of Interview _____

Time of Interview_____ Start _____Finish_____

Background information	Data
Age	
Sex	
Marital status	
Ethnicity	
Religion	
Occupation	
Level of education	

1. Do you know what SRH means?
2. In some communities discussing SRH is not promoted or taboo, what makes this taboo?
3. Do you think education about SRH service utilisation promote early initiation of sexual practices?
4. Do you counsel/guide adolescent on SRH service? How?
5. What do you think hinder adolescents from using SRH services?
6. What is your opinion on use of media to promote SRH?
7. What do you think motivate adolescent to practice unsafe sex?
8. In some communities it is believed that using family planning will cause infertility, what makes this?
9. What can be done to address the above challenges to enhance adolescents' SRH service utilisation?

I have done.

Thank you for participating in this study.

MARSAA 2. Qajeelfama Af-gaaffii

2.1 Marii garee xiyyeeffannoo dargagootaaf

Marii kana irratti hirmaachuuf baga nagaan dhuftan. Akka hayyama keessaniitti asitti gaaffilee marii isiniif dhiheessaa jira.

Lakk.af-gaaffii: _____

Maqaa M/barnootaa_____

Guyyaa af-gaaffii _____

Sa'aa af-gaaffii_____ jalqabbii _____dhuma_____

Odeefannoo duubee	**Ragaa**
Umrii	
Saala	
Haala gaa'ilaa	
Sabummaa	
Amantaa	
Sadarkaa barnootaa	

Haa mar'annu,

1. Waa'ee tajaajila sirna wal-hormaata fayyaa dargagootaa dhageessee beektaa (SRH)?

Qorannoo:

Eeyyee yoo jette,

a) Maal jechuudha?

b) Odeeffannoo fi tajaajila ittisa ulfaa, qorannoo fi wal'aansa HIV/STIs hoo?

c) Dargaggoonni waa'ee SRH beekuun barbaachisaa dha jettanii yaaddu? (Yoo eeyyee ta'e maaliif?)

2. Akka yaada keessaniitti fayyaan saalaa fi walhormaataa dargaggoota waliin walqabatu maali?

Qorannoo:

a) Gocha saalqunnamtii nageenya hin qabne ni beektaa?
b) Dargaggoonni saalqunnamtii nageenya hin qabne akka raawwatan maaltu kakaasa?
c) Waa'ee ulfa itti hin yaadamne maal beekta?
d) Rakkoolee fayyaa kanaaf sababoonni maal fa'a?
e) Rakkoolee fayyaa kanaan eenyutu caalaatti miidhama?

3. Ati fi maatiin kee waa'ee saalqunnamtii irratti ni mariattuu?
4. Tajaajilli saalqunnamtii mana barnootaa keessan keessa ni jiraa?
5. Tajaajila fayyaa saalqunnamtii argachuuf dhaabbata fayyaa dhaqxee beektaa?

Qorannoo:

a) Haalla tajaajilaa akkamitti madaalta/ibsita?
b) Lakki yoo jette, maaliif?

6. Tajaajila fayyaa saalqunnamtii (SRH) kanneen akka ittisa ulfaa, gorsaa, fi barnoota fayyaa saalaa akkamitti argattu?
7. Yeroo tajaajila kana argachuuf deemta rakkoon ni muudate beekaa?
8. Ilaalcha ykn Yaadannoowwan murtoo tajaajila SRH fayyadamuu irratti dhiibbaa sirra ga'u jiraa?
9. Tajaajila amma jiru irratti maal yoo fooya'e dargagoonni sirritti fayyadamu jettee yaada?
10. Osoo hi xumurin wanti nuuf dabaltu yoo jiraate?

Yeroo kee fudhattee nu wajjiin turuu keetiif galatoomi.

Maqaa qorataa: _____guyyaa_____mallattoo_____

C. Qajeelfama af-gaaffii hojjettoota Fayyaa, barsiisotaa, fi maatii dargagootaa

2.2 Qajeelfama af-gaaffii hojjettoota Fayyaa (KIIs)

Af-gaafii kana irratti hirmaachuuf argamuu keessaniif galatoomaa.

Lakk. Af-gaaffii: _____

Maqaa dhaabbata fayyaa_____

Guyyaa af-gaaffii _____

Sa'aa af-gaaffii_____ jalqaba _____xumura_____

Oddeeffannoo duubee	**Data**
Umrii	
Saala	
Haala gaa'ilaa	
Sadarkaa barnootaa	
Ogummaa	

1. Tajaajila SRH dargaggoota hoo jennu maal hubatu?
2. Gosoota tajaajila SRH dhaabbata fayyaa keessan keessatti kennitan ni kaaftuu?
3. Amala sirna fayyaa walhormaataa barbaaduu dargaggoota dhaabbata fayyaa keessan keessatti qaban maal fakkaata?
4. Dargagoonni SRH irratti odeeffannoo ga'aa qaban jettee yaaddaa?
5. Dhaabbanni fayyaa keessan tajaajila SRH dargaggootaaf kennuudhaaf meeshaalee barbaachisoo ta'an hunda qaba jettanii yaaddu?
6. Akka yaada keessaniitti, dhaabbati keessan tajaajilaaf iccitii dargaggoota kabajaa?
7. Tajaajilli SRH mana barumsaa irratti hundaa'e barbaachisaa jettanii yaaddu?
8. Itti fayyadama tajaajila SRH dargaggoota dhaabbata keessan keessatti guddisuuf qormaata armaan olii furuuf maaltu godhamuu qaba?

Yeroo keessan nu waliin waan dabarsitaniif galatoomaa!

2.3 Af-gaaffii barsiisotaa fi maatii waliin (KIIs)

Af-gaafii kana irratti hirmaachuuf argamuu keessaniif galatoomaa.

Lakk. Af-gaaffii: _____

Maqaa dhaabbataa_____

Guyyaa af-gaaffii _____

Sa'aa af-gaaffii_____ jalqaba _____xumura_____

Oddeeffannoo duubee	**Data**
Umrii	
Saala	
Haala gaa'ila	
Sabummaa	
Amantaa	
Sadarkaa barnootaa	
Hojii/ogummaa	

1. Sirna walhormaata fayyaa dargagootaa (SRH service) ni beektaa?
2. Hawaasa tokko tokko keessatti SRH irratti mari'atuun hin jajabeefamu ykn qaaniidha, maaltu kana taasise?
3. Barnoonni waa'ee itti fayyadama tajaajila SRH gocha saalqunnamtii dafanii jalqabuu ni jajjabeessa jettanii yaadduu?
4. Tajaajila SRH irratti dargaggeessa gorsitaa/qajeelchitaa? Akkamitti?
5. Dargagoota SRH akka hin fayyadamne maaltu dhoorga jettee yaadda?
6. Fayyadama miidiyaa SRH beeksisuuf yaadni keessan maali?
7. Dargaggeessi umrii kurnanii keessa jiru saalqunnamtii nageenya hin qabne akka raawwatu maaltu kakaasa jettanii yaaddu?
8. Hawaasa tokko tokko keessatti karoora maatii fayyadamuun dhala dhabuu akka fidu amanama, kana maaltu godha?
9. Itti fayyadama tajaajila SRH dargaggoota guddisuuf qormaata armaan olii furuuf maaltu godhamuu qaba?

Xumurree jira.

Qo'annoo kana irratti waan hirmaattaniif galatoomaa.

APPENDIX 9: Consent for key informants

Researcher's name: Derese Teshome Demissie
Mobile number: +251911997454
Email mylife: 17171555@mylife.unisa.ac.za
Email address: teshderese@gmail.com

Dear Participant

Title of the study: A STRATEGY TO ENHANCE UTILISATION OF ADOLESCENTS' SEXUAL AND REPRODUCTIVE HEALTH SERVICES IN SOUTH-EAST ETHIOPIA

As part of the requirements for the Doctor of Philosophy in Public Health that I am undertaking with the UNISA, a research study on a topic stated above will be undertaken. I awarded BSc in Midwifery from University of Gondar and Master of Public health from Jimma University working for Canadian Physicians for Aid and Relief (CPAR), Ethiopia.

This study is planned to explore and describe the adolescents' SRH service in Arsi Zone of Ethiopia to develop the strategies to enhance utilisation of Adolescents' Sexual and Reproductive Health services in Arsi zone/South-east Ethiopia. Information obtained from this study will provide an insight into the SRH service of adolescents which could contribute both for decision and policy makers in developing strategies to enhance utilisation of adolescents' SRH service in Arsi Zone, Ethiopia.

To attain our objective, we need to interview you. Your participations are completely confidential. It is your full right to refuse to answer any or all the questions and you can refuse to participate or withdraw at any time without stating a reason. Your honest answers to these questions will help us in better understanding of what people think, say and do about certain behaviours, so we request your truthful and keen participation. Completion of the questionnaire may take 25 to 30 minutes. To maintain anonymity and confidentiality, you will not be asked to complete a consent form. The information to be collected will be used strictly for statistical inferences and no information pertaining to individuals will be disclosed. You can the researcher any questions you have.

Thank you for deciding to participate in the study.

Kind regards

Derese Teshome Demissie

APPENDIX 10: Consent for adolescents older than 18-years-old

Researcher's name: Derese Teshome Demissie
Mobile number: +251911997454
Email mylife: 17171555@mylife.unisa.ac.za
Email address: teshderese@gmail.com

Dear Adolescent

Title of the study: A STRATEGY TO ENHANCE UTILISATION OF ADOLESCENTS' SEXUAL AND REPRODUCTIVE HEALTH SERVICES IN SOUTH-EAST ETHIOPIA

As part of the requirements for the Doctor of Philosophy in Public Health that I am undertaking with the UNISA, a research study on a topic stated above will be undertaken. I was awarded BSc in Midwifery from the University of Gondar and a Master of Public health from Jimma University working for Canadian Physicians for Aid and Relief (CPAR), Ethiopia.

This study is planned to explore and describe the adolescents' SRH service in the Arsi Zone of Ethiopia to develop strategies to enhance utilisation of Adolescents' Sexual and Reproductive Health services in Arsi zone/South-east Ethiopia. Information obtained from this study will provide insight into the SRH service of adolescents which could contribute both to decisions and policymakers in developing strategies to enhance utilisation of adolescents' SRH service in Arsi Zone, Ethiopia.

The study will involve various life questions. Here is the questionnaire for you to complete you need not put your name on the questionnaire; no individual response will be reported. Your answers are completely confidential. It is your full right to refuse to answer any or all the questions and you can refuse to participate or withdraw at any time without stating a reason. Your honest answers to these questions will help us a better understanding of what people think, say, and do about certain behaviours, so we request your truthful and keen participation. Completion of the questionnaire may take up to 40 to 60 minutes. Completed questionnaires must be placed in the box provided by the researcher. To maintain anonymity and confidentiality, you will not be asked to complete a consent form. The information to be collected will be used strictly for statistical inferences and no information pertaining to individuals will be disclosed. Thank you for deciding to participate in the study.

Kind regards

Derese Teshome Demissie

APPENDIX 11: Parental consent (adolescents less than 18-years-old)

Researcher's name: Derese Teshome Demissie
Mobile number: +251911997454
Email mylife: 17171555@mylife.unisa.ac.za
Email address: teshderese@gmail.com

Title of the study: A STRATEGY TO ENHANCE UTILISATION OF ADOLESCENTS' SEXUAL AND REPRODUCTIVE HEALTH SERVICES IN SOUTH-EAST ETHIOPIA

Your child is invited to participate in a research project. Your child's participation is entirely voluntary, and you may choose that your child should not participate. If you choose for your child to participate, or if you withdraw your consent and stop your child's participation in the study, your decision will not cause any negative consequence and you will not lose any benefit. If you have any questions about the study, please contact Mr. Derese Teshome Demissie (Researcher). The purpose of the study is to develop a Strategy to enhance utilisation of Adolescents' Sexual and Reproductive Health services based on the findings. There is a self-administered questionnaire to complete and a focus group discussion (FGD) interview for your child to complete and there is no need to put his/her name on the questionnaire. His/her honest answer to this questionnaire will help us to understand what adolescents think, say, and do about some issues of sexual reproductive health so; we request your child's participation. This data will be confidential. We will not write your child's name on the response. The collected data will be summarised and used for education and publication purposes.

Signature: you are deciding about allowing your child to participate in this study. Your signature below indicates you read and understand this consent and allow your child to participate in this study. You will be given a copy of this consent for your record.

_____

Name and signature of child Date

_____

Name and signature of parent Date

_____

Name and signature of researcher Date

APPENDIX 12: Assent form (adolescents less than 18-years-old)

Researcher's name: Derese Teshome Demissie
Mobile number: +251911997454
Email mylife: 17171555@mylife.unisa.ac.za
Email address: teshderese@gmail.com

Title of the study: A STRATEGY TO ENHANCE UTILISATION OF ADOLESCENTS' SEXUAL AND REPRODUCTIVE HEALTH SERVICES IN SOUTH-EAST ETHIOPIA

The study has been described to me in a language that I can understand, and I freely and voluntarily agree to participate. All questions I asked about the study have been answered by me. I understand that my identity will not be disclosed, and I may withdraw from the study without a reason at any time and this will not negatively affect me.

Participant's name: _____

Participant's signature: _____

Date: _____

APPENDIX 13: Letter from language editor

I, the undersigned, declare that I have edited the **DPhil thesis of DERESE TESHOME DEMISSIE**, titled:

A STRATEGY TO ENHANCE UTILISATION OF ADOLESCENTS' SEXUAL AND REPRODUCTIVE HEALTH SERVICES IN SOUTH-EAST ETHIOPIA

I have read the thesis and made suggestions regarding the layout and use of UK English. I have also verified that all sources listed in the list of references were cited correctly in the thesis and that all in-text references are accounted for in the list of references. While I tried to work as carefully as possible, some errors may have been overlooked, and I may also have made mistakes during the editing process.

Where figures in the thesis were inserted as images, I was unable to make any corrections to them. I also refrained from correcting the English translations of interviewees' citations, since these quotations had to reflect the language used by the interviewee or the translation into English.

I consulted the guide for doctoral students from the Department of Health Studies at UNISA and attempted to comply with the required regulations. Please note that the correct abbreviation for et al. is with a period, not et al as the guide states.

I cannot be held responsible for changes made to the dissertation after editing was completed and before it was submitted in its final form for examination, or for submission into the UNISA repository.

Signed: 

Prof (emeritus) P.J. Botha

(Member of the South African Translators' Institute, no. 1000048.)

Date: 24th December 2025

APPENDIX 14: Letter from technical editor

158 Mount Augusta Drive
Midlands
MIDSTREAM
12 January 2026

e-mail: piet.rinacoetzer@gmail.com

TO WHOM IT MAY CONCERN

STUDENT: **DERESE TESHOME DEMISSIE**
STUDENT NUMBER: **17171555**

TITLE: **A STRATEGY TO ENHANCE UTILISATION OF ADOLESCENTS' SEXUAL AND REPRODUCTIVE HEALTH SERVICES IN SOUTH-EAST ETHIOPIA**

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Mrs EC Coetzer

APPENDIX 15: Similarity Turnitin report

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