TRAINING GUIDELINES FOR PROMOTING ADOLESCENTS' KNOWLEDGE AND PERCEPTIONS ON SEXUAL AND REPRODUCTIVE HEALTH RIGHTS AND SERVICES IN RURAL ARSI ZONE, ETHIOPIA

by

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Dedication

I dedicated this thesis to my father (Mr. Bekele Wakjira) and mother (Mrs. Dure Negessa) for their love, prayer and good wishes in my professional and personal life. I am also thankful to my brothers (Mr. Ayele and Ayela Bekele Wakjira) who have been my source of inspiration and strength. This achievement is unreservedly dedicated to my beloved wife Mrs. Nacho Name Edossa and our lovely children (Keyeron, Urji and Wan ofi).

Student number: **64084175**

D E C L A R A T I O N

I declare that **training guidelines for promoting adolescents' knowledge and perceptions on sexual and reproductive health rights and services in rural Arsi Zone, Ethiopia** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

November 2021

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SIGNATURE DATE

Daniel Bekele Wakjira

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ABSTRACT

Adolescents face various challenges regarding sexual and reproductive health rights (SRHRs) and services, mainly due to lack of knowledge and misperceptions. Therefore, the purpose of the study was to develop training guidelines for promoting adolescents' knowledge and perceptions on SRHRs and services in rural Arsi Zone, Ethiopia. The study was conducted at five secondary schools and two health centres in the Zone. The justification of this study was to contribute a complete and comprehensive picture of the adolescents' SRHRs and services at rural schools. The information generated would contribute to identifying potential areas of intervention and equip policymakers with evidence to support focused interventions.

The researcher used a mixed methods approach of sequential explanatory design to collect, analyse, and integrate quantitative and qualitative data. The study was conducted in three phases. The first phase was conducted to investigate the knowledge, perceptions and service utilisation among 800 adolescents on SRHRs and service. Data were collected by pre-tested and structured self-administered questionnaires and analysed by Statistical Package for Social Sciences (SPSS) version 25 software. Bivariate and multivariate logistic regressions were done to identify the association of factors with sexual and reproductive health service utilisation. The statistical significance level was determined by odds ratios at 95% confidence interval and p-value less than 5%. For the second phase,

purposely selected 24 adolescents and 12 key informants participated. The qualitative data analysis was done by thematic analysis using Atlas ti version 8. For the third phase, based on the findings of Phases 1 and 2, training guidelines for promotion of adolescents' knowledge and perceptions on SRHRs and services were developed. Finally, the developed training guidelines were validated by experts and literature. During data collection at each phase the ethical principles were briefly described and implemented. Validity and reliability of the quantitative tools were assured before and during data collection procedures. To ensure the trustworthiness of the qualitative study, the four measuring (credibility, transferability, dependability and conformability) points were implemented.

Overall, the study found limited knowledge, low-level services utilisation and misperceptions of adolescents on SRHRs and services. The findings also revealed that training curriculum didn't include adolescents' SRHRs and services. Based on the study findings and literature support, the training guidelines were developed. The developed training guidelines for promoting adolescents' knowledge and perceptions on SRHRs and services recommended to incorporate SRHRs and services in Ethiopian education system. The developed training guidelines cover eight major topics. It is expected that the developed final training guidelines will address most of the challenges encountered by rural school going adolescents on the issues of SRHs utilisation. These guidelines are valuable resources that should always be easily accessible and available.
KEY TERMS: Adolescents, knowledge, perceptions, promotion, sexual and reproductive health rights, training guidelines

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
AOR	Adjusted Odds Ratio
ASRH	Adolescent Sexual and Reproductive Health
ASRHRs	Adolescents Sexual and Reproductive Health Rights
COR	Cruds Odds Ratio
EDHS	Ethiopian Demographic Health Survey
FDRE	Federal Democratic Republic of Ethiopia
FGDs	Focused group discussion
FMOE	Federal Ministry of Education
FMOH	Federal Ministry of Health
HBM	Health Belief Model
HCPs	Health Care Providers
HCT	HIV Counselling and Testing
HIV	Human Immune Deficiency Virus
HPV	Human Papilloma Virus
HSDP	National Health Sector Development Programme
HSTP	Health Sector Transformation Plan
ICPD	International Conference on Population and Development
IDIs	In-depth-interview
IUCD	Intrauterine Contraceptive Device
NGOs	Non-Governmental Organizations
RH	Reproductive Health
SRH	Sexual and Reproductive Health
SRHRs	Sexual and Reproductive Health Rights
SRHs	Sexual and reproductive health services
SSA	Sub-Saharan Africa
STDs	Sexually Transmitted Diseases
STIs	Sexually Transmitted Infections

UNAIDS	United Nations program on HIV and AIDS
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations International Children Emergency Fund
UNISA	University of South Africa
USAID	United States Agency for International Development
WHO	World Health Organization

LIST OF APPENDICES

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

In this chapter, the research overview is presented systematically and logically. The topics and sub-topics of the research orientation are described. The chapter provides the overview of research problems, purpose, objectives, and questions that the study pursues to address. The chapter also details significance of the study, key concepts and definitions, research paradigm and theoretical framework, research design and method. It also describes the scope of the study and the overall structure of the thesis.

World Health Organization (WHO 2017a:1) describes adolescence as the period in life when an individual is no longer a child, but not yet an adult. The word adolescence refers to the transitional phase of growth and development in which the people undergo vast, physiological, physical, psychological and social changes (Kar, Choudhury & Singh 2015:7). This transition phase occurs in between (10 to 19 years old) in human life (WHO 2017b:6). Adolescence phase is a critical time in their lives because it is accompanied by many changes, leading to interest and testing, in which adolescents are not properly informed about sexual and reproductive health (SRH) issues (Iqbal, Zakar, Zakar & Fischer 2017: 2).

Adolescence is a time to focus on health promotion to reduce the risk of SRH problems such as; pregnancy and birth-related problems and complications and they are also highly susceptible for many sexually transmitted infections (STIs) such as, human immunodeficiency virus (HIV), gonorrhoea and syphilis (Martin, Hamilton, Osterman, Driscoll & Drake 2018:2).

Adolescent sexual and reproductive health rights (ASRHRs) is an important factor in young people's development stage and protects them from sexual violation. However, most of them still had poor knowledge of their SRHRs to exercise (Iqbal et al 2017:11).

Evidence suggests that the state of non-use of SRH services and the lack of effective ideas for effective information and resources to protect themselves from adverse outcomes put young people at greater risk than adults from infection, abuse and sexual harassment (Vongxay, Albers, Thongmixay, Thongsombath, Broerse & Sychareun 2019:2).

In this study, the research gap that triggered the research questions was that the knowledge and perceptions of adolescents SRHRs and services particularly in rural schools of Ethiopia were not adequate. In addition, a previous study in (Olutoyin, Ayodeji & Oluwafisayomi 2016:1) reveals that the greater burdens of reproductive health problems are usually found in adolescents because they have limited knowledge about their SRHRs and services. However, these age groups are perceived as healthy and have been largely neglected in world public health (Olutoyin et al 2016:1).

Evidence showed that in developing countries, young girls under age 15 years give 777,000 births annually. Giving birth during this period negatively affects adolescents' life, parents, societies and children. Globally, obstetrics complications are the prominent cause of death among girls aged 15-19. Particularly, 99% of maternal mortality occurs in developing countries including Ethiopia among females of childbearing age (UNFPA 2015a: 5 &WHO 2016:1).

Furthermore, the researcher is driven to conduct this study because there are insufficient studies analysing and evaluating factors that have influenced the use of SRHS based on health belief model theory (HBM) in rural Arsi Zone Ethiopia. Thus, the researcher is motivated to investigate the knowledge and perceptions of adolescents on their SRHRs and services that helps to develop training guidelines for promotion of adolescents' knowledge and perceptions of SRHRs and service utilisation.

1.2. THE BACKGROUND TO THE RESEARCH PROBLEM

Geographically, the study was done in Arsi Zone Oromiya regional state in Ethiopia. Arsi Zone is known as a source of Ethiopian Athletes. The Zone is bordered by the Bale Zone in the south, the West Arsi Zone in the southwest, the East Shewa Zone in the northwest, the Afar Region in the northwest and the Hararghe Zone in the east. (http://www.oromiaa.com/english/imades/arsi zone)

The Zone is located 175kilometres from Addis Ababa city. The report from Arsi Zone Education department office shows that there are nineteen (19) rural high schools with the expected total numbers of adolescent students attending in rural being 8137 of these males 5096 and females 3041 (Arsi Zone Education office report 2019:12).

In Africa, next to Nigeria, Ethiopia is the largest, most populous country with diverse cultural values and a mix of ethnic and religious diversity (HSTP 2016: 18). About the age (47%) of the Ethiopian population are adolescents less than 15 years of age (Kassa, Arowojolu & Odukogbe 2019: 3). According to Ethiopian Healthy Survey (EDHS 2016:15) reports, in Ethiopia sex ratio in both sex of adolescents is the same percentage (23.4%). The average fertility rate of the country is 4.1 births per woman (EDHS 2016:15).

Across the world, most adolescents face challenges of early pregnancy and parenthood, difficulties accessing SRHS and exposure to HIV and STIs (Jessica & Hamid 2015:1). These challenges are common with rural adolescents as evidenced by (EDHS 2016:23), while the majority of adolescents in Ethiopia (four-fifths) live in rural areas. Evidence showed that childbearing is more common in rural areas than in cities (15%) compared (5%), respectively. This may be due to their very limited exposure to the mass media and any information (EDHS 2016:19). Finally, existing literature showed that in Ethiopia many adolescents are challenged with many SRH risks due to lack of knowledge and misperceptions towards their SRHRs and services. Therefore, the researcher intended to develop training guidelines for the promotion of adolescents' knowledge and perceptions in rural secondary high schools in Arsi Zone, Ethiopia.

1.3 THE STATEMENT OF RESEARCH PROBLEM

The researcher recognised the study problems while working in the Arsi Zone, in university as a lecturer. Risks of adolescent SRH observed by the researcher serve as a key means of improving the problems and challenges faced by rural school-going adolescents. Although Ethiopia has made significant progress on the access to basic health facilities, adolescents still face a number of SRH challenges, including prevalence of HIV/AIDS, early marriage and other harmful traditional practices, substance abuse and persistent gender inequalities (Birhan,Tushune & Jebena 2018:4).

In Ethiopia, sexual health and reproductive health information and perceptions are areas where there are large gaps in the exercise of rights and services (Birhan et al 2018:5). Apart from the existence of policies and strategies, there is a general lack of knowledge and ideas among young people about existing policies and strategies (Federal Ministry of Health 2016:9). This is because SRH education programs in public schools are fragmented and not standardised. As a result, knowledge and opinions on SRH issues are low among Ethiopian adolescents, especially in rural areas.

Additionally, there are no publications that focus on promoting adolescents' SRHRs and services through education to nurture and create an enabling environment, particularly at in rural settings. Therefore, rural secondary schools in Arsi Zone were selected for this study, as no previously known studies were conducted on the development of training guidelines to promote adolescents' knowledge and perceptions of SRHRs and services in this area.

1.4 PURPOSE OF THE STUDY

The purpose of this study was aimed to develop training guidelines for the promotion of adolescents' knowledge and perceptions on SRHRs and services.

1.4.1 Research objectives for quantitative (phase 1)

- To investigate adolescents' knowledge and perceptions of SRHRs and services in rural schools of Arsi Zone Ethiopia.
- To identify the magnitude of adolescents' SRHs utilisation in rural schools of Arsi Zone Ethiopia.
- To determine factors associated with SRHs utilisation of adolescents in rural schools of Arsi Zone Ethiopia.

1.4.2 Research objectives for qualitative (phase 2)

- To explore and describe adolescents' understanding of SRHRs and services.
- To explore and describe barriers that hinder adolescents' SRHs access and utilisations.
- To explore and describe the key informants' opinions on whether the current content and extent of SRH education meets the needs of adolescents.
- To explore and describe the key informants' suggestions on how to improve the adolescents' SRHRs and services.

1.4.1.1 Study questions for phase 1

- What are the knowledge and perceptions levels of adolescents for SRHRs and services in rural schools of Arsi Zone Ethiopia?
- What are the magnitude of adolescents' SRHs utilisation in rural schools of Arsi Zone Ethiopia?
- What are the factors associated with SRHs utilisation of adolescents in rural schools of Arsi Zone Ethiopia?

1.4.2.1Study questions for phase 2

- What is the adolescents' understanding regarding SRHRs and services?
- What are the barriers that hinder adolescents'SRHs access and utilisations?

- What are the key informants' opinions on whether the current content of SRH education meets the needs of adolescents?
- What are the key informants' suggestions to improve the adolescents SRHRs and services?

1.5 SIGNIFICANCE OF THE STUDY

Evidence suggests that access to high-quality services and information on SRHRs and services is a fundamental right. However, in many developing countries, adolescents' access to SRH information and service utilisation is limited. Therefore, the importance of research is related to its practical application to people of the target group of reproductive health (in this case, adolescents); its scientific contribution to the field of study and the institution, the research profile of the university of South Africa (UNISA).

As mentioned in the statement of the problems, adolescents in Ethiopia due to lack of knowledge and misperceptions of SRHRs and services, face many challenges including pregnancy and childbirth related mortality, STIs/HIV, and unsafe abortion. However, little has been known about their knowledge and views on SRH issues, especially in rural Ethiopia. Therefore, the assessment of the information pattern and perceptions of adolescents' SRHRs and services would help in developing training guidelines for the promotion of their knowledge and perceptions.

Moreover, the study will inform policy makers, increase public health attention on the gaps, and create opportunities for prevention of the poor adolescent reproductive health outcome. The recommendations from the study will help to modify the existing curriculum for adolescents SRH education in secondary schools.

1.6 DEFINITIONS OF KEY TERMS

1.6.1 Conceptual definitions

Adolescence: The term adolescence refers to a group of children growing into adults between the ages (10 to 19) years (WHO 2017a:1). Correspondingly, (UNFPA 2006:2 & WHO 2006:1), further categorised as 10 to 13 years old as early adolescence, 13 to 15 years old mid adolescence and 15 to 19 years old as late adolescence. For this study, all late adolescents (15 to 19 years old) were purposively selected. Since these groups are considered being more mature, experience major physical changes and gain mental maturity to respond to the research questions. Accordingly, secondary school attending adolescents participated in the study.

Knowledge: According to the Oxford Dictionary (2012:402), knowledge is “facts, information, and skills acquired through education or experience of a subject.’’ For this study, it refers to the sum of what is known by the adolescents regarding SRHRs and services.

Training guidelines: It is a document containing recommendations for medical practice or public health policy (WHO 2014:1). In this study, training guidelines are recommendations or plan of actions developed for promotions of adolescents' knowledge and perceptions of SRHRs and services.

Perception: It is "a process where people take in sensory information from their environment and use that information to interact with the environment" (Dahm 2011:4). In this study, perception indicates adolescents’ views about their SRHRs and service utilisation.

Sexual and reproductive health rights” (SRHRs): This refers to the rights of SRHs care, information, autonomy in decision-making of human rights; they are international, inseparable and undeniable. Such rights are based on other important rights like ‘‘right to health care, the right to freedom, the right to privacy, the right not to be harassed or mistreated, and the right to freedom from sexual violence"(Oronje, Theobald, Lithur & Ibisom 2011:8). In this study, it focused on the combination of knowledge, the perceptions to knowing about SRHRs and access to sources of information along with the ability to exercise (autonomy), which is an important indicator for the implementation of adolescents’ rights in the study area.

Sexual and Reproductive Health (SRH): It is defined as "a complete physical, mental and social well-being in all aspects related to sexual and reproductive growth" (Oronje et al 2011:11). In this study, the focus was on the knowledge, perceptions and utilisations of sexual reproductive health services of adolescents.

Rural setting: This can be a semi-town "with formal, out-of-town accommodation, but sharing at least one boundary with the declared urban area.

https://www.collinsdictionary.com/dictionary/english/rural-setting

In this context, rural schools are those high schools found out of town having a local authority.

1.6.2 Operational definitions

Good perceptions: Adolescents scoring above or equal the mean value of the total score in perceptions of SRHRs and services questions categorised as having good perception while a score of less the mean value was considered as having a poor perception (Iqbal 2017:4). In this study, the level of perception was measured through computing the perceptions questionnaires and dichotomised as good or poor perceptions.

Knowledgeable: Adolescents scoring above or equal the mean value of the total score in knowledge questions were characterised as knowledgeable while those who score less than the mean value, were considered as not knowledgeable (Binu, Marama, Gerbaba & Sinaga 2018:3). In the context of this study, the level of knowledge was measured through computing the knowledge questionnaires and dichotomised as knowledgeable or not knowledgeable.

Sexual and reproductive health service (SRHs) utilisation: Adolescents SRHs utilisation was measured by asking them if they used one or more of the services in the previous 12 months, a positive response (yes) to use of one of the listed services (contraceptives, STIs including HIV test and counselling (HCT), and pregnancy related services) above was regarded as utilisation of SRHs (Abiodun, Olu-abiodun, Ani & Sotunsa 2016:6). In the context of this study, the utilisation of SRHs was measured by asking adolescents whether they used one of the listed services in the previous 12 months, a positive response (Yes) or (Not). Also, to measure the adolescents' ability to exercise

their SRHRs, respondents were asked if adolescents were free to exercise their SRHRs or not?

1.7 THEORETICAL FOUNDATION OF THE STUDY

1.7.1 Research paradigm

A study paradigm is a guide that researchers can use to ground their research (Shannon-Baker 2016: 319). It is the researcher's view on how to look at things and apply in study (Rehman & Alharthi 2016:51). Pragmatism focused on realistic and real-world problems need to be solved and be consequence-oriented, problem-centred and pluralistic (Amare 2017: 54 & Fei 2015:16). In this study, the pragmatism paradigm that is the most widely used for mixed method research design was considered. Therefore, due to the nature of the questions that are answered in the mixed method study design the chosen research paradigm is pragmatist.

1.7.2 The theoretical framework

According to Butler (1994:149), the Health Belief Model (HBM) was developed in the early 1950s by social scientists at the U.S. Public Health Service in order to understand the failure of people to adopt disease prevention strategies or screening tests for the early detection of disease. Later uses of HBM were for patients' responses to symptoms and compliance with medical treatments.

The HBM suggests that a person's belief in a personal threat of an illness or disease together with a person's belief in the effectiveness of the recommended health behaviour or action will predict the likelihood that the person will adopt the behaviour (Abraham & Sheeran 2015:29). Therefore, the HBM was used as the theoretical framework since adolescents sexual and reproductive health could be challenged and guided by their perceptions.

The HBM theories describe that people's beliefs about whether or not they are at risk for a disease or health problem, and their perceptions of the benefits of taking action to avoid it influence their readiness to take action. The HBM contains several constructs that are hypothesised to predict why people engage in prevention, screening, and/or controlling health conditions (Tarkang & Zotor 2015:3).

- Personal characteristics, such as age, gender, and ethnicity modify individual perceptions, such as perceived susceptibility, severity, self-efficacy, benefits and barriers.
- Perceived susceptibility and severity of a health condition together, have been labelled as "perceived threat."
- Perceived benefits help reduce perceived threat to health behaviour. Perceived barriers impede health behaviours. Benefits minus barriers support health behaviour change.
- Self-efficacy influences perceived threat (perceived susceptibility and severity) and perceived benefits minus perceived barriers, which support initiation of health behaviour change.
- Cues in the environment trigger action and act on individual perceptions, such as perceived benefits, and perceived susceptibility (Abraham & Sheeran 2015:29).

1.7.2.1 Application of the constructs in the study

The researcher was interested in understanding the perceived susceptibility, severity, barriers and benefits of SRHRs and services among rural school going adolescents in the rural Arsi zone, Ethiopia. One may consider that adolescents were at risk for SRH risks and they might be motivated to adopt a behavioural change. If they perceive that SRH problems have a negative impact on their lives, they may take steps to prevent such problems. Literature affirms that people take action if they believe that adopting this new way of health reduces their tendency to be in poor health. Also, they see significant benefits in adopting new health behaviour in relation to the costs to be incurred; they may have adopted a new health code of conduct (Jeihooni, Hidarnia, Kaveh, Hajizadeh & Askari 2016:7).

Largely, people are more likely to take action if they feel that they are able to perform the task successfully (Tarkang & Zotor 2015:3). Hence, this model (HBM) was used to bring behavioural change among adolescents on their SRHRs and services. Accordingly, the developed training guidelines were guided by the concept of this theory to promote adolescents' knowledge and perceptions of SRHRs and services utilisation.

Generally, the study was guided by the following factors of HBM: As described in (Figure 1.1 below). The HBM comprises three different stages that lead to action related health.

i. **Individual perceptions:** This is focused on individuals believed to be susceptible to the risk and perceptions to the severity of the diseases (Butler 1994:149).
ii. **Modifying factors:** According to Butler (1994: 150), these refer to demographic variables of the individuals that influence their health-seeking behaviours. For this study, the modifying factors of adolescents were: age, gender, educational level, knowledge and perceptions.
iii. **Likelihood of action:** This is the possibility of an action a person's action determined by the balance or inequality between a person's perceived positive and negative energy affecting his or her life (Butler (1994: 150).

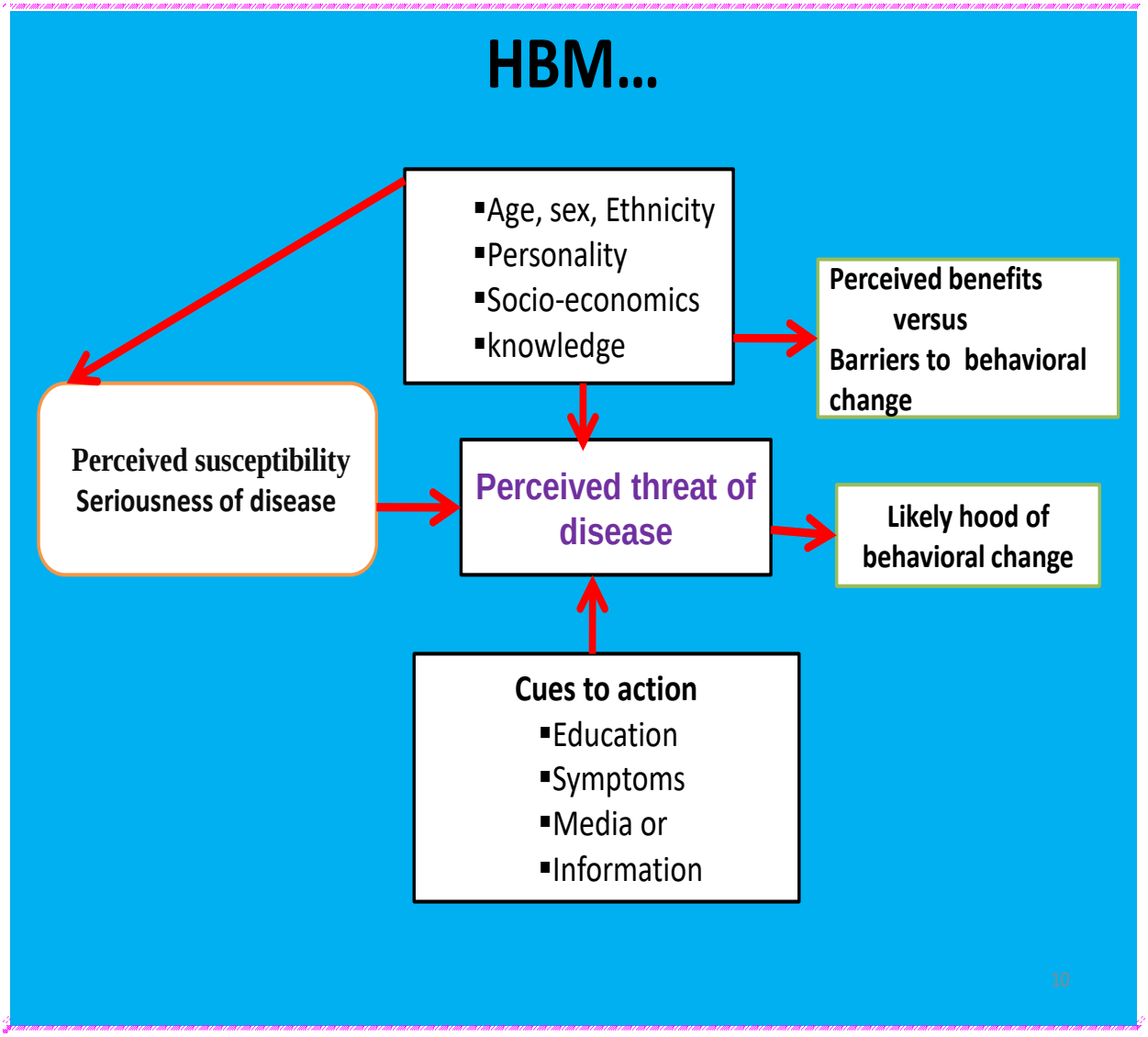

Figure1.1 Diagrammatic presentation (Tarkang & Zotor 2015:4)

1.8 RESEARCH DESIGN AND METHODOLOGY

In this study, a mixed-method sequential explanatory study design was used. This design was selected to understand the knowledge, perceptions and use of SRHRs and services among rural schooling adolescents by combining numerical styles from quantitative data followed from qualitative data (Creswell 2015:535).

For mixed-method study, the sequential explanatory study design was chosen when the quantitative data collection and analysis were followed by qualitative data collection and analysis (Creswell 2015:20). Consequently, this study passes through three different phases (phase 1 for quantitative, phase 2 for qualitative, and phase 3 for training guidelines development from the phases 1 and 2 findings).

1.8.1 Quantitative Phase (phase 1)

This phase utilised a quantitative research design to identify adolescents' knowledge and perceptions of SRHRs and services utilisations. In addition, this study's first phase identified the factors associated with SRH service utilisation among adolescents.

1.8.1.1 Phase 1: Study Setting

The study was done in five randomly selected rural secondary schools in Arsi Zone, Ethiopia. These schools were selected from Dodota, Hexosa, Bokoji, Sagure and Tiyo secondary schools. In Ethiopia, secondary school starts at grade 9 until grade 12 and has two phases. Pupils age group 15 to 16 years are expected to attend 9 and 10 grades while pupils 17 to 19 years age group attend 11 to 12 grades (https://www.nuffic.nl/en/education-systems/ethiopa). The rural secondary schools were selected because of the fact that the researcher experienced adolescents' knowledge and perceptions gaps there, which exposed adolescents to SRH risks.

1.8.1.2 Phase 1: Population and sample selection

Scholars defined population as a group of people or things with certain common characteristics that are of interest to the researcher (Babbie 2016:119). In this study, the study population was all adolescents attending secondary schools in Dodota, Hexosa, Bokoji, Sagure and Tiyo schools in Arsi Zone, Ethiopia.

The sample is a small group of targeted individuals that the researcher wants to study in order to make targeted people addressed (Creswell 2015:142). The study's sample

population consisted of randomly selected individual adolescents in the five selected secondary schools.

1.8.1.3 Phase 1: Sampling criteria

Sampling is the method of choosing a subset of the number of interested people for the sake of making study and estimates of the statistics of that population (Anol 2012:65). Hence, the researcher used the probability sampling technique to select adolescents from randomly selected secondary schools. Adolescents were selected in accordance with their inclusion and exclusion criteria pre-determined to complete the self-administered questionnaire (See in detail in chapter 3 of table 3:1).

1.8.1.4 Phase I: Data collection

In this phase, data collection was done by organised self-administered questionnaires. Firstly, following identification of the respondents, the objectives and implication of the study was clarified to them, and then researcher addressed any queries. Secondly, for respondents less than18 year's old parental consent was obtained before conducting data collection and those who were greater than 18 years their consent was also obtained. The questionnaires were then administered to the respondents by the researcher and assistants using paper and pencils. Those who could complete the questionnaire without assistance were allowed to do so, while the researcher assisted those who could not. The researcher distributed questionnaires for selected adolescents. Confidentiality and anonymity were strictly applied, and respondents' identifiers were not required. Finally, the researcher kept the completed questionnaires under lock and key during the entire process.

1.8.1.5 Phase I: Data analysis

Creswell (2015:10) states that data analysis is summarising and interpreting the data findings in words to answer the research questions. For this quantitative study, the collected data were coded, cleaned and analysed by using SPSS 25 version software.

Frequency distribution, mean, and standard deviation were used for univariate analysis. Bivariate and multivariate logistic regressions were done to identify the association of factors with sexual and reproductive health service utilisation. The statistical significance level was determined by odds ratios, at 95% confidence interval and p-value less than 5% was used to declare the statistical significance in the analysis. See Chapter 3.

1.8.1.6 Phase I: Data validity and reliability

Validity is defined as the strength of the research tool provided to measure what is to be measured (Sideridis, Saddaawi & Al-Harbi 2018:4). In the current study, to guarantee the validity: First, the content validity of the questionnaires was confirmed. The research project's supervisor and some experts on the field of study carefully analysed the research questionnaire to judge the contents' appropriateness and the need for modification to achieve the study's objectives. The supervisor of the project determined whether the research instruments' items adequately represented all the areas for investigation. The well-structured questionnaire was then pretested to ensure coherence and inclusiveness. Preliminary tests were conducted for questionnaires to increase their relevance, accuracy, and clarity in answering required research questions.

Data reliability (Creswell 2015:159) refers to the level at which a given study is consistent when the same strategies are used in repetitive ways from a stable and consistent object. An important role of keeping reliability in this study is to reduce bias and errors in the conduct of the study. Thus, in this study, the questionnaire was tested for reliability using Cronbach's alpha (value 0.85).

1.8.2 Phase II: Qualitative method and design

Qualitative research has been defined as an investigative process of understanding according to the cultures of different investigative methods that assess a person's problem (Creswell 2015:16). In this phase, the researcher used to understand the actual perceptions of the study participants of their SRHRs and services.

1.8.2.1 Phase II: Qualitative study setting

The qualitative study was conducted at rural Arsi Zone, Ethiopia**.** See chapter 5 section 5.5 and chapter 1 section*1.9.1.1).*

1.8.2.2 Phase II: Population

In this study, all adolescents who had been involved in phase 1 of the study were invited to take part in phase 2 of the study. Eligible participants were purposely selected for both FGDs and IDIs from the purposely selected schools and health facilities respectively.

1.8.2.3 Phase II: Sample and sampling technique

As described by Creswell (2015:324) non-probability purposive sampling can be used for qualitative study. Consequently, 24 adolescents for FGDs and 12 key informants for IDIs were selected in the current study.

1.8.2.4 Phase II: Data collection

Creswell (2015: 218) described individual interviews as a process for collecting IDIs data. The researcher asked questions and wrote down the answers to the person who participated in one study at a time. Alternatively, focus group discussion collects data through group discussions, usually four to six. Discussions are designed to test the understanding and ideas of new SRHRs and services. In this phase, data were collected from 4 FGDs among adolescents using structured open-ended interview guides. The second sets of data were collected from key informants of 6 teachers and 6 HCPs during IDIs. The researcher conducted IDIs based on how to improve adolescents SRH problems in their community.

1.8.2.5 Phase II: Data analysis

It is a process of transcribing, coding, and developing categories (Creswell 2014:198). In this phase, an expert in both languages translated the transcripts from Afan Oromo to

English language. The verbatim transcription and the careful translation were used to guarantee the accuracy of the original messages of the interview. As mentioned in chapter 5 thematic analysis was used by using ATLAS.ti-8 version software.

1.8.3 Phase III: Training guidelines development

The training guideline were developed to promote adolescents' knowledge and perceptions of SRHRs and services, based on the study results of phase I, findings of phase II and on the integration of these results. For details, see the below discussion under chapter 7.

1.9 MEASURESOFTRUSTWORTHINESS ANDVALIDITY AND RELIABILITY

Trustworthiness refers to the quality of the research findings. Trustworthiness focuses on ways in which a researcher or reader judges the quality of the findings (Miles & Huberman 1994:277). Trustworthiness exists if the findings of a qualitative study represent reality or life experiences of the participants.

The four strategies that were used to ensure trustworthiness of this study are credibility, transferability, dependability and confirm ability. A detailed description of these strategies and their application to this study were presented in chapter 5, section 5.11. For a quantitative phase the validity and reliability of the study were assured as discussed in chapter 3, section 3.11.

1.10 ETHICAL PRINCIPLES

The ethical protection of the study participants was maintained throughout the data collection. Prior to data collection, ethical clearance was obtained from the UNISA, Department of Health Ethics Research Committee and from concerned bodies. Accordingly, the following ethical principles were applied for both phases: on which ethical conduct is based on principle of respect for persons, beneficence and non-malfeasance and justice. The ethical issues that relate to this study are consent, privacy and

confidentiality, protection from harm and publication of the findings. The details of ethical considerations are discussed in chapter 3, section 3.13.

1.11 SCOPE OF THE STUDY

The research was limited to investigate and explore adolescents' knowledge, perceptions, use of services and affecting factors of SRHRs and services. In addition, to identify barriers of SRH service utilisation and development of training guidelines used to promote adolescents' knowledge and perceptions of SRHRs and services. It can infer the general population in the study area and other similar settings since it uses probability-sampling techniques. The scope of the study was limited to five rural high schools in Arsi Zone, Ethiopia.

1.12 THE STRUCTURE OF THE STUDY

As stated below, the thesis is categorised as:
Chapter 1: Orientation to the study.
Chapter 2: Literature review for the study.
Chapter 3: Research design and method of phase 1.
Chapter 4: Presentation and discussion of phase 1 result.
Chapter 5: Research design and method of phase 2.
Chapter 6: Presentation and discussion of phase 2 findings.
Chapter 7: Integration of phases 1 and 2 for training guidelines development.
Chapter 8: Conclusions, recommendations and limitations of the research.

1.13 SUMMARY

In this chapter, the orientation of study was discussed in respect of study background information, research problem, significance, purpose, objectives and research paradigm and theoretical foundation were presented in this chapter. The study design and methodology, ethical issues and approaches were also briefly described.

CHAPTER 2

LITRATURE REVIEW

2.1 INTRODUCTION

In this chapter, a review of texts from a wide range of sources including books, journals articles and government reports as well as theses/dissertations titles was made on topics related to adolescent ideas and SRHRs information and services. Moreover, relevant articles were searched by MEDLINE (PubMed), EMBASE, Current Contents (Institute for Scientific Information), Science Direct (Elsevier), the Cochrane Library and Google scholar search engines using the following subject headings and text words: “adolescent,” “sexual reproductive health,” “reproductive health right,” ‘‘training guideline’’ and their synonyms and related terms. Also, the researcher used Boolean logic to combine search terms. These Boolean operators (AND, OR and NOT) were used to try different combinations of search terms or subject headings stated above.

2. 2 ADOLESCENCE SEXUAL AND REPRODUCTIVE HEALTH CONCEPTS

According to (WHO 2010:11), “the word adolescence is derived from the Latin verb ‘‘adolescere’’ which means grow to maturity.” However, (UNFPA 2006:1) categorise the peoples age group as 10 to 19 years adolescents, 15 to 24 years youth and those aged between 10 to 24 years as young people.

Adolescence is a stage in life where the growth of the reproductive system, sexual maturity, and identity formation emerged (Anjali, Bhagyalaxmi & Shikha 2009: 14). One situation we know is that adolescence as a temporary phase characterised by exploration, discovery and taking risks is associated with a host of major changes in the lives of teenagers. This is marked as the time amongst juvenile and parenthood when physiological and anatomical changes turn boys and girls into young men and women so they can have offspring (Sedgh, Lawrence, Finer, Bankole, Elires & Singh 2015:2).

During this transition, young people become more sensitive to the natural world around them. Eco-friendly issues comprising parents, friends, school, shelter, community policies and strategies, may support or challenge the health of teen-agers (Thupayagale-Tshweneagae & Mokomane 2013: 23). Moreover, adolescence is a critical period where new behaviours are easier to learn than any time. Therefore, it is important to develop training guidelines for promotion of adolescents' knowledge and perceptions of SRHRs and services.

Globally, an expected 1.2 million teenagers died from SRH risks. These are associated with underserved of SRH services, cultural influences and lack of knowledge on their SRH negative outcomes like sexual coercion and early marriage to protect themselves from these complications at all (WHO 2015a:4). A study done in Zimbabwe showed most of the time adolescents' pregnancy and childbearing occur before they have experiences and skills in self-protection, get access to health services and supplies such as condoms (Kurebwa 2017: 2).

A study in Pakistan shows that 50% of adolescents were knowledgeable about their SRHRs. However, they very rarely exercise their SRH rights (Iqbal et al 2017: 3).It was also recommended by world health organisations that it is the right and need of every adolescent to possess information and exercise their rights of SRH services (WHO 2018 a:4).

2. 3 SEXUAL AND REPRODUCTIVE HEALTH RIGHTS

Sexual and reproductive health is the state of complete physical, mental and social well-being in all matters pertaining to the reproductive system. It means that people can have a satisfying and safe sexual life, the ability to reproduce, and the freedom to decide how, when, and how often (WHO 2017b:3).If the needs of SRH are not met, people are deprived of the right to make important decisions about their bodies and their future, which has a detrimental effect on the well-being of their families and future generations (UNFPA 2014: 1).

Young people are also at greater risk, often facing barriers to knowledge and sexual and reproductive health care. Adolescents are negatively affected by HIV, for example, and every year millions of girls experience unintended pregnancies, which put them at risk during childbirth or unsafe abortions and disrupt their ability to attend school (UNFPA 2014:2).

To preserve adolescents SRHRs, they want admittance to correct information and the safest, most effective, affordable and acceptable birth control method they choose. Everybody has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of limits (UNFPA 2010:70).

These human rights are contingent on the respect of the fundamental rights of adolescents to select freely and time for their children and to have the information However, many adolescents still face barriers to exercise their SRHRs of information and care (UNFPA 2010:70).

2.3.1 Linking SRH with human rights

Progressively international, regional and national bodies have affirmed the centrality of human rights in the context of SRH and provided guidance on its normative content and application (Sen & Govender 2015: 228). Human rights in relation to SRH: a) protect individuals against coercion, discrimination and violence; b) call for access to necessary information, education and services, including SRHs, to be available, accessible, and acceptable of good quality; and c) call for accountability of duty bearers and mechanisms for redress of abuses and violations of rights individuals (Ana & Marie 2018:7).

Women's rights, particularly human rights related to SRH, include the right of individuals and couples to make decisions concerning their health and reproduction free of discrimination, coercion, and violence as expressed in human rights documents (WHO 2018b: 9-11). The study states that, SRHRs and sexual rights are consistently human rights (HRs) documented through several HRs tools. Sexual rights provide persons the

chance to freely select spouses deprived of any kind of judgement and the right to control and exercise safe sex (Serra 2014: 4).

Human rights also put emphasis on addressing inequalities, ensuring participation of individuals and communities in health planning and decision-making and ensuring accountability. An overall impact of this approach is to achieve the empowerment of individuals to claim their rights to information, education, and quality of services (UNFPA 2015a: 5).

Strategic indicators for universal access to SRHRs make choices about individuals SRH function, without refinement, pressure, and violence to ensure that people are capable to exercise (UNFPA 2015a: 5).

Accordingly, adolescents SRHRs include:

- Seek, obtain and convey information related to SRH
- Have respect for human veracity
- Choose their spouse
- Make a decision to have children and
- Practice a non-violent and enjoyable sexy lifespan (Universal Access 2015:3).

Likewise, a study conducted in Ghana suggests that adolescents have SRHRs, just as adults do, but their low social status, lack of knowledge and lack of autonomy and physical vulnerability make it more difficult for them to exercise such rights (Yendaw, Martin-Yeboah & Bagah 2015:148).

Generally, SRHRs of adolescents are summarised in figure 2.1 below.

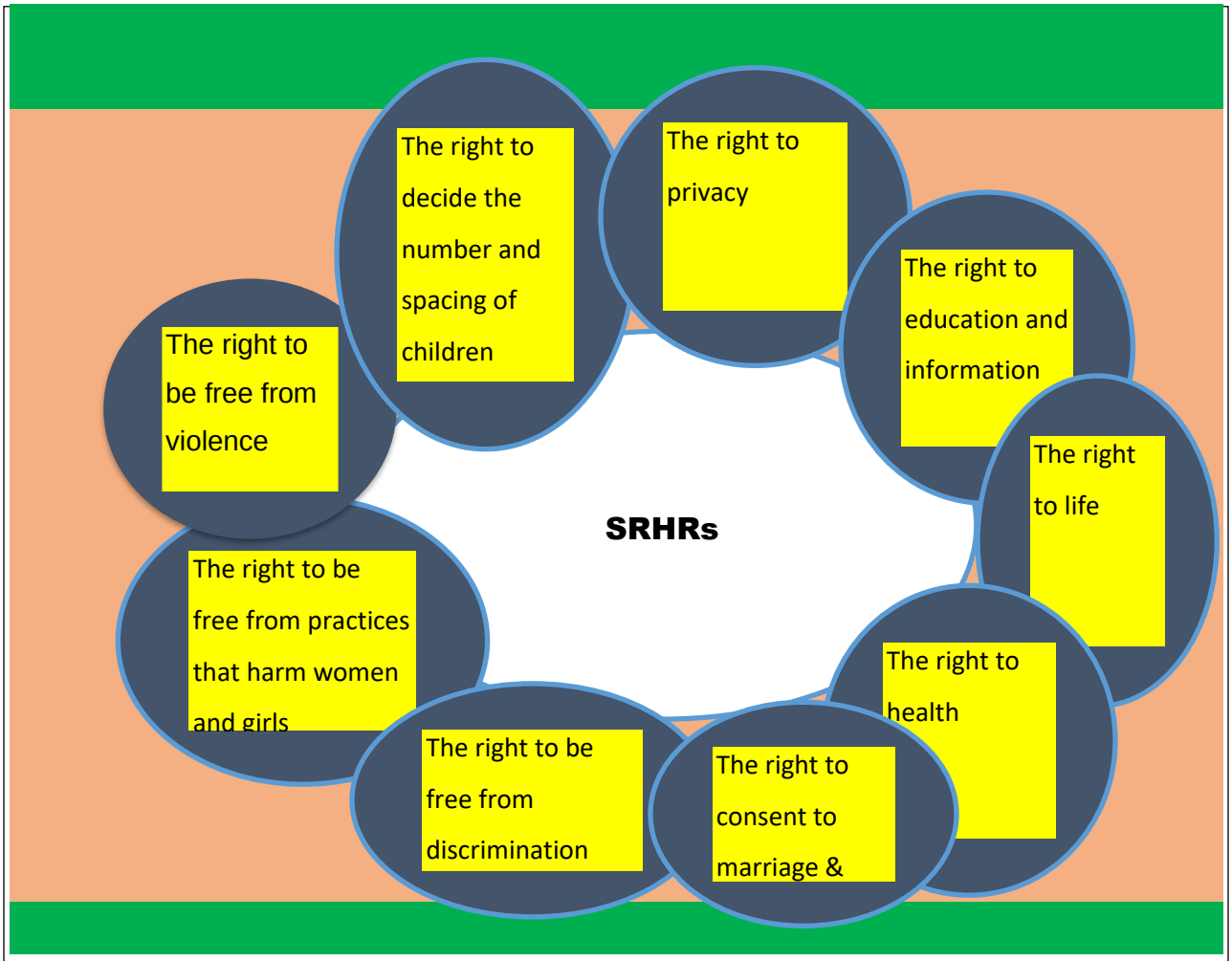

Figure2. 1: Universal adolescents' SRHRs (UNFPA 2015: 5)

2. 4 ADOLESCENTS' CHALLENGE OF SEXUAL AND REPRODUCTIVE HEALTH

The study in Kenya on adolescents' perceptions of SRHs by (Godia, Olenja, Hofman & Broek 2014:14) reveals that many challenges are faced by adolescents due to traditional, community and financial scarcity in which they live. Adolescents face SRH risks like pregnancy and childbirth related complications; STIs /HIV, sexual and physical abuse (Mavundla, Dlamini, Mac-Ikemenjani & Nyoni 2015:50).

Literature showed that lack of parental guidance and support is one of the causes for unintended pregnancies, STIs, and HIV among rural adolescents (Mustapa, Ismailb, Mohamadc & Ibrahimd 2015:1). Additionally, ASRH issues are politically unrecognised in some countries and often have uncertain policies and laws (Morris &Rushwan 2015:41). Evidence showed that in Ethiopia the National Policy of ASRHs was more concentrated on adult women instead of adolescents (Federal Ministry of Health 2016:16).

In developing countries, ASRHs were not properly provided due to corruption, lack of resources, economic and physical accessibility of services (Morris & Rushwan 2015:41). Moreover, ASRHs utilisation could be affected by confidential issues, embarrassment, lack of knowledge, misinformation and tradition, stigma and shame (Lince-Deroche, Hargey, Holt & Shochet 2015:76).

2.4.1 Adolescent versus sexually transmitted infections (STIs)

According to WHO reports on HIV / AIDS, an expected 2.1 million young people were living with HIV in 2016; most of them were found in African countries. Since 2006, the total number of HIV-related deaths has been declining. However, evidence reports that this is not yet the case among young people (Abrahams 2015:1). The majority of adolescents living with HIV do not receive the support and care they need to improve their state of health and prevent transmission, hence placing millions of adolescents at risk of contracting the virus (WHO 2017a:1).

The study conducted by (Thupayagale-Tshweneagae & Mokomane 2013:16) shows that globally around 5,000 adolescents were infected with HIV daily. This shows that young people are at risk of HIV infection due to poor health information, risky behaviours and lack of access to SRHs.

Study revealed that over four decades into the epidemic, most adolescents still lacked information on how to prevent STIs including HIV and AIDS. Most of them had heard about AIDS, but very few knew how one could be infected by HIV (Kumar, Goyal, Singh,

Bhardwaj, Mittal & Yadav 2017:2). According to UNICEF (2017:1), many adolescents were representing a rising part of individuals living with HIV. Moreover, a study cited by (Morris & Rushwan 2015:44), shows that HIV and STIs also have alarming rates of infection among adolescents.

According to this study, adolescents have poor knowledge and protective barriers (condom) that make them more prone to STIs and HIV. The cultural and socioeconomic factors (social inequality) and involvement in sexual relationships with older partners make them more vulnerable to STIs and HIV. This shows that globally only a few teenagers used the acceptable and affordable STIs/HIV services at all. In most countries, the knowledge of HIV/STIs among adolescent people is low and HIV testing is rare (Morris &Rushwan 2015:51).

2.4.2 Adolescent early marriage and teenage pregnancy

Despite global progress in expanding access to education and delaying adolescent marriage and childbearing, still lack of knowledge and awareness remain challenging adolescents. Consequently, they are at risk of early marriage, and teenage pregnancy (Bajracharya, Psaki & Sadiq 2019:2).

As reported by the (World Bank 2017:2), in less developed countries, about 39% of girls get married before the age of 18 and 12% before the age of 15. According to this report, the birth rate in middle-income countries is twice higher than that of high-income countries.

In most of the less developed countries, teenagers choose to become pregnant because they have fewer learning and business chances. They often preferred to get marriage and childbearing as the best option (Darroch, Woog, Bankole & Ashford 2016: 1). In addition (WHO 2014:2) recommends that adolescents' well-being and economic or social growth could be improved by avoiding early marriage, teenage pregnancy, and pregnancy related risks.

2.5. SEXUAL AND REPRODUCTIVE HEALTH SERVICE UTILISATIONS

Adolescents SRHs should be accessible, affordable, relevant, and free of gender bias and any discrimination (WHO 2014:3). A study conducted in Nigeria by (Olutoyin, Ayodeji & Oluwafisayomi 2016: 7) states that ASRHs were physically accessible, but financially not supportive to adolescents. In this study, almost half (51.0%) of adolescents utilised SRHs. Private clinics (43.1%) were the most preferred health facilities for rural youth to SRHs (Olutoyin et al 2016: 7).

Evidence indicates that adolescents in developing countries underutilised SRHs. A report on a survey from Ethiopia among school going adolescents indicated (21.2 %) (Binu et al 2018: 1). Another report from 70 developing countries on adolescents' use of SRHs presented that data related to contraceptive use, care-seeking for a sexually transmitted infections (STIs) and testing for HIV was limited (Woog, Singh, Browne & Philbin, 2015:6).

Creating an enabling environment in the service delivery sites, and ensuring privacy and confidentiality, as well as ensuring same-sex service providers and feasible service hours to adolescents, could increase the service utilisation (Napit, Shrestha, Magar, Paudel, Thapa, Dhakal & Amatya 2020:3).

The findings revealed that modern contraceptive use was low among married adolescents in all regions of Africa. Only a minority of sexually active adolescent women who had the STIs sought to care at a health facility. The proportion of adolescent women who had been tested for HIV 12 months prior to the survey ranged from (2%) in Western African countries to (34%) in Southern African countries (Woog et al 2015:3).

Some other studies in sub-Saharan African and Asian countries have also found that adolescent mothers are more likely to delay seeking antenatal care and less likely to receive adequate antenatal care, compared to older mothers (Kamal, Hassan & Islam 2015:1). Thus, it is recommended that SRHs need to be assessed periodically to ensure that adolescent service utilisation is provided in order to improve the service utilisation.

2. 6 ADOLESCENTS' KNOWLEDGE OF SRH ISSUES

Studies conducted in Ghana show that (80%) of the respondents have heard and known some aspects of SRHRs. However, female adolescents as compared to male adolescents lacked knowledge of SRHRs (56%, 46.2%) respectively that could lead to sexual rights violations (Yendaw et al 2015:1). Research in Nigeria shows that about half of teens were aware of STIs and (31%) were aware of reproductive problems (Abiodun et al 2016: 2).

Additionally, important research has been done to examine children's knowledge and perception of SRHs in Nepal. The study was conducted among 3041, 15-19-year-olds living in rural areas in four Nepal counties, which concluded that participants had limited reproductive and sexual health information (Khanal 2016: 21).

Ethiopia (EDHS 2016: 38) shows that adolescents' knowledge of how to prevent HIV varies between female and male adolescents (24%) and (39%) respectively. Regarding residence, urban adolescents were more likely to have access to HIV prevention information than for rural adolescents.

2. 7 PERCEPTIONS OF SEXUAL AND REPRODUCTIVE HEALTH

Health belief model theory holds that, the view that "people's perceptions about whether they are at risk or not of disease or health problem, and their ideas about the benefits of taking action to avoid it influence their readiness to take action" (Abraham & Sheeran 2015:30). These beliefs as well as ideas are incorporated into theoretical concepts namely: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy (Tarkang & Zotor 2015:3).

A study conducted in Pakistan by (Iqbal et al 2017: 9) states that a lack of perspective on SRHRs can lead to sexual abuse, violence, lifelong mental trauma and / or adverse health outcomes. Adolescents' perceptions are not uniform between boys and girls. Adolescents seeking SRHs are characterised based on the available services and staff helps (Godia et al 2014:13).

Comparative study conducted in Kaski, Nepal, on girls' access to adolescent friendly SRHs by (Sunita & Randi 2020:1), states that girls demonstrate poor literacy about SRH. Most female adolescents face challenges before they reach health facilities. Strong sexual orientation, stigma and dependency are the highest barriers to young girls seeking care. They concluded that health facilities were unfriendly for young people and had an access plan (Sunita & Randi 2020:1)

2. 8 SUMMARY

This chapter briefs overview of the adolescents' perceptions and knowledge of SRHRs and services in Ethiopia and globally. Adolescent SRH issues were discussed in respect of its multifaceted perspectives, its purposes, impact, achievements, challenges, in availability of resources, as well as the associated constraints. Also, suggestions for interventions from various sources were discussed (Chapter 3 outlines phase 1 research design and methodology for quantitative phase).

CHAPTER 3

RESEARCH DESIGN AND METHODS FOR QUANTITATIVE (PHASE 1)

3.1 INTRODUCTION

This chapter describes an inclusive description of the study design and the methods used to achieve the purpose and objectives of the study and answer the research questions. The results of phase 1 will be discussed in next chapter 4.

3.2 RESEARCH DESIGN

Research design is a strategy used to guide researchers for population and sample selection processes as well as used for the data collection process and data analysis (Johnson & Christensen 2017: 478). This study utilised the mixed-methods explanatory sequential design whereby data were collected using quantitative and qualitative techniques. Mixed-methods sequential explanatory design implies collecting and analysing quantitative and then qualitative data in two consecutive phases within one study (Creswell 2015:535).

In the explanatory sequential study design, the researcher collects data during the quantitative (numeric) study and analyses it as a first step of the mixed methods. In this case, both phases 1 and 2 were allowed to provide a comprehensive understanding of adolescents' knowledge and perceptions of SRHRs and services in rural schools in Arsi Zone, Ethiopia.

3.2 RESEARCH PARADIGM

The paradigm reveals shared thinking and principles that shape the way a researcher perceives the world, interprets and works in. Through this concept lens, the researcher looks at the methods of research to determine the research methods to be used, and how the data will be analysed (Adil & Khalid 2016:1 & Nguyen 2019: 4). Scientific research

literature suggests that the researcher should have a clear view of paradigms or worldviews that give the researcher the basics of philosophy, theory, and methods (Zukauskas, Vveinhardt & Andriukaitiene 2018: 5).

According to Zukauskas et al (2018:6), a research paradigm is a perspective based on a set of assumptions, concepts, values, and practices that are held by a researcher, and it is essentially an approach to thinking about and doing research. Pragmatism allows the researcher to use a variety of methods, using different concepts from both quantitative and qualitative data to gain a better understanding of research problems (Shannon-Baker 2016: 323). Since the current study used mixed-method study design, a pragmatism research paradigm was selected for this study.

3.2.1 The quantitative research design approach

This design examines the relationships among variables as a means of testing theories (Creswell & Creswell 2018:37). The quantitative research design involves identifying correlations and patterns in variable relationships by examining and testing such variables. Besides, it is considered a rational process for verifying, disproving, or offering credibility to theories that have existed (Leavy 2017:30).

In quantitative research the researchers analyse data with the help of statistical knowledge and tools, hoping the data will yield an unbiased result which can be generalised to a larger population (Creswell & Creswell 2018:37). The quantitative method employed in the present study was the principal component designed to collect data useful to have an empirical understanding of the patterns of adolescents' knowledge and perceptions of SRHRs and services. In this study, the research paradigm is a positivist paradigm. This method allowed the researcher to ask all the respondents the same questions with predetermined responses, which allowed objective data to be collected throughout the study. Hence, in this phase, a cross-sectional quantitative survey was conducted among adolescents in rural secondary schools in Arsi Zone, Ethiopia.

3.2.2 Qualitative research design approach

Qualitative research is a paradigm of inquiry that allows researchers to examine human behaviour in depth and the reasons that govern such behaviour (Fei 2015: 566). The researcher acts as a listener and interpreter of the data 'given' by the participant; the researcher's interpretation is brought to the fore in the analysis process. In order to credibly interpret a participant's story, therefore, the researcher needs to understand and make explicit their position in relation to the phenomenon under scrutiny. This requires a degree of self-reflexivity (Creswell &Creswell 2018:37).

Qualitative research is often an inductive process, fit for in-depth exploration of small samples with a less general result (Fei 2015: 571). The justification behind such an additional arrangement was to get a complete and comprehensive picture of the intended objectives. In fact, the need for the undertaking of a qualitative study becomes evident as a result of the emergence of new phenomena requiring further inquiry into some of the issues which would not be captured by the quantitative research method.

In the current study, the qualitative research design was utilised to explore and understand the knowledge and perceptions of adolescents on SRHRs and services in rural Ethiopia. The qualitative component of gathering data provided a focused engagement with school going adolescents, health care providers and teachers in rural Arsi Zone Ethiopia.

3.2.3 Rationale for using mixed methods approach

Presently, mixed methods have become increasingly popular in health-related research allowing a broader and deeper understanding of complex human phenomena. This growth in popularity has increased the range of usage and complexity in design approaches producing greater need for understanding of logistical and practical application in the study (Doyle, Brady & Byrne 2016:1).

A mixed-method approach was used to gain strength and reduce the weaknesses that result from using a single research design (Dawadi, Shrestha & Giri 2021:25). The mixed-

method approach helps to highlight complex research issues such as health inequalities and to address the problems of vulnerable or marginalised people (adolescents). Furthermore, it helps to minimise the chance of missing out pertinent information due to the study design limitations (Johnson & Christensen 2017:478).

Creswell and Plano Clark (2018:17) described that the main function of mixed-method study is the combination of quantitative and qualitative research design approaches to provide a more complete understanding of a research problem than either approach alone. Therefore, the researcher believes that using a combination of these studies helps to answer the research objectives.

In this study, the mixed-method study design was chosen as it enables the researcher to investigate and explore all relevant information that has been useful to the study, improving the reliability and overall performance of the research. Generally, in this study the mixed method design was chosen in order for the researcher to have a broader purpose and in-depth understanding of the research questions and phenomena (i.e., knowledge and perceptions of the adolescents regarding SRHRs and services).

3.2.3.1Philosophical underpinning of mixed-method design

In a mixed-method research design, the researchers' outlooks may be created from an idea of the post-positivist (quantitative) or constructivist (qualitative) design (Grove, Burns &Gray 2015:3). For a mixed method study design, a pragmatism philosophy used in a diverse view of the world and collecting data from different methods and analysis was included in a single study (Creswell & Plano Clark 2018: 10).

In this study, the justification for using pragmatism philosophy is because pragmatics philosophy recognises that there are many different ways of interpreting the world and undertaking research, no single point of view can ever give the entire picture and that there may be multiple realities (Creswell & Plano Clark 2018: 10). Accordingly, for this study, a mixed method design using a pragmatism philosophy was applied.

Furthermore, the reasons of using pragmatism as a philosophical underpinning to this study are explained below:

- Pragmatism is not limited to any specific epistemology or ontology.
- Pragmatism provides researchers with flexibility in terms of selection of methods, strategies and research methods that best suit their needs and goals.
- For pragmatists the world is not complete unity.
- For the researcher of mixed methods, pragmatism makes it easy to use a variety of methods, different worldviews, and different types of data collection and analytical techniques (Creswell 2014:11).

3.2.3.2 Sequential explanatory mixed methods

Sequential explanatory design is applied when two-phases are used first collecting quantitative data (phase 1) and analysis of results, and based on results from phase 1, the second phase (qualitative) data collection and analysis carried out (Greene 2015: 5).

The quantitative results led to the emergence of new questions which were used purposefully to select the best participants of the second phase (In this case; adolescents, teachers, and health care providers).

As discussed in chapter 7, the findings from both phases were combined through the data interpretation phase. The main reasons for choosing the sequential explanatory mixed method were best fit to answer the proposed research questions and draw on broader conclusions of the quantitative and qualitative findings (Chad &Baxter 2019: 18).
For detail see figure 3.1 below.

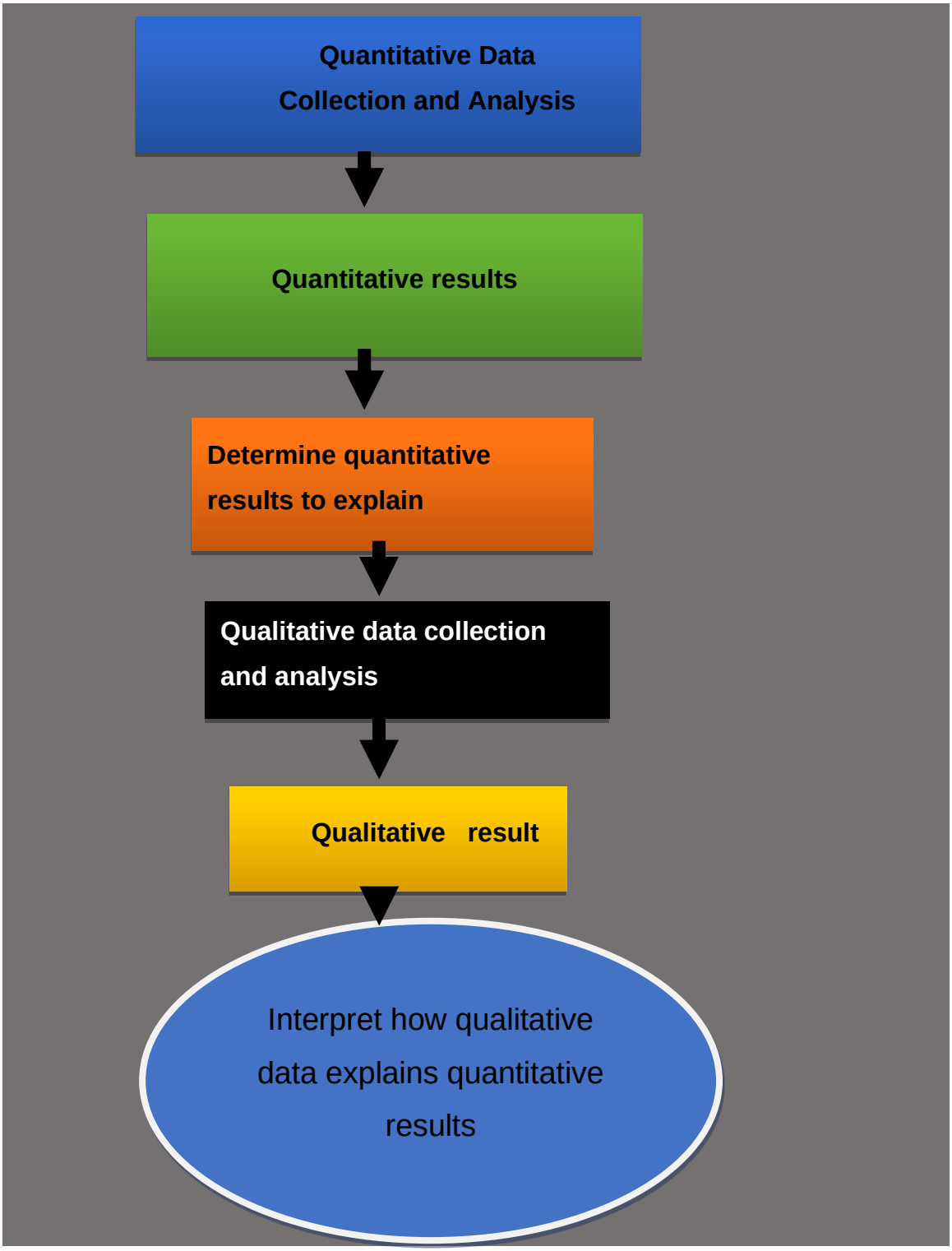

Figure 3.1 Diagrammatic presentation of sequential explanatory study design

3.6 STUDY SETTING

The study was conducted in rural areas of Arsi Zone, Oromiya Regional State, Ethiopia. Arsi Zone is found in the Eastern part of Ethiopia, 175 kilometres from Addis Ababa city. The study was done in five randomly selected rural secondary schools in Arsi Zone, Ethiopia. The schools selected were Dodota, Hexosa, Bokoji, Sagure and Tiyo secondary schools. In Ethiopia, secondary school starts at grade 9 until grade 12 and has two phases. Pupils age group 15 to 16 years were expected to attend 9 and 10 grades while pupils 17 to 19 years age group attend 11 to 12 grades (Education System in Ethiopia 2012:6).

The selection of the rural secondary schools was based on the researcher's experience on adolescents' knowledge and perceptions gaps, which exposed them to SRH problems and complications. According to the Arsi Zone Education Department Office Report (2019:1), the total numbers of adolescent students attending at rural high school were 8137, of these males 5096 and females 3041.

3.7 STUDY POPULATION FOR PHASE 1

A study population is a group of people that share common characteristics as predefined by the researcher (Babbie 2016:119). In this study, all adolescents attending secondary schools in rural Arsi Zone were considered as a study population.

3.7.1 Target population

It is the total group of people from whom the sample can be taken (Asiamah, Mensah & Oteng-Abayie 2017: 4). In this phase, the target population was adolescents (15 to 19-year-old) regularly attending five rural secondary schools.

3.8 SAMPLING PROCESS FOR PHASE 1

3.8.1Sample

Sample is a part of the population that represents the characteristics of the population (Creswell 2015:142). In this study, each adolescent (15 to 19 years) who attended at five selected rural secondary schools was considered as a study sample.

3.8.2 Sampling frame

When drawing a random sample, the researcher must have a complete list of people from whom he or she wants to draw a sample (Creswell 2015:142). In this case, the registry of adolescents in selected secondary schools was used as a sample frame.

3.8.3 Sample size determination for phase 1

To calculate the study sample size the researcher used a single population proportion formula as indicated below:

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

As,

n = the final sample size of the study

Z = Standard normal variable at 95% confidence level (1.96)

d = Marginal of error (0.05

p = Expected prevalence of adolescents who had knowledge on SRH (57.3%) and two design effects (Shiferaw, Getahun & Asres 2014:5). Also, 10%of expected non-response was added.

Then, $n = \underline{(1:96)^2 * 0.573(1-0.573) = 376}$

$(0.05)^2$

n= (376* 2 (design effect) =752

n = with 10% non-response rate 752+75 = **827.**

3.8.4 Sampling of respondents

Leavy (2017:76) defined sampling as the technique of choosing a study unit of the study to make representative of the whole group. The technique can be either probability or non-probability sampling (Taherdoost 2016:20). For this study, a probability sampling method was used to select five secondary schools using a list of schools in the rural Arsi Zone as a sample frame. There are 19 rural secondary schools in the area. Among these, five secondary schools were randomly selected by lottery method.

Following sample size calculation, the adolescents were stratified into grade 9, 10, 11, and 12 based on their grade level. All these five randomly selected rural secondary schools were included in the study. The calculated sample was proportionally allocated to each secondary school based on the number of adolescents (see table 3.1 below). Lastly, the systematic random sampling (SRS) technique was used to select study respondents from each grade level and section based on their attendance lists. When selected adolescent students were absent during the survey days, the researcher used next list of registers instead of the absent student.

Table3. 1 Proportional allocation at each secondary school

Area of secondary Schools	Population size	Sample proportional to school population size (PPs)	Desired sample at each school
Dodota	1400	1400/8576*827	135
Hexosa	2192	2192/8576*827	211
Bokoji	2484	2484/8576*827	240
Sagure	1500	1500/8576*827	145
Tiyo	1000	1000/8576*827	96
Total	8576		**827**

3.8.5 INCLUSION AND EXCLUSION CRITERIA FOR PHASE 1

Inclusion criteria of the study

- Adolescents attending daytime school aged 15-19 years, irrespective of gender
- Adolescents attending grades 9-12 at rural public schools (Because there were no private schools in rural study setting)
- Adolescents who were interested in partaking in the study.
- Adolescents aged 15-19 years were targeted because they are the most vulnerable to SRH problems. At the time they were most adolescents that have their sexual debut; some get pregnant or marry off (EDHS 2016: 6).

Exclusion criteria of the study

- Adolescents schooling at night time.
- Adolescents who were physically and mentally seriously ill that were unable to read, write and hear.
- Adolescents absent from school during data collection time.
- Adolescents aged less than 15 years.

3. 9 DATA COLLECTION APPROACH

In this phase data were collected by means of a self-administered questionnaire. After the decision to select the respondent by using both random and systematic sampling technique, each respondent was first given a consent form to read and sign it based on understanding and absolute willingness. In addition, for respondents less than 18 years, consent was requested from their parents / guardians before conducting data collection (See Appendix F: Consent form).

There were six data collectors. The data collectors were drawn from professional midwives based on their experience in data collection. Five of them had a Bachelor of Science (Bsc) in Midwifery and one Master of Science (Msc)/teacher from the Midwifery Department. Since the study was conducted at five schools, each Bsc Midwifery data collector who had experience in data collection was assigned for each school. While the one (Msc) teacher who had experience in facilitating and supervising the data collection process was chosen to assist the investigator for the overall data collection process. All of them received training for three days on what they had to do as data collectors. Signed and completed consent forms were placed in a box provided by the researcher, which was sealed once all the forms had been placed in the box daily.

The consent forms were not attached to the questionnaires thereby preserving anonymity. Also, additional boxes were provided for filled and completed questionnaires. The researcher/data collector started providing the questionnaires to respondents after a thorough explanation and following informed consent was obtained.

The data collector collected the questionnaires and dropped them in the box once the data collection course was finished by each interview epoch. When each day's data collection was over, the data collector handed over the sealed box and kept it in the researcher's office. During handing over of the collected data, each data collector/research assistant and researcher checked out the quality and completeness of each questionnaire so that

appropriate action to be taken for incomplete and less quality questionnaires on a timely basis.

3.9.1 Questionnaires

The questionnaire was developed based on a conceptual framework and objectives of the study by reviewing various literatures. The questionnaires were modified from previous studies and WHO reports (Khanal 2016: 6; Iqbal 2017: 13 & WHO 2018a: 22). The first questionnaire in English was translated into Afan Oromo regional language and translated back into English to maintain its consistency. Modifications were made to the original questionnaires to reflect the cultural context of Ethiopians (Appendix I: A).

3.9.1.1 Characteristics of the questionnaires

Bolarinwa (2015:196) describes that the questionnaires are the predetermined set of questions used to collect data. In this case, the adapted research instruments were categorised as indicated below. The questionnaires included 84 close-ended questions (Appendix: I)

The questionnaires main components were as follows:

A. Demographic and economic characteristics of respondents.
B. Knowledge and perceptions of respondents towards SRHRs and service.
C. Utilisations towards SRHs and affecting factors.
C. Respondents attitudes towards SRHs utilisation.

3.9.1.2 Pre-testing

The developed questionnaires were pre-tested a month before the actual data collection by 5% or 41 respondents at secondary school (Gonde secondary school) in areas other than the actual study area. Some modifications of vague words were corrected. The skip option was also added to individuals who indicated that they did not use SRHs questions.

3.10 DATA ANALYSIS AND MANAGEMENT FOR PHASE 1

3.10.1 Steps in data analysis and interpretation

Analysing and interpreting data involves representing data in statistics, and figures to summarise data while interpreting conclusions in words to provide answers to research questions (Creswell: 2015: 10). Collected data were analysed using descriptive and inferential statistics. Data coding was done according to the framework and objectives of the study using SPSS version 25.0 software before being analysed. The mistakes from respondents were checked or corrections made as considered necessary. Descriptive statistics were primarily used to describe demographic data and research questions based on frequency, and inferential analyses were used to explore relationships of dependent and independent variables. The main descriptive statistical procedures used were frequency distribution, mean, and standard deviations.

- **For using the bivariate logistic regression analysis**:

In this analysis all potential factors associated with the adolescents SRHs utilisation were checked. The ASRHs utilisation was a dichotomous variable. On the SPSS, the code given to “ASRHs with Good utilisation was ‘1’ whereas ‘0” was used to code a Poor ASRHs utilisation”. The bivariate analysis was done one by one to determine the crude odds ratio (COR) for each variable with 95% confidence interval (CI).

- **For multivariate logistic regression analysis**:

Those variables with their COR < 0.25 were all considered to be taken to the next model. Considering Hosmer and Lemeshow (2000:95), the next model of the analysis, multiple logistic regression analysis, was run. Models were built by using stepwise backward method of model building technique. This method was chosen because of the shorter computation time it takes while running the models and can give a chance for variables after running (Hosmer &Lemeshow 2000:97).

In the multiple binary logistic regression models, the effect of each independent variable on the dependent variable (SRHs use) was assessed by controlling for the possible confounders using a stepwise backward type of model development. Factors that were insignificant in the stepwise backward model development were removed one by one. Goodness of the models was also tested by diagnosing correctness of formulation of the models by using Hosmer-Lemeshow test and the one which was found to be greater than the significance level (p value =0.05) was accepted. If either of the models fulfils this criterion the one which is highly insignificant one was taken (Hosmer & Lemeshow 2000:97). Finally, the statistical significance level was determined by odds ratios, at 95%CI and p-value <0.05 were used to declare the statistical significance in the analysis.

3.11 VALIDITY AND RELIABILITY FOR PHASE 1

3.11.1 Data collection instrument validity

The validity of the research refers to the level at which a study answers research questions and findings are accurate to the purpose of research (Sideridis, Saddaawi & Al-Harbi 2018: 3). It can be internal and external. Internal validity is assured when the design of the study answers the question in the study accurately while the external validity refers to the ability to produce generalisability results to the population under which the study takes place (Sideridis et al 2018: 4).

In this study to maintain content validity of the tools; experts on the field of study and research project supervisor carefully analysed and commented on the instrument items for appropriateness to achieve the study's objectives. Furthermore, the research supervisor determined whether the research items adequately represented all the areas needing investigation.

For internal validity improvement, well-designed study design (mixed method) and study objectives were developed from relevant literature and documents. Thus, the investigator was more confident about the internal validity of the study results. The well-designed

questionnaires were then pre-tested to ensure consistency and comprehensiveness. Then, all ambiguous tools were modified, deleted, or appropriately replaced. Additionally, to ensure external validity, study settings and study respondents were drawn randomly from five secondary high schools to ensure the generalisability of the study results.

3.11.2 Reliability of data collection instrument

Reliability refers to the level at which a given study is consistent when using the same techniques in repetitive methods (Sideridis et al 2018: 2). The reliability of the study was assured by providing five days of training on theoretical and practical data collection for all data collectors.

The investigator verified the reliability of selected questions from study respondents during the fieldwork. Also, 15 randomly selected data were checked by different people for consistency. According to Sideridis et al (2018:2), the questionnaire was tested for reliability using statistical methods. Hence, for this study the researcher used the Cronbach alpha (α) for adolescents' perceptions of SRHRs and service measurements by licker scales 0.85 and the knowledge measuring questions with the multiple responses were 0.80 (Appendix I).

3.12 VARIABLES

3.12.1 Dependent variable

The outcome variable of the study was whether respondents had ever utilised SRHs in the last 1 year. Adolescent SRHs utilisation was measured based on respondents' self-response (1 =Yes and 0= No).

3.12.2 Independent variables

The Socio-demographic variables (age, religion, ethnicity, gender, grade, marital status, family education, family occupation, family income, family relationship, and adolescents'

pocket money), knowledge, and perceptions were considered as independent variables of the study.

3.13 ETHICAL CONSIDERATIONS FOR PHASE 1 AND PHASE 2

Ethical concerns focus on the rights of human research participants to full knowledge of the purpose of the study and the nature and scope of their involvement; the specific conduct of the investigator; and the ethics underlying the research question, boundary-setting strategies, and design procedures that were implemented (Creswell 2015:22).

The ethical protection of adolescents was maintained throughout the data collection. Prior to data collection, ethical clearance was obtained from the UNISA, Department of Health Ethics Research Committee (Appendix: C). Permission was granted from the Arsi Department of Education office for each school (Appendix: B). Participation was on the basis for voluntary informed consent obtained from each respondent and the code of conduct and the rules of autonomy, as well as adherence to principle of respect for persons, principle of beneficence and non-malfeasance, the principles fairness and justice are described in the following sections.

3.13.1 Principle of respect for persons

For both phases during data collection, the researcher explained the purpose of study to respondents and participants in familiar languages respectfully. Their participation was voluntary and informed that they could withdraw from the study at any time if they wished to do so. Respondents were allowed to ask any questions, and then sign an information sheet and an informed consent form (see Appendix E: section I). Accordingly, the following principles were applied:

- **Informed consent/assent:**

Informed consent means that participants have adequate information regarding the research, can comprehend the information and have the power of free choices, enabling them to consent to or decline participation voluntarily (Polit & Beck 2012:175).

In this study, for the quantitative phase, the respondents to the self-administered questionnaires were briefed on the aim of the study. In this way, adolescents18 years of age and older were able to make an informed decision about whether to participate or not. Permission forms were designed and shared with selected respondents. Then each respondent signed informed consent (see Appendix F: section I). For adolescents aged 18 years and under, an assent form was signed on their behalf from parents or guardians (Appendix F: section III) but adolescents afterwards confirmed their assent to partake in the study before completing the questionnaire.

The consent and assent forms clearly stated what the research was about and what the research was intended to explore on. The respondents were told that at any given time during the interview section they were free to leave if they felt not comfortable and did not want to finish. Also, for the qualitative phase the participants were provided with a participant information sheet (Appendix E: section I & II) to go through and ask questions if they were not clarified, after which their permission was sought to be interviewed.

Permission was also required from participants to audiotape conversations. Adolescents 18 years and older and key informants who agreed to be interviewed were provided with consent forms to complete (Appendix F: section I & II).

- **Autonomy/self-determination**

Autonomy is the right of participants or institutions to do the things they want to do (Polit & Beck 2012:177). Thus, participants were told that their participation in the study was voluntary, and they were free to decline to participate or respond and that they could withdraw from the study at any time. Those who agreed to participate were told that if they

want to withdraw or not answer some or all questions during the interview, assured as they were free not to answer or even withdraw from the study without any punishment.

- **Privacy and confidentiality**

For both phases of study, the data from the participants were placed under lock and key at the centre where the researcher works. Privacy and confidentiality were ascertained by using codes and not the participants' names in the questionnaires. The room and the environment were conducive to making communication private and maintaining confidentiality. The participants would not be asked to give their names even for focus group discussions. Contact details of the researcher and the supervisor were also given to each participant. Participants were assured that information provided whether orally or written would be used only for the research purpose and would therefore be strictly anonymous and confidential. See attached confidentiality agreement applied during data collection (Appendix: E).

- **Voluntarism**

For both phases, participants were told that their participation in the study was voluntary and they were free to decline to participate or that they could withdraw from the study at any time.

3.13.2 Principle of beneficence and non-malfeasance

- **Beneficence**:

One of most fundamental ethical principles in research is that of beneficence which imposes a duty on researchers to minimise harm and maximise benefits. This principle covers multiple dimensions such as the right to freedom from harm and discomfort and the right to protect from exploitation (Polit &Beck 2017: 748).

For both phases, the current study also emphasised on a moral responsibility to do things for the benefit of others. The researcher and research assistants guarded against any discomforts that might occur and immediately phrase the question so that it could not appear to be a personal experience. The researcher and research assistants confirmed the benefit by ensuring a comfort environment for interviews. The researcher conducted interviews in an independent classroom during the student break when the disruption was minimal. Honesty and openness were considered which fostered the relationship between the researcher and the respondents. If the conversation was too stressful for the respondents, they should be left alone. Respondents were informed of their right to withdraw from the study at any time, even if the data collection process had begun, without fear of harassment

- **Non-malfeasance**

Researchers should not engage in discriminatory, harmful, or exploitative practices or harassment. Researchers should ensure that the actual benefits to be derived by the participants or society from the research clearly outweigh possible risks and that participants are subjected to only those risks that are clearly necessary for the conduct of the research. Similarly, researchers should ensure that the risks are assessed and that adequate precautions are taken to minimise and mitigate risks (Polit & Beck 2017: 748).

Accordingly, for both phases, since the study topic was a highly sensitive issue and the researcher needed to be extra careful and consider how the participants felt. Regardless of that the research was voluntary and the researcher needed to guard against harming the participants psychologically and emotionally. Thus, to avoid traumatising the participants, the researcher avoided asking highly sensitive questions to avoid psychological discomfort among the adolescents. The researcher avoided psychological discomfort by giving adequate information on what the study was about, and their recommendations would be an addition to existing knowledge to issues about ASRHRs and services.

3.13.3 Principle of justice

Justice is another ethical principle which includes right to fair treatment and privacy (Polit & Beck 2012:173). In both phases all participants equally/fairly participated without discrimination. All participants in the study were equally respected and were given similar information on the study. All participants were informed that the participation should not be expected to carry the costs of the study that needed to be included. The random sampling process was used to increase the chance of participating in the study.

3.13.4 Risk and benefit

The adolescents were informed of the potential benefit of gathering information that helped to improve knowledge and perceptions of SRHRs and services for all study participants. In addition, they were informed that there was no harm and nor risk and benefit in participating in the research and that any information given by them was not to be used against them.

3.14 SUMMARY

Chapter 3 mainly described the directions guided and how the researcher followed certain principles. The research population, sample population, sampling frame, and sample size determination based on the standard formula and sampling techniques were thoroughly discussed. Also, the process of the data collection and instrument development and how to keep data quality was clearly stated. Finally, the ethical issues that had been considered for data collection and how to get respondents' informed consent before they could respond in a study were well addressed.

CHAPTER 4

PRESENTATION AND DISCUSSION FOR PHASE 1 RESULTS

4.1 INTRODUCTION

This chapter presents and discusses the phase 1(quantitative) results. The results were presented under heads and sub-headings based on the study objectives and questions.

4.2 QUANTITATIVE (PHASE 1) RESULTS

From the sampled adolescents, 827 were recruited. Out of these, 27 were excluded due to incompleteness and inconsistency of the responses. Complete questionnaire analysis was done for 800 adolescents yielding a 96.7% response rate.

4.2.1 Socio-demographic factors

The respondents in the study were 15–19 years old. Their mean age was (17 $\pm$1.3SD) years old. The majority of adolescents 598(74.8%) were found in the age group 17−19 years. The distributions of the students by grades were almost equally divided between grades 9 and 10 (50.3%) and grade 11 and 12(49.8%). Among adolescents, 457(57.1%) were males while 343 (42.9%) of them were females. Regarding their marital, status the majority of the respondents 787(98.4%) were single. Nearly half of the respondents, 359 (44.9%) were Muslims followed by 270(33.8%) orthodox. Regarding their ethnicity, the dominant group of study responders was Oromo 629 (78.6%). Among adolescents interviewed 554 (69.3%) were living with their parents as only 31(3.9%) lived in a rental house. For details, see table 4.1 below.

Table 4. 1 Respondents' socio demographic characteristics

Variables	(N=800)	
	Number	(%)
Age group		
15-16	202	25.3
17-19	598	74.8
Gender		
Male	457	57.1
Female	343	42.9
Education level		
Grades 9 to10	402	50.3
Grades 11 to 12	398	49.8
Religion		
Muslim	359	44.9
Orthodox	270	33.8
Protestant	143	17.9
Wakeffata (Oromo's religion)	28	3.5
Ethnic group		
Oromo	629	78.6
Amhara	140	17.5
Gurage	25	3.1
Others*	6	0.8
Marital status		
Single	787	98.4
Married	11	1.4
Divorced	2	0.3
Widowed	0	0.0%
Whom you live with		
Both parents	554	69.3
Father only	52	6.5
Mother only	87	10.9
Guardian/relatives	76	9.5
Live independently in rental house	31	3.9

*Others =any ethnic group out of major groups (Oromo, Amhara & Gurage) in the area

4.2.2 Parental education and economic profile

As summarised in table 4.2, regarding parental educational status 112 (14%) fathers had diplomas and above while only 74 (9.3%) mothers had diplomas and above. Most of the fathers 456(57%) were farmers while 389(48.6%) of mothers were housewives. Respondents saw the economic status of their families to be medium 437(54.6%) and 227(28.4%) and 136(17%) found to be the richest and poorest respectively.

Table4. 2 Parental education and economical status

Variables	Total (n = 800)	
	Number	(%)
Paternal education		
No formal education	238	29.8
Primary school (1-8)	353	44.1
Secondary school (9-12)	97	12.1
Diploma and above	112	14.0
Maternal education		
No formal education	408	51.0
Grade (1-8)	299	37.4
Grade (9-12)	19	2.4
Diploma and above	74	9.3
Family economic status		
Poor	136	17.0
Medium	437	54.6
Rich	227	28.4
Respondents own income	231	28.9
Yes	569	71.1
No		

4.2.3 Knowledge of sexual and reproductive health rights

Respondents were asked nine questions to investigate their knowledge of the human rights standard that applies for ASRHRs. In terms of respondents' knowledge of SRH rights, 582(72.8%) respondents did not support the idea that families have the right to

decide their marriage to female children. In this study, 265 (33.1%) respondents agreed on fully accessible and affordable early childhood rights services for adolescents while the majority of respondents 535 (66.9%) disagreed with the availability of reproductive health services. Almost half, 385(48.1%) of the respondents had the right to access of education and information. As presented in table 4.3 below, the summary of knowledge was stated in relation to the means scores as 4.26 +1.54 SD (out of a maximum of 9). This study shows that 362(45.3%) of the respondents were knowledgeable about SRHRs that apply for human right standards.

This result was like of a study done in Shire; Ethiopia (47.1%) as cited by (Gebretsadik & Weldearegay 2016:30). Conversely, the result of the study found to be lower than of studies conducted in East Gojjam, Ethiopia (67%) cited by (Abajobir & Seme 2014:8). The discrepancy might be due to, study design and cultural difference among participants.

Table 4. 3 Knowledge of the human rights standard that apply for SRHRs (N=800)

Questions	Yes	No
	Frequency (%)	Frequency (%)
Right to life, liberty and security	549(68.6)	251(31.4)
Right to choices SRHs without their partner's consent	495(61.9)	305(38.1)
Right to consent to marriage	218(27.3)	582(72.8)
Right to the full range of accessible and affordable SRH services	265(33.1)	535(66.9)
Right to be free to enjoy and control their sexual and reproductive life	450(56.3)	350(43.8)
Right not to be subjected to torture	450(56.3)	350(43.8)
Right to be free from sexual violence	507(63.4)	293(36.6)
Right to education and information?	385(48.1)	415(51.9)
Right to married women limit the number of her children without her husband's consent	283(35.4)	517(64.6)
Overall knowledge of ASRHRs (N= 800)	**n (%)**	
Knowledgeable Not knowledgeable Mean +SD	362(45.3) 438 (54.8) 4.26+1.54	

4.2.4 Knowledge on types of sexual assault/harassment

As outlined in (Figure 4.1 below), there are many different types of sexual assaults. Adolescents' knowledge of the types of sexual assaults was assessed in eight questions. Respondents were found to have limited information about the forced marriages 278(34.9%), non-consensual sexual touching 333 (42.5%), abusive language 193 (24.2%), HIV/STIs based discrimination 291(36.5%) and denial of SRHs provided 261(32.7%). Overall, the adolescents' knowledge on types of sexual assaults was limited to 326 (40.9%).

These results agree with another study conducted by (Lee, Stark, Oriordan &Lazebnik 2015:30) which confirms that majority of adolescents showed a limited knowledge on types of sexual assaults. Moreover, (Yee, Alagappar & Ngeow 2015:230) state that young women have shown that they have better knowledge than younger men do. However, in the current study, this difference is less significant.

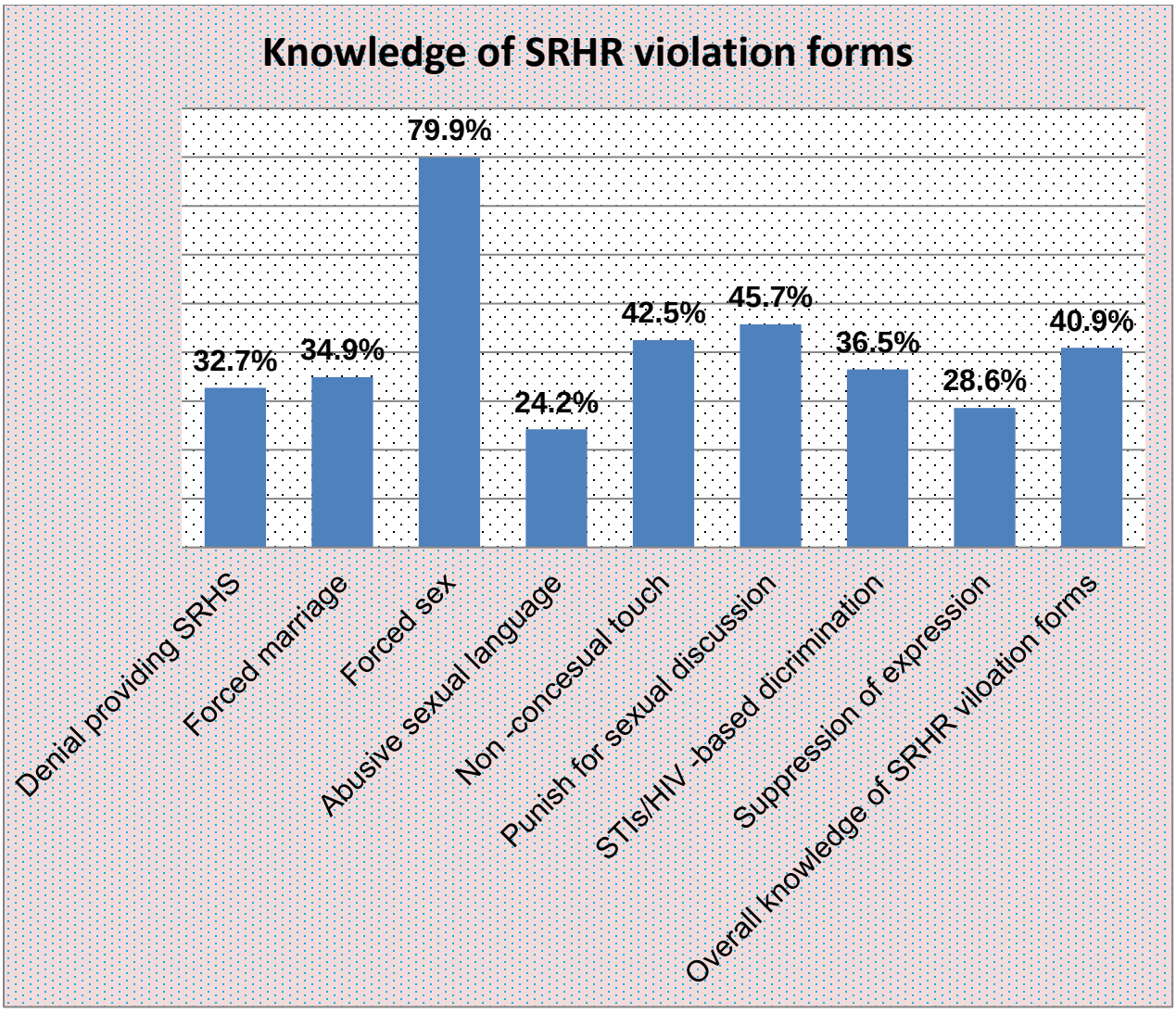

Figure 4.1 Respondents' knowledge on types of sexual assaults (n=800)

4.2.5 Perceptions towards sexual and reproductive health rights

Table 4.4 below shows the views of adolescents regarding the different types of SRHs and SRHR abuse. Adolescents were asked if they believed the right to use reproductive health services was kept secret. Of these, 439 (54.9%) of them indicated their agreement with this view. About 518 (64.8%) of adolescents have found that they have the right to be free from sexual harassment /violence. More than half, 225(59.1%) of respondents disagreed that a man should have sex whenever he wants without regarding his wife's wishes. About two-thirds of 517 (64.6%) of teens disagreed with the statement that unmarried couples do not have the right to use contraceptives without condoms.

Overall, the results showed a positive outlook 517 (64.6%) in SRHRs and services (Table 4.4). However, this result was higher than in the study conducted in Adet Tana Haik (53.4%) conducted by (Ayalew, Nigatu &Debie 2019:3). This difference may be due to variances in location and research design implemented.

Table 4. 4 Respondents' perceptions of SRHRs and services

Variables	Agree	Neutral	Disagree
	n (%)	n (%)	n (%)
Unmarried couples have no right to use contraceptives other than condoms	139(17.4)	144(18)	517(64.6)
Free from discrimination/abuse/ violence	518(64.8)	128(16)	154(19.3)
The right to free and affordable reproductive health information and services	374(46.8)	255(31.90	171(21.4)
The right to use a reproductive health service is kept confidential	439(54.9)	161(20.1)	200(25)
Parents have a right to make decisions about their children	177 (22.1)	122(15.3)	501(62.6)
Right to terminate pregnancy	236(29.5)	199(24.9)	365(45.6)
A man should get sex whenever he wants irrespective of his wife's wish	473(28.1)	102(12.8)	225(59.1)
Overall perceptions Good perception = 517(64.6%) Poor perception = 283(35.4%)			

4.2.6 Knowledge of physical changes and fertility

Adolescents were asked about physical changes they experience during puberty, for girl's growth of pubic hair 392(51.2%), breast development 589 (77%), develops soft voice 268 (35%), the start of menstruation 325(42.5%) and the desire to have sex 3294(8.4%) were reported as knowing.

Overall, 352(46%) respondents were knowledgeable on the physical maturation of girls during puberty (Figure 4.2). For physical changes of boys during puberty, about 380(47.5%) of respondents knew voice change and 336 (42%) knew growth of pubic hair as a physical change in boys. More than half of the respondents 420 (52.2%) knew the

growth muscle of boys, whereas only 154 (19.3%) knew experiencing wet dreams followed by 10(1.3%) saying I do not know (see figure 4.3). In terms of fertility information, 413 (51.6%) respondents did not know how old a girl could be pregnant, followed during puberty 221 (27.6%) and after puberty 166 (20.8%). Also, 316 (39.5%) of adolescents know that a woman can be impregnated within first sexual contact. Furthermore, regarding the most critical period of pregnancy in relation to the menstrual cycle, only 108 (13.5%) indicated that they were in the middle of the cycle, and 587 (73.4%) uncertain and 105 (13.1%) of them responded as soon as bleeding commence.

The existing literature also supports the results. In India, (60.3%) of girls did not know about menstruation before menstruating and reported misunderstandings about the source and method of menstruation (Shah, Nair, Shah, Modi, Desai & Desai 2013:205). A comparative study of Nigeria and Kenya found that young women are more likely to talk about breast growth than menstruation, as it is associated with puberty. Teens have done their best to try to hide physical changes from others, including parents (Bello, Fatusi, Adepoju, Maina, Kabiru, Sommer & Mmari 2017: 35).

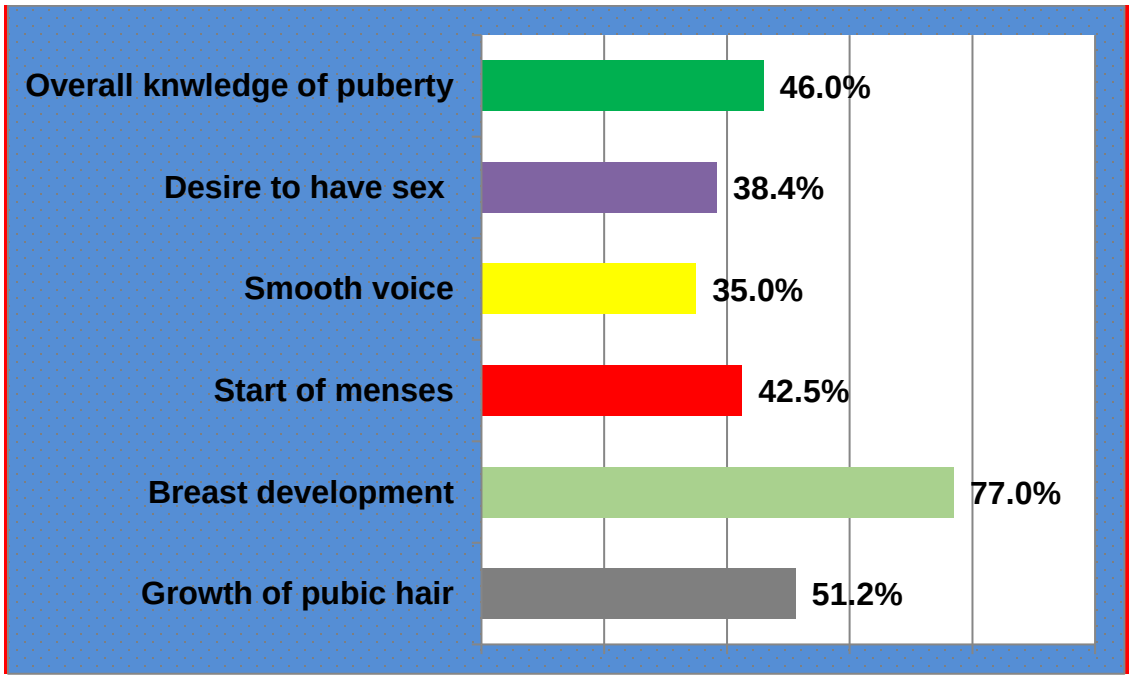

Figure 4. 2 Knowledge on signs of physical maturation in girls during puberty (n=800)

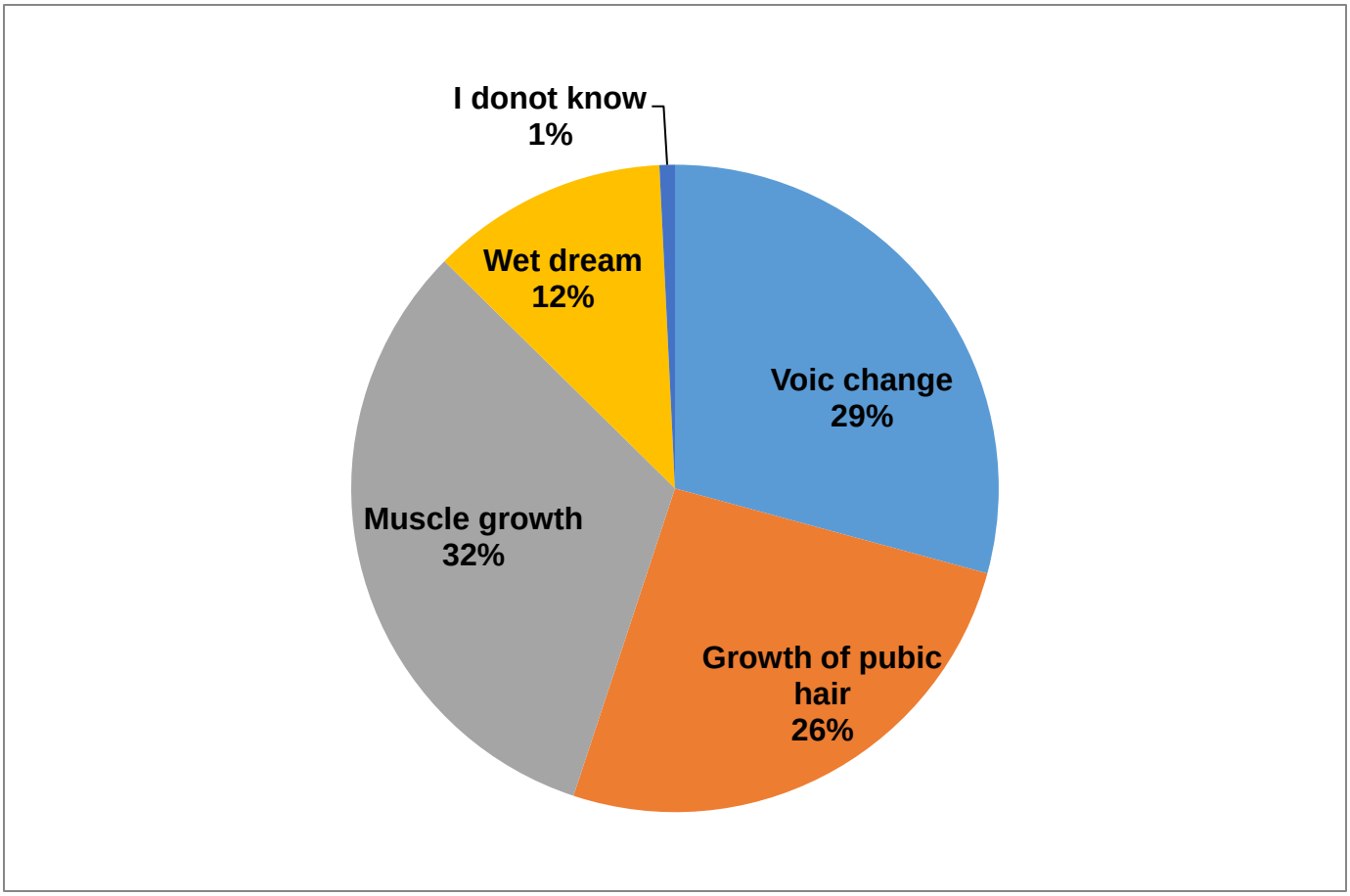

Figure 4. 3 Adolescents' Knowledge of physical change of boy during puberty (n=800)

4.2.7 Knowledge /awareness of sexual and reproductive health services

Adolescent awareness of SRHs was assessed by asking if they knew the components of reproductive health services. Most respondents knew family planning services 592 (74.6%) followed by prenatal/post-natal care services 348 (43.8%) whereas the least known was information and education 39(4.9%) followed by STIs diagnosis and treatment services 177(22%).

Concerning the availability of SRHs, most of the adolescents 726 (90.8%) knew at public and private health institutions while only 74(9.3%) responded that SRHs are accessed from traditional healers in the community.

Regarding adolescents' main sources of SRH information included: Peers 300 (37.5%), TV/Radio 191(23.9%), health workers 144(18%), teachers 113(14.1%) and parents 52(6.5%). The existing literature supports that most of the friends or peers were a common source of adolescents' SRH information. However, it is neither trusted nor preferred because of their lack of knowledge and experience (Pandey, Seale & Razee 2019:10).

4.2.7.1 Knowledge on STIs and mode of transmission

Table 4.5 below shows the number of rural adolescents who knew each type of STIs and prevention methods. Many adolescents 677 (84.6%) were aware of HIV / AIDS, Gonorrhoea 334 (41.8%), syphilis 314(39.3%), Chancroid 117(14.6%) as a form of STIs. With information on HIV/AIDS transmission, 594 (74.3%) responded that HIV was transmitted through unprotected sex. Regarding HIV prevention method, 629 (78.6%) reported abstinence as the best way to prevent HIV.

Previous studies also supported that over four decades into the epidemic of HIV/AIDS, most adolescents still lacked information on how to prevent STIs (Kumar et al 2017:2). This shows that globally only a few adolescents have access to acceptable and affordable STIs/HIV awareness and health services. In most countries, the knowledge of HIV/STIs among adolescent people is low and HIV testing is rare (Morris &Rushwan 2015:51).

Table 4. 5 Knowledge of STIs and mode of transmission

Variable	Frequency (%)	
Knowledge on types of STIs	**Yes**	**No**
HIV/AIDS	677(84.6)	123(15.4)
Gonorrhoea/Chlamydia	334(41.8)	466(58.3)
Syphilis	314(39.3)	486(60.8)
Others (Chancroid, herpes simples)	117(14.6)	683(85.4)
Mode of HIV transmission and prevention	Yes	No
Unprotected sexual intercourse	594(74.3)	206(25.8)
Transfusion of infected blood	396(49.5)	404(50.5)
Sharing of sharp materials	428(53.5)	372(46.5)
During pregnancy and childbirth	267(33.4)	533(66.6)
During breastfeeding	428(53.5)	372(46.5)
Means of HIV prevention**:** Sexual abstinence	629(78.6)	171(21.4)

4.2.7. 2 Awareness of contraceptive methods

As seen in figure 4.3 below, when adolescents' awareness on contraceptives was assessed, it was identified that most of them 568 (73.2%) were aware of oral contraceptives/pills and 500 (64.4%) injection (Depo-Provera). However, those that were less known among them were, IUCD 332 (42.8%), Implant 326 (42%) and emergency contraceptives 153 (20%). The result was inconsistent with a study conducted in four sub-Saharan countries and found that the male condom was the most popular contraceptive method for teens (Ngilangwa, Rajesh, Kawala, Mbeba, Sambili, Mkuwa, Noronha, Meremo, &Nyagero 2016: 2).

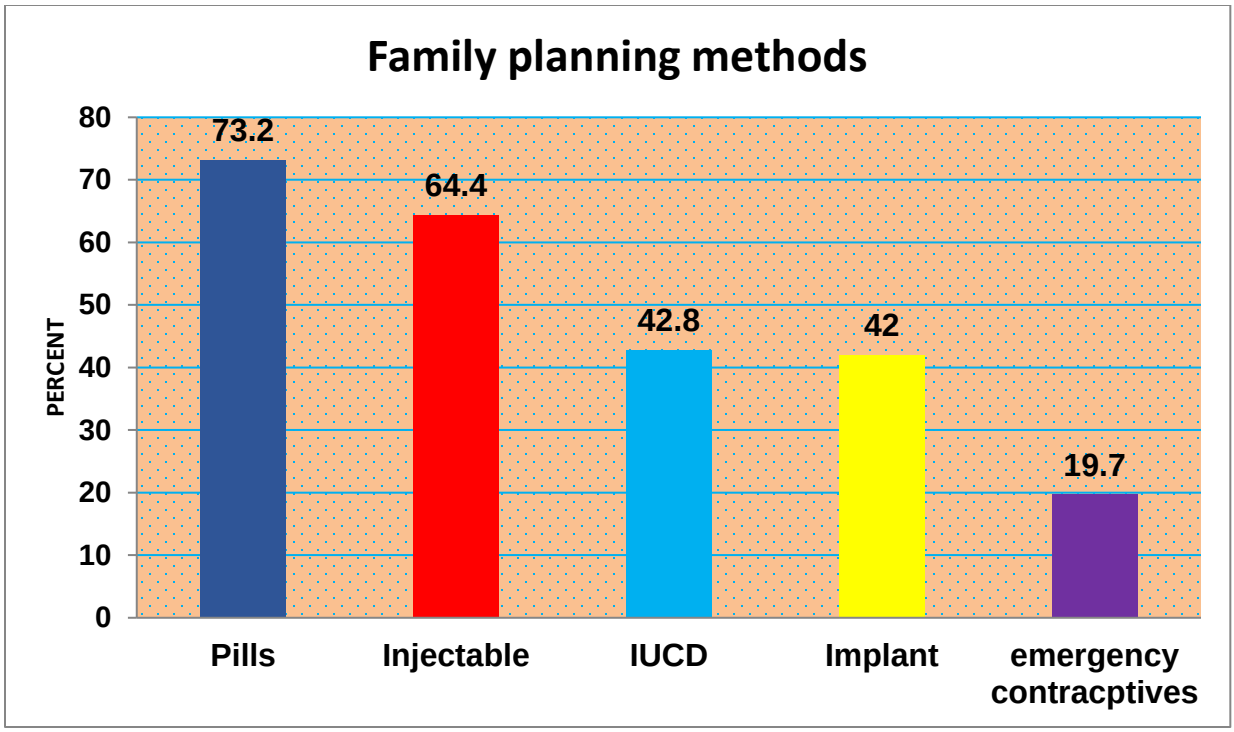

Figure 4. 4 Awareness on types of contraceptives methods (n=800)

4.2.8 Magnitude of SRHs utilisation

In this study, the magnitude of adolescents' SRHs utilisation was found very low 208 (26.1%). Out of this the most used service was the HIV counselling and testing (HCT) service 329 (41.1%), any form of contraceptives services 150 (18.8%) and 30 (3.8%) used STI screening and treatment. In contrast, a study conducted in Nigeria by (Olutoyin et al 2016:7) shows that half (51.0%) of adolescents have used SRH services in the last 12 months. Private clinics (43.1%) were areas where the majority of rural adolescents used SRHs (Olutoyin et al 2016: 7).

Likewise, in the current study, more adolescents 423 (52.9%) preferred to use the services at private health facilities versus governmental health facilities 377(47.1%). Concerning healthcare provider preference, 373(46.6%) were from the same sex, 204 (25.5%) were from the opposite sex and 223 (27.9%) did not prefer healthcare providers.

4.2.8.1 Factors hindering SRHS utilisation

Rural schooling adolescents were asked about factors hindering them from accessing SRHs utilisation. As summarised in figure 4.4 below, lack of information, fear of being seen by parents, lack of money, religious/cultural influence and distance of health facility were the major barriers to SRHS utilisation 309 (38.6%), 192(24%), 144(18%), 127(15.95) and 28(3.5%) respectively.

Another study done in Ethiopia by (Abajobir &Seme 2014:1), also shows that only one-fifth (21.5%) of adolescents used the services. This was affected by parental fear, lack of basic knowledge and pressure from the community were found to prevent adolescents from accessing and using SRHs.

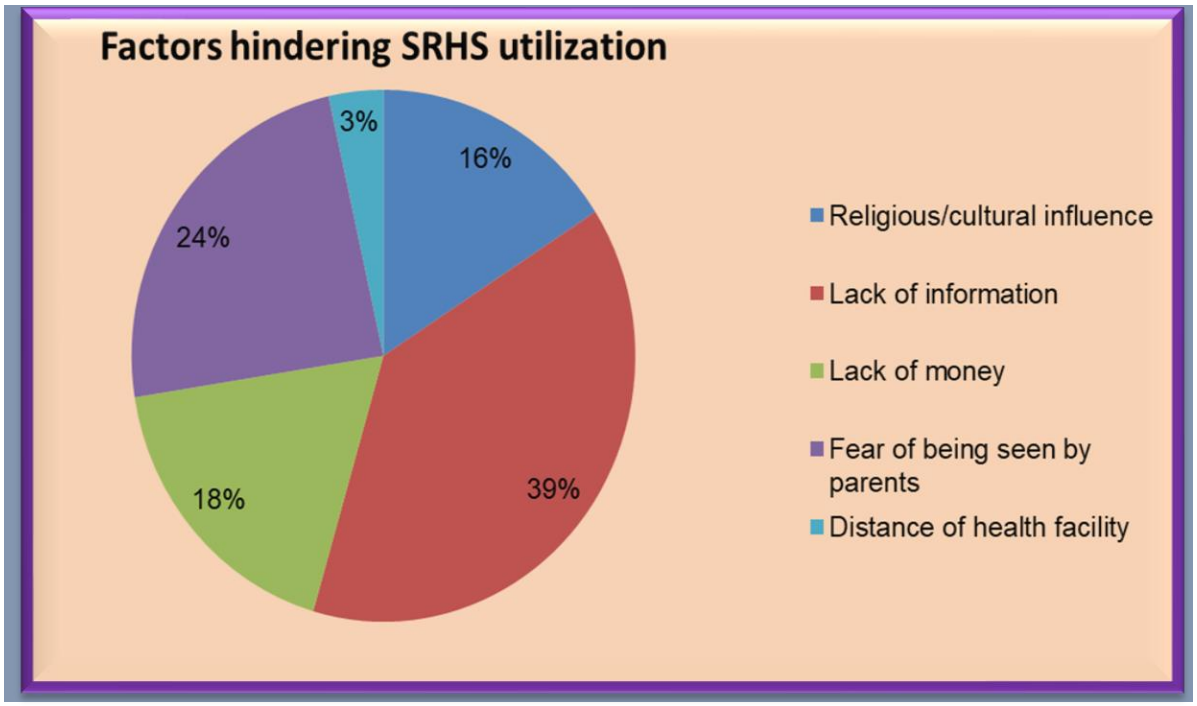

Figure 4. 5 Factors hindering SRHS utilisation by rural adolescents (n=800)

4.2.8.2 Adolescents' sexual behaviours

Adolescents' sexual behaviours are the various sexual practices and engagements. This study found that 240 (30%) of the adolescents had been in a relationship at the range of 15-19 years of those who had sex 150 (62.8%) used a condom and 89 (37.2%) did not use. Another study shows that in the same way many adolescents who had been in a relationship between 15-19 years had engaged in some form of physical contacts such as kissing and touching (Tanabe, Nagujjah, Rimal, Bukania& Krause 2015:4).

Regarding sexual and reproductive discussion 271(33.9%) of the respondents had ever discussed about their sexuality in the last 12 months with anyone else. Of these who had discussed 167(62.1%) with their friends, 70 (26%) with parents and 32 (11.9%) with schoolteachers.

4.2.8.3 Perceptions in relation to health belief model

Table 4.6 below summarises adolescents' perceptions on SRHs according to the health belief model (HBM). To assess the perceived susceptibility, respondents were asked if they were at risk for any of the SRH problems 344 (43.0%) of adolescents believed being at risk of unintended pregnancy and STIs/ HIV.

For perceived severity, 367 (45.9%) of them believed that SRH complications could affect their health lives (Example: unintended pregnancy and unsafe abortions). In terms of perceived cues to action, they believed that they have ability to protect themselves from SRH problems 153 (19. 1%), perceived benefits, having adequate knowledge of SRH (504 (63%) helped them to be safe and perceived barrier tested by asking factors that hinder from accessing and utilisation of SRHs 216 (27) %). For more detail, see table 4.6 below.

Table4. 6. Perceptions towards SRHS in relation to HBM construct

Statements	Yes	No
	n (%)	n (%)
Perceived susceptibility:	344(43)	456 (57)
Perceived severity:	367(45.9)	433(54.1)
Perceived benefit:	504(63)	296(37)
Perceived cues to action:	153(19.1)	647(80.9)
Perceived barrier:	216(27)	584(73)

4.2.9 Factors associated with SRHs utilisation

Further data analysis was done to determine factors that are associated with SRHS utilisation. The results are summarised in (table 4.7) for both bivariate and multivariate logistic regression analysis.

4.2.9.1 Bivariate and multivariate logistic analysis results

In bivariate analysis SRHs utilisation among secondary school adolescents was significantly associated with SRHs utilisation as follows: Being female adolescent (COR = 0.71, 95% CI: 0.51- 0.98) and 17-19 years age (COR =3.14, 95% CI: 2.01 - 4.95). Being from grade 11 -12 (COR = 1.68, 95% CI: 1.22-2.32), married (COR =1.42, 95% CI: 3.27-7.55), knowledgeable (COR =1.62, 95% CI: 1.18-2.24). In addition, those adolescents getting daily pocket income (COR =0.45, 95% CI: 0.32-0.63) and being perceived at risk (COR =1.83, 95%CI: 1.33-2.52) were statistically significant with SRHs use.

For multivariate logistic regression analysis, the independent variables were again analysed to check the possible confounding variables. Therefore, the likelihood of SRHs utilisation was significantly associated as follows: Adolescents aged 17-19 years have

used SRHs three times more than 15-16 years (AOR = 3.30, 95% CI: 2.17-5. 23). Respondents from Grades 11 and 12 were twice as likely to use SRHs compared to their peers studying grades 9 and 10 (AOR = 1.69, 95% CI: 1. 23-2.35). The probability of using SRHs was 3 times higher among married couples than single (AOR = 2.89, 95% CI: 1.23-6.83). Out-of-pocket money adolescents were less likely to use SRHs compared to others (AOR = 0.55, 95% CI: 0.38-0.78). Concerning awareness, adolescents with knowledge of SRHS were 1.4 times more likely to use the SRHs than those without knowledge (AOR = 1.47, 95% CI: 1.05-2.05). Moreover, respondents who perceived being susceptible to SRH risks were more likely to use the SRHs (COR =1.86, 95% CI: 1.34-2.59). Surprisingly, genders towards SRHs were not significantly associated with the use of the SRHs in multivariate analysis as expected (Table 4.7).

4.3 DISCUSSION OF THE RESULTS

As discussed above (section 4.2.9.1). This study revealed that knowledge about SRH issues is the prerequisite for adolescent SRHs utilisation. Respondents who have ever heard about SRHs had used the service more than 1.5 times likely compared to those who never heard about it. It is supported with a study conducted on adolescents' SRHs utilisation in Nekemt town, Ethiopia (Binu et al 2018: 2) and in Nageria, Lagos (Ajike & Mbegbu 2016:17).

This evidence shows that promoting adolescents' knowledge of SRHs will improve utilisation of services. In this study, adolescents from grades 11-12 were more likely to utilise SRHs than grades 9-10. This discrepancy might be the result of experience, information sharing and communication on SRH issues among adolescents in the senior classes.

Moreover, this was because highly educated people are more likely to receive health care and confidently understand what to do about it (IPPF 2015:2). Another literature conducted by (Zimmerman, Woolf & Haley 2015:1) states that education can lead to higher levels of

health-related information and influence one's preferences for the future, which in turn may improve one's behaviour and health outcomes.

In addition, the study shows that adolescents' age, marital status, and income can influence their access to SRHs. Older adolescents from 17-19 years old accessed the services more than the younger ones. This may be because older adolescents are more independent than the younger ones and so could decide to access or not to access SRHs. The result is also supported with previous study conducted in Enugu state, Nigeria as cited by (Odo, Samuel, Nwgue, Nnamani & Atama 2018: 11) which shows that level of access of health services is lower in younger adolescents.

The study revealed that adolescents who get daily pocket money were more likely to access and use SRHs as compared with their counterparts. Accordingly, adolescents who get daily pocket money were more likely to use SRHs as compared to others who did not. This result agrees with another study by (Odo et al 2018:12) which states that lower income negatively influenced adolescents' SRHs access and utilisation.

Table 4. 7 The bivariate and multivariate logistic analysis

Variables	Ever utilized SRHs		COR [95% CI]	AOR [95% CI]	P-value
	No	Yes			
Age category					
15-16	177	25	1.00	1.00	
17-19	414	184	3.14(2.01 - 4.95)	3.30 (2.17-5.23)	0.00
Gender					
Male	325	132	1.00	1.00	
Female	266	77	0.71(0.51- 0.98)	1.40(0.99-1.97)*	0.04
Education level					
Grade 9-10	317	85	1.00	1.00	
Grade 11-12	274	124	1.68(1.22 -2.32)	1.69 (1. 23-2.35)	0.01
Marital status					
Single	571	190	1.00	1.00	
Married	11	12	1.42(3.27-7.55)	2.89 (1.23-6.83)	0.02
Divorce/widowed	9	7	5.08(0.91-28.30)	5.08(0.91-28.30)	0.06
Have own income					
Yes	144	87	1.00	1.00	
No	447	122	0.45(0.32-0.63)	0.55(0.38-0.78)	0.001
Knowledge					
Not knowledgeable	213	100	1.00	1.00	
Knowledgeable	378	109	1.62(1.18-2.24)	1.47(1.05-2.05)	0.024
Perceived susceptibility				1.00	
No	360	96	1.00		
Yes	231	113	1.83(1.33-2.52)	1.86(1.34-2.59)	0.00

References (1.00), has no association (*), Adjusted odd ratio (AOR) and Crude odd ratio (COA)

4.4 SUMMARY

In this chapter, 800 adolescents responded to the questionnaires. Information collected was discussed under subtopics like demographic and economic profile, knowledge, perceptions, SRHs utilisation and associated factors. The study found that there was limited knowledge and poor perceptions towards SRHRs and services among rural adolescents attending secondary schools in Arsi Zone, Ethiopia. Furthermore, SRHs utilisations were very limited. This was significantly associated with adolescents' age, level of education, marital status, knowledge and perceptions on SRH issues, and economic status. Therefore, the researcher, motivated to develop training guidelines for promotion of adolescents' knowledge and perceptions towards their SRHRs and services. In the next chapter 6, these results were explained qualitatively.

CHAPTER 5

RESEARCH DESIGN AND METHODS OF QUALITATIVE (PHASE 2)

5.1 INTRODUCTION

The aim of this chapter is to offer a complete explanation of the research design and the techniques used to achieve the purpose and objectives of the study and answer the research questions for phase 2.

5.2 STUDY DESIGN FOR PHASE 2

According to Yousaf (2019:1), study design is defined as a systemic approach that helps the researcher for scientific research and to organise all the identified components of data that resulted in credible outcomes. Creswell (2015: 16) defines the design of quality research as a process of investigating comprehension based on a culture of review examining a social or individual problem.

Qualitative study comprises checking the characteristics that are not possible to be presented in numerical value Creswell (2015:16). As discussed in chapter 3, for this study the sequential explanatory mixed method of study design was used. In addition, the philosophical underpinning for the mixing of mixed methods is pragmatism that focuses on the gripping and emergence of mixed-method research. For more detail (see chapter 3, section 3.3).

5.3 RESEARCH PARADIGM FOR PHASE 2

According to (Creswell 2014:9), research paradigms state one's perspectives or worldview. Paradigms are lenses through which we see or view the world or are a type of window framework through which we look at the complexities of the real world. Furthermore, it can determine the way we understand and define something. Scholars

categorised paradigm as the two dominant paradigms which are a quantitative or positivist paradigm and qualitative or naturalistic paradigm. In comparison, the positivist paradigm assumes that there exists only one ultimate reality, thus, seeks objectivity. In this paradigm the inquirer is expected to be independent of the matter being researched. It also emphasises generalising or reaching conclusions based on sample studies (Creswell 2014:10).

In contrast, the naturalist paradigm assumes that realities are mentally constructed by individuals. This paradigm recognises the importance of subjectivity and researchers' value. Through this approach, one can understand the nature or quality of a phenomenon (Migiro & Magangi 2011:37). However, both paradigms have their own strengths and weaknesses. For instance, understanding the view or perceptions of people is better to be described by the naturalistic paradigm. As generalising the research finding to the population based on the sample studied is not totally the intent of naturalism but of the positivist paradigm.

Nowadays, many researchers are conducting research to get the complementary benefits of the two research paradigms with a research design called mixed method research (Migiro & Magangi 2011:37). In this context, getting the research findings with a mixed method would help the researcher to develop appropriate training guidelines to promote adolescents' knowledge and perceptions on SRHRs and services. Therefore, this research applied both paradigms. With the positivist paradigm, the researcher conducted the first phase of the study. And then, the experiences/perceptions of the adolescents' and other key informants regarding knowledge and perceptions of SRHRs and services in Ethiopia were captured by the naturalistic approach.

Generally, for this phase (qualitative) study, the post-positivist took the position of approximating reality and truth in qualitative study. Therefore, the value of qualitative research is high in augmenting and supplementing the quantitative study findings thereby making our understanding greater (Shannon-Baker 2016:6).

5. 4 STUDY SETTING OF PHASE 2

For detail (see chapter 3) the FGDs and IDIs were conducted in the rural region of Arsi Zone. The FGDs with adolescents and IDIs with teachers were conducted at (Dodeta and Hetosa secondary schools) while IDIs with HCPs were conducted at their working place (Eteya and Dera Health facilities) of public health institutions nearby selected secondary schools.

5.5 STUDY POPULATION OF PHASE 2

In this phase, the study was represented by two study populations. The first one comprised of male and female adolescents between the ages of 15-19 years attending the secondary schools in rural Arsi Zone, Ethiopia. Adolescents of this age group were considered, as they were more likely to have sex and to take risky sexual behaviour (EDHS 2016: 6). Older adolescents had more experience than younger ones. They are also better able to communicate and reflect on their wider experience (Morris & Rushwan 2015:2). The second study population was key informants (teachers and HCPs working in the rural Arsi Zone.

5.6 SAMPLING OF PHASE 2

The intention for conducting the qualitative study was for the sake of getting further explanation regarding results of the first phase of the study. The HCPs, teachers and adolescents were believed to possess more knowledge and experience to fit for the purpose of the study. To do so, the study employed a purposive sampling technique to include study participants until data saturation attained. Data saturation is a state remarked by repetitiveness of the information and cessation of new emerging ideas (Houser 2015:392). The total number of the study participants was 36. This figure was the sum of 24 discussants participating in FGDs and 12 key informants participated in the interviews. The total number of participants in a given FGD ranged from 6-8.

5.7 INCLUSION AND EXCLUSION CRITERIA FOR PHASE 2

Inclusion criteria

- Daytime schooling adolescents from grade 9 to12 in rural secondary schools.
- Adolescents 15-19 years of age.
- Adolescents who participated in the first phase.
- Willing to participate in the study.
- For teachers who have been teaching in rural high schools for at least 2 years.
- For HCPs, they had to be health professionals working for at least 2 years providing SRHs to adolescents in rural Arsi Zone.

Exclusion criteria

- Night-time schooling adolescents.
- Seriously ill or unable to speak and hear.
- Reluctant or not volunteer to participate in the study.
- Adolescents who did not partake in the first phase of the study.
- For teachers who were not teaching at the rural school.
- Healthcare providers not assigned to SRHs provision for adolescents.

5.8 DATA COLLECTION TOOLS OF PHASE 2

An interview guide was prepared by the investigator based on the literature review and objectives of the study (Iqbal et al 2017:12 & Orach, Otim, Aporomon, Amone, Okello, Odongkara & Komakech 2015:18). This instrument was used to facilitate FGDs on adolescents (Appendix I: B) and for key informants' interviews with HCPs and teachers (Appendix I: C).

The guiding questions were short and open-ended, one-dimensional, and prepared by regional language (Afan Oromo). In addition, prior to the data collection process, the interview guides were pre-tested in one secondary school on adolescents and one health facility on HCPs other than study sites which had almost similar socio demographic characteristics. The result of the pre-test was assessed, and some corrections and changes were made as necessary. Also, the order of the questions was repositioned;

some of the questions which had similar concepts were merged together; and some of the questions were shortened for a better clarity.

5.9 DATA COLLECTION PROCESS OF PHASE 2

The two research assistants (Msc in Maternity and Retroactive Health) were recruited to assist with data collection throughout the interviews. The researcher moderated the interviews when the research assistants took brief notes and monitored the digital voice recorder to ensure that it recorded all the discussions. Follow-up questions were also asked to gather the necessary information. There was no language problem as the discussions were conducted in the local language, which Afan Oromo is the most widely spoken language in the area where the researcher and his assistants were able to speak fluently. This has made it easier for participants to understand and express their opinions more freely. The interview was continued until the saturation of the data for both FGDs and key informant interview. Data completion was achieved after the conducting of 4 FGDs and 12 interviews. Research assistants in the field received three days training prior to the start of data collection for the content of the interview directions, selection of suitable participants, data accuracy, completeness, and ethical requirements.

5.9.1 Data collection for focus group discussions (FGDs)

For the FGDs, adolescents were grouped according to their same sex to avoid adolescents from being reluctant to share personal experiences with their opposite sex peers and to create friendly environment during discussion. As the SRH issues are sensitive and make it easier for the researcher to gain a sense of trust and openness to communicate openly with the same sex.

The researcher moderated and conducted all the interviews and when the thought was not understood, the researcher probed to clarify the interview questions. In addition, two research assistants took notes throughout the discussion and recorded verbal responses

from participants. Those research assistants taking notes during the interview recorded interviews along with voice.

The discussions were all made in a separate room that was adequate to accommodate all the FGDs and allowed a circular or semi-circular seating. It was performed in a private classroom during the break when other students were outside, without teachers/parents being present. In addition to taking notes of the FGDs, at each session the voice was recorded with participants' permission to ensure a more reliable data gathering process. Each discussion was completed within 40 minutes on average.

During discussions, each participant was identified by giving a code as follows: Group 1 Participant 1 = (G1/P1), Group 2 Participant 1= (G2/P1), Group 3 Participant 3= (G 3/P3), etc. used on the analysis to represent each verbatim (Table 5:1 below).

Table 5. 1 Participants for FGDs (N =24).

Number of focus group discussions (4 FGDs)	Number of participants at each group
1	6
2	6
3	6
4	6
Total	24

5.9.2 Key Informants interviews

The data for the qualitative phase was collected from purposively selected and voluntary key informants. The researcher conducted the in-depth interviews to collect data from the key informants of health care providers and secondary school teachers by going to the places where they work. The key informants were purposely selected based on their

experience in the provision of SRHs and provision of education to adolescents. In addition, their suggestions and comments were used to improve adolescents SRH problems. Thus, the researcher intended to assess their opinions on whether the current content and extent of SRH education meets the needs of adolescents, recommended ways to improve adolescents' SRH problems.

The same as the FGDs, the interviews were conducted in Afan Oromo using the semi-structured interview guide. At the beginning, key informants' written consent was obtained from each participant including audio recording of their responses. Totally the IDIs were carried-out with 6 HCPs and 6 Teachers until the information got saturated. The average time for the interview took about 25 minutes.

5. 10 DATA MANAGEMENT AND ANALYSIS OF PHASE 2

Creswell (2018:193) states that in the qualitative phase a key step of data analysis is carried out by transcribing, coding and categories. Post interview/discussion of FGDs and IDIs, the tape-recorded interviews/discussions were replayed by the researcher and checked for audibility and completeness of the information soon after the interviews/discussions. This enabled the researcher to identify gaps and ambiguities with the recording and to immediately reconstruct the interview while it was still fresh in the mind (Polit & Beck 2012:557).

During this time, the researcher listened to the tapes objectively and got the opportunity to critique his own interviewing style in readiness for subsequent interviews/discussions. The researcher then transcribed the tape-recorded interviews/discussions verbatim. Caution was taken to ensure that words were not missed and information about pauses, laughter and shouting was adequately captured and noted.

The information was translated from Afan Oromo to English by a professional translator and editor for accuracy before the data analysis could begin (Creswell & Creswell 2018:193). Data collection and analysis in qualitative research are inseparable; these

inform one another. Then, data analysis can begin soon after the first interview has been undertaken and transcribed. Accordingly, in this study the thematic analysis was performed using Atlasti-8 version software to code and analyse the data. The major themes and sub themes emerged according to the research objectives (see chapter 6).

5.11 MEASURES FOR ENSURING TRUSTWORTHINESS

Trustworthiness or rigour of a qualitative research is one of the most important issues about checking the validity of the qualitative data collected and its interpretation. Trustworthiness exists if the findings of a qualitative study accurately reflect the experiences and the viewpoints of the participants and not the perception of the researcher (Creswell & Creswell 2018:199). According to the model of (Lincoln & Guba 1985:293) the process of ascertaining qualitative trustworthiness involves four basic measures. These are credibility, dependability, confirmability, and transferability. These are described as follows:

5.11.1 Credibility

Credibility means self-confidence that can be based on the truth of the study findings (Polit & Beck 2017:787). Credibility of a study is ensured if the findings of the study are a true reflection of reality and the context of where the study was conducted. A credible study report may come if a researcher measured exactly and accurately what was planned to be measured (Polit & Beck 2017:787). Hence, in this study, the following measures were used to ensure credibility.

5.11.1.1 Prolonged engagement

Prolonged engagement refers to spending quality time, interacting with the participants in the field during data collection, and verbatim transcription of audiotapes during data analysis (Lemon & Hayes 2020:4). Prolonged engagement relays to intense the researcher interaction with data collected.

In this study, there was prolonged interaction with participants during data collection and the researcher immersed himself in the data during verbatim transcription of audiotapes and data analysis, reading and re-reading the transcript. The researcher has a persistent observation of the data in the field during data collection. For both FGDs and IDIs the researcher was in close contact with participants during data gathering and verification of themes and categories. The researcher has worked with adolescents, teachers and healthcare providers for four years before embarking on the study.

5.11.1.2 Triangulation of the data

Triangulation is the use of multiple data sources for the purpose of providing increased understanding of the findings and validating conclusions (Lemon & Hayes 2020:4). For this study, the researcher collected data from different sources. The data collected from the key informants (teachers and HCPs) and FGDs (adolescents) by various questions and from different sources was used to ensure the triangulation of the study. Also, the audio tapped data and the field notes were different materials used to document the findings to assure referential adequacy. Finally, the first drafted training guideline was sent to experts and supervisors to interrogate verify and validate the findings of the study and enrich the training guidelines developed by the researcher.

5.11.1.3 Peer examination

For this study, to assure credibility the peer examination was done. The first draft report was given to a peer with equal status to the researcher but not part of the research team. The peer was asked if the report makes sense or not.

5.11.1.4 Member checks

In this study, the transcript, the first draft report was sent to the members or participants to crosscheck the reported research and if scripts are the same with what they said. Accordingly, the participants had the chance to correct errors and give additional

information. Also, the interview guide, and the first draft report were sent to the research supervisor to crosscheck the reported research and make corrections.

The interview guides were pretested at other than study sites before the actual interviews commenced. To ensure the credibility of the study, the last strategy was based on review by an external auditor. The contribution along with examiners of the thesis are the external auditors from which the study benefited.

5.11.2 Dependability

Dependability denotes the extent to which the data or finding obtained from research, if repeated, is consistent across the time and conditions. Reporting the step-by-step processes of the detailed methodologies used to conduct a study can help others repeat the same research and obtain similar findings (Polit & Beck 2017:787). Therefore, in this study to ensure the dense description and audit trail, the details of the methodologies used to conduct the study were clearly described and checked by experienced auditors.

5.11.2.1 Audit trail

According to (Polit & Beck 2012:585), the audit trail requires that written strategies be developed to show how the researcher made certain decisions so that other researchers exploring similar situations can follow the same logic and arrive at the same conclusions as was evident. In this study, colleagues and the study supervisor followed the process and procedures that were used by the researcher when conducting the study. The research objectives were checked by the study promoter for clarity and congruence with the research design. The interview guide was pretested and modified based on the feedback given before the study was conducted. Findings were validated by the participants that they accurately reflect their experiences.

5.11.2.2 Dense description methodology

To enhance the dependability in this study, the researcher described and documented the research design, methods of data collection and analysis implemented. Accurate note taking during both FGDs and IDIs also helped to improve reliability of the data. All the research assistants (data collectors) were trained by the researcher for three days before onset of data collection. The data collection was stopped at the level of data saturation.

5.11.2.3 Reflexivity

It refers to the examination of one's own personal, possibly unconscious reactions. It can also mean exploring the dynamics of the researcher-researched relationship and how the research is constituted (Dodgson 2019:1). This minimises the researcher's biases even though these cannot be eliminated. Thus, in this study the researcher examined his own judgments, practises, and belief systems during the data collection process. During data analysis the researcher used the test-retest method to test the reliability of the coding. Also, the researcher carefully identified any personal beliefs that may have incidentally affected the research findings. The researcher set apart what he knew about adolescents' SRHRs and services, in order to understand and report the phenomenon as experienced by participants.

5.11.3 Transferability

Transferability in qualitative research implies the applicability of the research finding in another's similar setup. Transferability of the research finding can be enhanced by collection of detailed or 'thick' description of the data and reporting in more precise but sufficient details. The description should not be limited to the findings, but the details of the methodology, design, context, objectives, and others (Merriam & Tisdell 2016: 252).

5.11.3.1Dense description of results

In this study, the methodology has been described in detail to allow for transferability. The findings were detailed with themes, categories and sub-categories. Relevant literature

used to enhance clarity and would allow other researchers to make judgement about transferability of findings to other similar contexts.

5.11.4 Confirmability

Confirmability refers to the degree to which the findings of the study are a result of the participant's responses and conditions of research only, not biases, motivation and perceptions of the researcher. Furthermore, confirmability is a criterion for evaluating quality of data in terms of its objectivity or neutrality (Polit & Beck 2017: 787). To confirm the conformability of the interpretation or conclusion of the research with the original data, a confirmability audit trail is needed (Polit & Beck 2017: 787).

5.11.4 Confirmability audit

Therefore, to ensure the conformability audit trail the audio and field notes transcripts were compared and contrasted with the final research report made. In this way an audit trail was made by two experienced qualitative researchers to check for conformability of the study finding. Also, it was assured by minimising any sources of bias by directly quoted participants' ideas and providing unbiased interpretation of the findings.

5.12 ETHICAL CONSIDERATIONS (see chapter 3, section 3.13)

5.14 SUMMARY

The chapter outlines the phase 2 research design, methodology, study settings, study population and data analysis. In this phase, data were collected from adolescents and key informants. Finally, the chapter presented all the ethical considerations applied in conducting this research. In addition, each of the steps of ensuring trustworthiness was discussed.

CHAPTER 6

PRESENTATION AND DISCUSSION OF THE FINDINGS FOR PHASE 2

6.1 INTRODUCTION

This chapter presents and discusses the findings of the study according to the main objectives of the second phase. The researcher used quotes from participants' descriptions and literature available to support the findings. Finally, standardised information obtained by FGDs and IDIs was coded, categorised, and developed into themes (Table 6.3).

6.2 SOCIO DEMOGRAPHIC PROFILES OF THE PARTICIPANTS FOR (FGDs)

Demographic profiles of adolescents who participated in FGDs were described in table 6.1 below. In this phase a total of twenty-four adolescents aged 15 to 19 years participated purposely at selected two schools. The majority were aged 17-19 years old. At each secondary school, two FGDs were conducted.

Discussions were held with twelve female and twelve male adolescents. About the educational level, twelve were selected from grades 9 and 10 while twelve participants were from grades 11 and 12. Regarding their marital status, most of the adolescents were single while only two were married and were both females. Based on Religious affiliation 14 were Muslims, seven were Orthodox and three were Protestant.

Table 6. 1 Participants demographic profile for FGDs (adolescents' N =24).

Adolescents' Demographic profile			
Variables	**Category**	**Number**	**Total**
Age	15-17 year	8	24
	18-19 year	16	
Gender	Male	12	
	Female	12	
Grade	Grades 9 -10	12	
	Grades 11-12	12	
Marital status	Single	22	
	Married	2	
Religion	Muslim	14	
	Orthodox	7	
	Protestant	3	

6.2.1 Demographic profiles of key informants for IDIs

As described in table 6.2 below, in case of IDIs, 12 key informants consisted of 6 HCPs and 6 teachers were interviewed. The age range of all participants was between 30-50 years. Both HCPs and teachers were purposively selected from their working place at rural Arsi Zone considering their experience in dealing with adolescents' SRH issues.

Table 6. 2 Demographic profiles of key informants for IDIs (N=12)

Occupation	Gender	Number	Age range	Education	Marital status	Total
Teachers	Male	3	30-50	2 BA & 1 MA	All married	6
	Female	3	27-40	3 BA	All married	
HCPs	Male	3	33-45	1 BSc & 2 MSc	1 single & 2 married	
	Female	3	28-40	3 BSc	All married	6
Total		12				12

Key: BA (Bachelor of Art), MA (Master of Art), BSc (Bachelor of Science) & MSc (Master of sciences).

6.3 THE STUDY'S THEMES, CATEGORIES AND SUB-CATEGORIES

In this study in accordance with stated objectives, three themes, five categories and 16 sub-categories emerged (table 6.3).

Table 6. 3 Summary of the emerged themes and categories

THEMES	CATEGORIES	SUB-CATEGORIES
1. Understanding of SRHRs and services	1.1 Knowledge and Source of information on SRHRs and services	1.1.1 Awareness of SRHRs
		1.1.2 Knowledge on existing SRH services
		1.1.3 Sources of SRHS information and preferences
		1.1.4 Perceptions on importance of SRHRs education
	1.2 Healthcare-seeking behaviour to SRHRs and services	1.2.1 Ability to exercise SRHRs
		1.2.2 Use and types of SRH services
2. Perceived barriers that prevent access and use of SRH services	2.1 Barriers to access and utilisation of SRH services	2.1.1 Lack of information
		2.1.2 Fear of parents and community
		2.1.3 Religious and cultural norm
		2.1.4 Inaccessibility of SRH services
		2.1.5 Care providers attitude
		2.1.6 Financial challenge
3. Suggestions to promote SRH services	3.1 Awareness creation	3.1.1 SRH education at school
		3.1.2 Parents support/guiding
	3.2 Quality of health facility system	3.2.1 Accessible of health facilities
		3.2.2 Care providers' support

6.3.1 Theme 1: Understanding adolescents' SRHRs and services

Two categories and six sub-categories emerged under this theme.

Each quotation is named with the participant's code number as follows: "G1=Group 1, P1=participant 1, then G1/P1 = group 1 participant 1, G3/P3 = group 3 participant 3, HCP=Health care provider", all these were used for the analysis part to represent each verbatim.

Category 1.1: Knowledge and Source of information on SRHRs and services

As indicated in table 6.3 above, awareness of SRHRs, knowledge on existing SRH services, sources of SRHS information and preferences and perceptions on importance of SRHRs awareness were described under this category.

***Sub-category 1.1.1: Awareness of* sexual and reproductive health rights**

During FGDs, the findings from the discussion showed that many adolescents attending rural secondary schools had little or no understanding of ASRHRs. The following quotes demonstrate their awareness about the components of ASRHRs:

> *'It is hard to describe the components of the ASRHRs. Because we did not learn about it, and no one taught us."* ***(G1P5).***
>
> *''I think ASRHRs, are the services that adolescents can use to prevent HIV/AIDS through the use of condom during sex."* ***(G3P2).***

In this study, adolescents' awareness of existing SRHs was inadequate. During FGDs the study participants could discuss components of adolescents SRHRs at all. Literature suggested that adolescents should gain experience and awareness in rights of self-protection from STIs, and before they get access to health services and supplies like condoms (Yendaw, Martin-Yeboah & Bagah 2015:3). Additionally, important research has been done to examine adolescents' knowledge and perception of SRHRs in Nepal. The study was conducted among 3041, 15-19-year-olds living in rural areas in 4 Nepal countries, which concluded that participants had limited reproductive and sexual health information (Khanal 2016: 21).

Sub-category 1.1.2 Knowledge on existing SRHs

Adolescents were asked what they meant by SRHs. These included sexually transmitted infections and contraceptive services, counselling services, abortions, and access to information and education. Initially, they were asked what they meant by the term Reproductive Health Services (RHS). From the interviews, most adolescents had limited SRHS knowledge available in their community.

As participants stated below:

> *"I think the term RHS is a maternity related service for pregnancy and childbirth."* ***(G2P1).***
>
> *"I have been to hospitals for some reasons, but I have never seen or heard of such activities [SRHs]."* ***(G4P1).***

In addition, from IDIs key informants who participated in the study showed limited knowledge of adolescents regarding their SRHs. One female HCP affirms this. She said that:

> *"At our clinic it is not common for adolescents to come and use the services. If they were informed, they would use them." (**Female, HCP).***

The findings showed that young married women were more knowledgeable about contraceptives services than single young women were, to name many different methods. However, they have no idea about emergency contraceptives. Also, a study conducted by (Tirivayi 2020:1), showed that in the sub-Saharan region most adolescents are unable to use contraceptive services, factors such as knowledge of the ovulation cycle and facilitators of contraceptive use are considered barriers.

Sub-category 1.1.3: Sources of SRHS information and preferences

From FGDs, some of participants recognised peers, parents, teachers, radio, and television as the main sources of information on SRHs. However, most adolescents trusted their peers for information.

> *"We [adolescents] get information from our friends, and sometimes from the radio and television.**" (G1P1).***
>
> *"Most of the time we gain information from friends, but we don't know if what they say is true. For example: I usually access information from my friends. The friend has answers to all my questions. I am afraid of my parents or teachers."* ***(G3P6).***

"… We (adolescents) get information sometimes from our schools and our parents give us some information as well as a warning. Furthermore, we discussed it with friends to know more about the problems." ***(G1P6).***

Regarding SRH discussion with their parents and teachers: This was expressed by the quotations as:

*"On such occasions, our parents, particularly our mothers, do not discuss SRHs with us; instead, they remain silent, bashful, and unfriendly."****(G4P1).***

"My father doesn't want to talk about sex. He will not let me get information. I think he considers I am getting educated at school. But in school we did not receive adequate information." ***(G3P2).***

"When teachers have to teach about sexual health most of them ask students to read for themselves, and then leave the room." ***(G1P2).***

Likewise, the key informant teacher confirmed that:

*"We (teachers) only cover a small portion of SRH course in biology class. When our students raise questions, most of us are unable to respond satisfactorily since we have limited knowledge and resources on the subject."(****Teacher, Male).***

A Study by Pandey et al (2019:10) revealed that friends were a common source of adolescents' SRH information. However, it is neither trusted nor preferred because of their lack of knowledge and experience.

Sub-category 1.1.4: Perceptions on importance of SRHRs awareness

When adolescents were asked for their views on the importance of having awareness of SRHRs, many of them showed their wish for these rights to be informed. Adolescent stated this as follows:

"I perceived that knowing these rights is essential because it empowers us to know what kind of rights we have and to exercise them." ***(G3P3****).*

Health care providers also supported this during IDIs as below:

*"Of course, if the adolescents had enough knowledge and experience of SRHRs, they would have improved their health and self-esteem." (****Male, HCP).***

Also, literature supports all adolescents should be able to access adequate information of their sexuality rights to use their rights. As well, they must know their reproductive bodies,

to avoid SRH problems and make decisions about their SRHs (Woog & Kagesten 2017:10).

Category 1.2: Healthcare-seeking behaviour to SRHRs and services

Under this category, two sub-categories (ability to exercise SRHRs and use and types of SRHs) were discussed as below: Almost all the adolescents had no experience of seeking healthcare in relation to SRHRs and services.

Sub-category 1.2.1: Ability to exercise SRHRs

Under this sub-category the findings revealed that most adolescents were unable to exercise their SRHRs. Their statements below depict as follows:

> *"I do not believe that adolescents have the right to use a condom or any other form of contraception. I believe it is advisable not to exercise prior to getting married" (**G4P3**).*
>
> *"Him… It is impossible to exercise these rights [SRHRs] for us. We have no full rights to practice SRHRs what we like as we are dependent on our family." **(G2P4).***
>
> *"As we had little experience and awareness, we were unable to exercise our rights in our community. Depending on our family, we are not independent in practising our SRHRs." **(G2P6).***

Furthermore, one of the key informants (HCP) who has been working in a rural area nearby the adolescents' school supported the above ideas:

> *"I realised that adolescents cannot use their SRHRs in our society. However, the condition is unlike in urban areas where youngsters are more experienced and have more information than in rural areas." **(Male, HCP**).*

The findings showed that most adolescents had limited autonomy to freely exercise their SRHRs. It was recommended by many key informants empowering adolescents to practise their rights of education, access and utilisation of SRHs, consent marriage and life, security and equality.

In addition, the existing literature supports that every adolescent has the rights of SRH that apply for adults. However, their low social status, lack of knowledge and physical vulnerability make it more difficult for them to exercise such rights (Yendaw et al 2015:3).

Sub-category 1.2.2: Use and types of SRHs

The findings showed that some participants used HIV counselling and testing (HCT) and family planning services. Among participants all married female adolescents reported their experiences of SRHs for a pregnancy test, HCT and contraceptive services utilisation. The SRH services that had been utilised by some adolescents were quoted as below:

> *"I have been using contraceptives. I feel safe using contraceptive methods because I don't want to drop school because of pregnancy."* ***(G2P4).***

Another participant stated:

> *"In my life, I have been tested for HIV and counselled in a health facility when I visited. Also, I received health education on how to prevent unwanted pregnancy and STIs." (**G2P3).***

The health care provider who is working in the rural area confirmed this:

> *"I feel that because men do not become pregnant, they are less inclined to seek SRH services." (**Female, HCP**).*

However, some of the adolescents had misperceptions about the rights of contraceptive service utilisation. *As quoted below:*

> *"I believe that adolescents do not have the right to use contraception. Because I think it was designed for adults or couples."* ***(G2P6).***

The findings revealed that unmarried adolescents never used contraceptive services in a health facility because they feared or ashamed the community. Another Study done in Ethiopia showed that SRHs utilisation among secondary school students in Woreta town was found to be low. This might make students prone to different problems related to reproductive health, which in turn can increase school dropout rate (Abate, Ayisa & Wolde-Mariam 2019:20).

6.3.2 Theme 2: Perceived barriers that prevent access and use of SRHs

This theme reflects the participants' perceptions of the challenges faced for SRHs access and utilisation. In this theme, one category and six sub-categories emerged.

Category 2.1: Barriers to access and utilisation of SRHs

As illustrated in table 6.3, barriers that prevent access and use of SRHs were presented as sub-categories below: Interviewed adolescents mentioned various barriers such as: lack of information about comprehensive SRHs for adolescents and where they can be accessed, community-stigma surrounding accessibility to SRHs, unaffordable services within private health facilities, fearing parents and church leaders on what they might think about adolescents who try to utilise or request SRHs and judgmental attitudes of some health service providers.

Sub-category 2.1.1 Lack of information about comprehensive SRHs

Majority of adolescents mentioned their reason for not utilising SRHs to be associated with not being informed. The adolescents indicated that the concern that affects their access to SRHs was lack of real information that resulted in low utilisation of the SRHs at any health facilities.

They said the following:

> *"I have lived in this region for a long time, yet I have never heard of a clinic that provides our needs. I believe there are more teenagers like myself who are unaware of the clinic that serves us."(**G4P3).***
>
> ***"**We are not aware of the services available for us, no information given to us, and lack of knowledge on why to seek such services prevents some of us from accessing the SRHs."**(G3P3).***
>
> *"As for myself, I'm not sure where I'd go if I were to be raped. I also have little knowledge of emergency contraception or SRHs. We were completely unaware of it because no one told us." (**G3P1**).*

Key informant as indicated below also confirmed this:

> *'' I think most of them (adolescents), have limited awareness and perceptions towards accessing and utilisation of SRHs." **(Male, HCP)**.*

The findings are supported by the previous study conducted on adolescents SRHs access in Uganda. This showed that the majority of adolescents never go to health institutions to seek SRHs because they are not aware of the services available for them, no information given to them, and lack of knowledge on why to seek such services (Atuyambe, Kibira, Bukenya, Muhumuza, Apolot &Mulogo 2015: 6).

Sub-category* 2.1.2: *Fear of parents and community

Adolescents were asked about their experienced perceptions about their parents and community members on their influence toward utilising or not utilising the SRHs for adolescents. Accordingly, the findings demonstrated that the parents and community members were identified to limit access to SRHs for adolescents. This might affect the accessibility to SRHs because adolescents were afraid, had self and social stigma from community in looking for the SRHs:

As stated below:

> *"I'm hesitant to speak up and seek help for the SRHs. Our community members limit ours' access to SRHs because they may gossip about us, we also fear them, and be ashamed if they saw us accessing those services, and therefore, I do not want them to know that I utilise SRHs."* ***(G2P6)****.*
>
> *"Not only if I'm seen in a health facility, but if I'm seen walking with a male friend, I'll be labelled a girl with shady morals. So, I am afraid of /ashamed to access these services."* ***(G2P4).***

Additionally, key informants during IDIs affirmed this:

> *"Both male and female teenagers are shy to express their feelings to us."* ***(Female, HCP).***
>
> *"Even we [teachers] are guilty.... I never heard my parents discuss sexual health when I was a teenager. As a result, we are afraid that if we discuss these difficulties, society will react badly. I believe this is why, even when we know it is an important topic to talk with students, we teachers are hesitant to do so. That is, without a doubt, our flaw." (****Male, Teacher)****.*

Literature also supports the findings that mostly rural school adolescents were not utilising adolescents SRHs because of fear of being named bad by society, family, and even friends (Mmari, Marshall, Hsu, Shon & Eguavoen 2016:5). Evidence supports those adolescents encountered weak parental and community support for adolescent health interventions and personal constraints (Abuosi & Anaba 2019:19).

Sub-category* 2.1.3: *Religious and cultural norm

Under this sub-category, the findings showed that socio-cultural norms constituted the important barrier to access SRHs where the religious leaders limit the adolescents for

using SRHs. The findings confirmed that the religious beliefs were the important contributing factors to the low access to SRHs [contraceptive services, abortions services….].

These views are asserted below:

> *"In our culture taking or accessing SRHs at our age is taboo. For example: if you do that, the society speaks ill of you when they see you accessing or using SRHs. They call you all kinds of names like rude."* ***(G2P5).***
>
> *"As to me, my religion did not permit to use abortion service to terminate pregnancy even in rape case." (**G4P5)**.*

During IDIs teachers stated as follows:

> *''Many of religious leaders are the principal people who limit adolescents to access the SRHs because they are refusing SRH services like abortion and contraceptive service utilization in general."* ***(Male, Teacher).***

Literature study confirms that talking about or SRHs issue for adolescents was taboo because sexuality was never freely and openly expressed in their culture. Even in some religious perspectives usage of birth control is considered as sinning God (Nmadu 2017:42).

Sub-categories* 2.1.4: *Inaccessibility of SRHs

According to the findings, the government is to be blamed for not making these programs available and easily accessible to students in remote schools. Long distances and transportation expenses made it difficult to visit health services, particularly in rural areas. Adolescents reported as indicated below:

> *''It is clear that we (Adolescents) have no health facilities that support SRHs in rural communities. Even in emergency case, we must travel long distance to access the services.''**(G4P6**).*

The study conducted in Ghana was also in line with these findings whereby the decision of adolescent to use SRH was significantly affected by internal and external factors, community and level of facilities that disabled youth use of SRHs (Challa, Manu, Morhe, Dalton, Boakye, Adanu & Hall 2017:1). Even though adolescents are accessing and utilising adolescents SRHs it is complicated by the lack of tools leading to complications of early sexual activity including teenage pregnancy, abortions and STIs (Ntulume 2018:1).

Sub-category 2.1.5: Health care providers' attitude

Adolescents find it difficult to request any SRHs and education in public facilities, because such demand is associated with the care provider's judgmental attitude. In addition, to that, the results indicated that the negative attitudes of the health care providers challenged them to access the SRHs. For instance, confidentiality and privacy related to the services provided.

They stated as follows:

> *"When you go to a public health institution, HCPs act as if we are impolite. They treat us with contempt. As a result, getting SRHs there is difficult."* ***(G3P4).***
>
> *"Every time you go to the providers for any illness, the first thing they ask you is if you've ever had unprotected sex, and then they ask you more personal and in-depth questions... I'm afraid to share my sexual experiences with others."* ***(G4P6).***

Study conducted in Tanzania described those teens do not seek official usage for SRH complications due to embarrassment and fear of exposure (Nyblade, Stockton, Nyato & Wamoyi 2017:16). Adolescents fear stigma and discrimination by health care providers, families and communities that prevent them from accessing SRHs, especially single girls (UNFPA 2015b: 6). Adolescents encountered negative provider attitudes, inadequate resources in adolescent health facilities, weak parental and community support for adolescent health interventions and personal constraints (Abuosi & Anaba 2019:19).

Sub-category* 2.1.6: *Financial challenge

In this study, most of the adolescents expressed financial challenge as one of the factors that hinders them from using the SRHs. This reported mainly, in terms of transport costs and pay for the services.

The participants stated as follows:

> *"I am not working [employed] and therefore, I cannot afford to pay for SRHs and for transportation."* ***(G3P6)****.*
>
> *"I only get money from my parents when I need to buy clothes or school materials. Nevertheless [fear] I cannot ask them for anything else. I'm cash-strapped and I'm unable to take advantage of the SRHs."* ***(G2P1)****.*

Prior literature support, that all the available SRHs should be geographically and financially accessible for adolescents (Challa et al 2017: 3). In addition, another study supported the

findings. It found that the majority of the SRHs were available and geographically accessible, but very few were financially accessible to adolescents (Odo et al 2018:18).

6.3.3 Theme 3: Suggestions to promote SRHs

In this theme, the main two categories emerged as far as the FGDs with study participants were concerned. This is the most important suggestion to improve SRHs and accessibility.

Category 3.1: Awareness creation

The findings explored that; all the participants emphasized the importance of enhancing adolescents' awareness through education.

Sub-categories 3.1.1: SRH education at school

During IDIs, key informants suggested that regular education at school like other subjects and campaigns should be organised on adolescents SRH issues. At each school well designed school-based education programs should be implemented. Also, during FGDs, most adolescents proposed their ideas that SRH education in schools must be comprehensive and clear for their awareness development.

From key informants, teacher stated that:

> *"I strongly suggest for all adolescents, understanding of their reproduction and bodily changes during puberty must be accessible at school. As it protects those [adolescents] from sex-related issues, I recommended that it should be taught as other subjects at the school." (**Male, Teacher).***

HCPs who were working at rural health facility said that*:*

> *"Teachers are the most essential sources of information for raising adolescents' awareness since they are more trusted than others." (**Male, HCP).***
>
> *''School authorities should engage with local health institutions to schedule frequent health education programs in their schools." **(Female, HCP).***

One adolescent stated that:

> *"I suggested that SRH education be easily available to all of us at our schools and even at the community level," **(G4 /P6).***

Other studies revealed that health education has been described as a concept, approach or method by which right information is made available to people and simultaneously

stimulating positive health attitudes and practices to promote personal and community health (Egemba & Ajuwon 2015:12).

Sub-category 3.1.2 Parents support /guiding

The study identifies that, majority of the participants emphasized the need for parents to provide their children with sufficient guidance and education on subjects of sexuality and physical changes in relation to SRH issues. Parents must communicate openly and provide correct information to both boys and girls.

One adolescent indicated that:

> *"I have never in my life talked to my parents about these (SRH). I think [guessed] they embraced talking about these issues with children because of cultural issues."* ***(G1P4).***

Key informant suggestion: female teacher stated:

> *"I think SRH education should start as early as from pre-school (at home), maybe not the way we teach the older ones.....just like a bad touch and a good touch. There has to be a way to teach sex education to children. I think some education at home is most important."* ***(Female, teacher)***

Literature supports that comprehensive sexuality education interventions at school and parental guidance are the important strategies to promote adolescents' awareness of SRH issues (Decker, Berglas & Brindis 2015:687). Moreover, evidence supports that, parents are an important source SRH information for very young adolescents and are likely to have a significant influence on adolescents' sexual attitudes, values, and risk-related beliefs (Maina, Ushie & Kabiru 2020:1). Another study showed that only a low proportion of adolescents communicated on SRH issues with their parents. Parents should focus on both male and female students equally, in discussing SRH matters and in improving their communication skills and should be transparent in the community to encourage open discussion among family members particularly with their adolescent children (Fanta, Lemma, Sagaro & Meskele 2016:2).

Category 3.2: Quality of health facility system

Under this category all the participants described that quality and comprehensive SRH services and information for adolescents are valuable for adolescents' wellbeing.

Sub-categories 3.2.1 Accessible health facility

All adolescents desire to have accessible and affordable SRH services.

Adolescents stated that:

> *"I suggest that the government should establish accessible and affordable health facilities for adolescents SRH services. As far as I know there are no health facilities established to serve us in rural areas,"* ***(G4P2).***
>
> *''I suggest that health care providers should spread awareness about the available friendly adolescents' SRH services when there is a campaign, because adolescents attend it."* ***(Male, HCP).***

Sub-category 3.2.2: Care providers' support

During FGDs, adolescents said that:

> *"I propose that healthcare providers should be respectful and compassionate. Also, the have to support us to give adolescent-friendly services."* ***(G4P4).***
>
> *"I suggest that health care providers' attitude must not be judgmental when we attend SRH services."* ***(G2P3).***

Additionally, the key informants suggested that adolescents' SRHs must be kept in a privacy and confidentiality manner.

Key informants indicated that:

> *"I suggest that all healthcare providers give SRHs to adolescents in privacy and confidential manners. The socio-demographic and adolescents' status are kept in privacy."* ***(Female, HCP).***
>
> *''I recommended that adolescents' service rooms should be separated from adults to avoid fear and shame****." (Male, HCP).***

These findings showed that geographical accessibility of SRHs, especially when it came to distance, was seen to be a negative factor influencing access among adolescents. In contrast, the study conducted in Rwanda revealed that the geographical accessibility of SRHs was not seen to be a negative factor influencing access among adolescents. The difference findings may be a result of the decentralisation of health systems in Rwanda for the attainment of Universal Health Coverage (UHC) (WHO 2014:28). Another literature aligns with the findings of this study that parents and health facilities should be supportive

to improve adolescents SRH service utilization (Denno, Hoopes & Chandra-Mouli 2015:22).

6. 4 SUMMARY

The summary of these findings found a low-level knowledge and misperceptions of adolescents about the SRHRs and services in rural secondary schools in Arsi Zone Ethiopia. The findings also discovered many factors that negatively affect adolescents' access to and use of SRHs. The findings were supported with key informants and adolescents' verbatim quotes and relevant literature to show the existing evidence. The next chapter 7 provides merging of both the quantitative and qualitative phases' data that were used to develop training guidelines to promote adolescents' knowledge and perceptions of SRHRs and services.

CHAPTER 7
INTEGRATION OF PHASES 1 AND 2 RESULTS

7.1 INTRODUCTION

Training guidelines are systematically developed statements or recommendations for achieving the desired goals (https://www.definitions.net/definition/guideline). To get full attention from stakeholders, training guidelines must be based on evidence (Milhem & Abushamsieh 2014: 2).

In the context of this study, these training guidelines were developed based on the evidence from both research phases (phase 1 and phase 2 findings) and supported with relevant literature reviews. This chapter presented the combination and discussions of phases 1 and 2 findings. From the integrated findings of these phases, the training guidelines were developed. The integration was done through incorporation and presenting a narrative discussion of both phases.

The combined findings were also supported with related literature to advance an inclusive understanding of the study. Based on this, 8 training guidelines were developed. The purpose of developing training guidelines was to promote adolescents' knowledge and perceptions of SRHRs and services. Therefore, these training guidelines are an important contribution as there were no other training guidelines in the study area. Also, it is considered an effective guide for policy makers and other stakeholders who use it to improve adolescents' knowledge and perceptions on SRHRs and services.

7.2 INTEGRATION PROCESS OF THE FINDINGS

In this section both the quantitative and qualitative findings were integrated to provide detailed understanding of the research problems (Santos, Erdmann, Meirelles, Lanzoni, Cunha & Ross 2017: 3).

Mixed methods research requires a purposeful mixing of methods in data collection, data analysis and interpretation of the evidence. The key word is ‘mixed’, as an essential step in the mixed methods approach is data linkage, or integration at an appropriate stage in the research process (Shorten & Smith 2017:1). In this study, the integrating of the data was done by the triangulation principle.

The triangulation principle is applied when the researchers advance their studies by collecting and mixing different kinds of data on the same research problem (Creswell 2015:542). This advances the strength of mixed study design and neutralises the weaknesses of individual single design. For this reason, the findings generated from phases 1 and 2 provide a detailed understanding of the findings that enable to develop training guidelines for the promotion of the adolescents’ knowledge and perceptions of SRHRs and services.

Generally, this study adapted the triangulation principles to combine the quantitative data with the qualitative data to produce the training guidelines on adolescents’ SRHRs and services (see figure 7.1 illustrates the quantitative and qualitative data integration process).

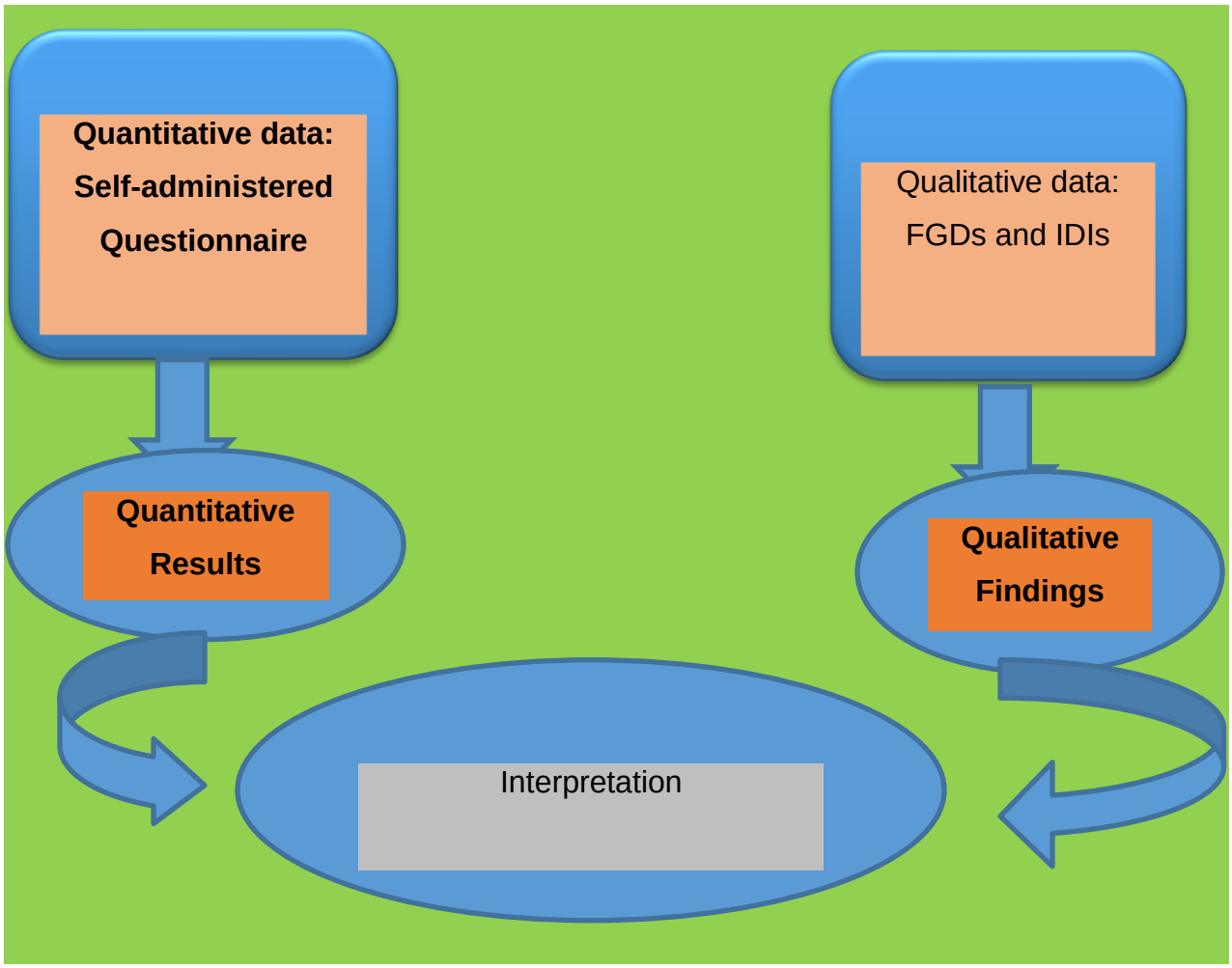

Figure 7. 1 Integration processes of the research study of phases 1 and 2

7.3 INTEGRATED MAIN FINDINGS OF THE STUDY

7.3.1 Adolescents' Knowledge of SRHRs

In phase 1 study under (section 4.2.3) less than half 362(45.3%) of respondents were knowledgeable about the components of SRHRs that apply human right standards. In addition, in (section 4.2.4) among adolescents asked the forms of SRHRs violation, forced marriages 278(34.8%), non-consensual touching 339 (42.4%), abusive sexual language 193(24.1%) and discriminations 291(36.4%) had knew forms of sexual violation. Overall adolescents' knowledge of SRHRs violation forms was 326 (40.8%). Similarly, the

qualitative findings from the FGDs under (sub-category 1.1.1) supported the low-level awareness of adolescents about their rights of sexuality and SRHs.
Most of the participants were unable to mention or list the contents of SRHRs that apply to the human rights standards.

During IDIs, the key informants suggested that there is a need to do more in knowledge and awareness creation by using social media, parents and teaching at school to enhance adolescents' knowledge of SRHRs. In this research, the findings showed a gap in knowledge and perceptions about SRHRs which happened due to various influencing factors. Studies from different countries also suggested that adolescents should exercise rights of SRHs and education access. For instance, the qualitative research conducted in Pakistan showed that almost all participants including doctors, teachers and adolescents were in favour, emphasising that these rights cannot be ignored, especially in the current era of information technology (Iqbal et al 2017:6). However, in the developing world, adolescents' SRHRs are violated, and a lack of a clear view of their rights is noticed (Shirkat 2016: 6).

Another study conducted in Ghana suggested that adolescents have rights of SRH, just as adults do, but their low social status, lack of knowledge and physical vulnerability make it more difficult for them to exercise such rights (Yendaw, Martin-Yeboah &Bagah 2015:148). Particularly, female adolescents had limited knowledge as compared to male adolescents that could lead to sexual rights violations (Yendaw et al 2015:1).

7.3. 2 Adolescents' awareness of SRHs

The findings, in both phases 1 and 2 found that most of the adolescents lacked adequate awareness of available SRHs in the community. In a quantitative study, adolescents' awareness was measured by asking whether they had information about SRHs that could be offered. In section 4.2.7 respondents' knowledge of SRHs was described as follows: family planning services 592(74.6%), pregnancy care services 348(43.8%), STIs diagnosis and treatment services 177(22%), and counselling or education 39(4.9%).

Regarding types of family planning knowledge, the most familiar were oral contraceptives pills 568 (73.2%) followed by injectable 500(64.4%), IUCD 332(42.8%), Implant 326 (42%) and the least known was emergency contraceptives 153 (19.7%) see in (section 4.2.7.2).

These findings indicated that most adolescents were unable to identify all components of SRHs existing in the community. As stated under (sub-category 1.1.2) the findings of the qualitative study, many rural adolescents had limited knowledge and access to SRHs. Moreover, most of the discussants were not familiar with the SRHs existing in their community. Some of SRHs known were limited to HIV/AIDS testing and counselling and contraceptive, particularly condoms. Generally, the participants talked on light issues concerning the existing knowledge of adolescents SRHs available and did not state much deeper information.

The literature has shown that all adolescents should have access to comprehensive SRH education and services to exercise their rights, understand their bodies, and make informed decisions about their gender (Woog &Kagesten 2017: 10). This agrees with findings by Abiodun et al (2016:1) having adequate knowledge of SRH services reduces misconception and contributes to utilising the services. Again, the study cited by Gebreyesus, Teweldemedhin, and Mamo (2019:4) confirms that adolescents who had good knowledge of where to find the services and who had positive perceptions towards services were more used to the services than their counterparts did.

7.3.2.1 Adolescents' sources of information

As reported in section 4.2.7, the main source of adolescents' SRH information were from their peers/friends 300(37.5%), TV/Radio 191(23.9%), health workers 144(18%), teachers 113(14.1%) and parents 52(6.5%). This was also affirmed in the qualitative phase as explained from FGDs most of the participants access SRH information primarily from their friends. However, many adolescents stated their preference to gain information at home from their parents. In section (sub-category 1.1.3), the key informants reported that most

of the adolescents were not concerned about the reality and accuracy of information, but they obtained information from their friends.

A study by Pandey et al (2019:10) revealed that friends were a common source of adolescents' SRH information. However, it is neither trusted nor preferred because of their lack of knowledge and experience.

7.3.3 Adolescents' perceptions towards SRHRs and services

In section (4.2.5), the perceptions of adolescents towards various forms of SRHRs and abuses were identified. When they were asked whether they believed that the right to use reproductive health services was kept confidential 439 (54.9%) had a positive perception that confidentiality should be kept.

Regarding freedom of sexual violation 518 (64.8%) had positive perception to be free from sexual violence. Also, 225(59.1%) of the respondents disagree that a spouse has sex whenever wanted regardless other desire. On the contrary, during FGDs some of the discussants had misperceptions about the rights of contraceptive access and utilisation among adolescents (sub-category 1.1.4). The literature revealed that adolescents who had positive perceptions towards their SRHRs were more likely to exercise their rights, understood their bodies and made informed decisions about their sexuality (Woog & Kagesten 2017:10).

7.3.4 Magnitude of SRHs utilisation

The quantitative results showed the magnitude of SRHs utilised by rural adolescents was only 208(26.1%) within the last 12 months of the study (see section 4.2.8.). Additionally, under (sub-category 1.2.2) in the qualitative findings none of the unmarried participants had experienced SRH services except HIV counselling and test at any health facility. Compared to other studies, the proportion of adolescents' SRHs utilisations is poor in this finding (Abiodun et al 2016:2 & Ghebreyesus et al 2019:15). This dissimilarity could be

due to the difference in study settings. The other studies settings were not limited to rural secondary schools like this study. It could also be due to the difference in number and type of SRHs the other studies focused on. Since in this study mainly the researcher focused on three services like family planning service, HIV counselling and testing and STIs screening and treatment services.

7.3.5 Perceived barriers for seeking and utilising SRHs

In the quantitative phase, the rural adolescents were asked what factors were preventing them from accessing SRH service utilisation. As summarised in (figure 4.5), lack of information, fear of being seen by parents, lack of money, religious or cultural influence and distance of the health facility were reported as the major barriers 309(38.6%), 192(24%), 144(18%), 127(15.95) and 28(3.5%) respectively.

Moreover, this was supported by qualitative findings reporting that participants' lack of knowledge, misperception towards SRHs and being shamed to the service were impacted negatively to utilising SRHs. In addition, cultural and religious norms, economic constraints, and infrastructure of the health facility system were found as factors affecting adolescents' use of SRHs utilisation and access. The findings also agree with the study conducted by (Khanal 2016:4).

In this study, many discussants reported that especially their parents had a strong influence on their utilisation of SRHs. Parental attitude to adolescents' SRHs utilisation and seeking behaviour prohibit adolescents' utilisation of the services. In health facilities healthcare providers judgmental attitudes and inaccessibility of the facilities in the rural areas were also, found to hinder adolescent access and utilisation of SRHs. These findings are in line with the findings of (Kimera, Vindevogel, Rubaihayo & Bilsen 2019: 6) who found that adolescents, because of stigmatisation, most of them feared to disclose their SRH problems to anyone often leading to delayed care-seeking behaviour and non-adherence to treatment.

7.4 DEVELOPMENT OF TRAINING GUIDELINES

Training guidelines are systematically developed statements of action or plan for accomplishing the anticipated objectives (https://www.definitions.net/definition/guideline). It is further regarded as any planned activity to transfer or modify knowledge, skills and behaviour through learning experiences (Milhem & Abushamsieh 2014:2). From the results in phase 1 and phase 2 findings, it is evident to bring a change in knowledge and perception of adolescents towards SRHRs and services. Thus, the researcher intended to develop the training guidelines to promote adolescents' knowledge and perceptions of SRHRs and services. In this manner, training guidelines were developed from the summary statements of both phases of the study. Then, supplemented by the comments and recommendations from the supervisor of the project and professionals in the field of study (For more details, see below section 7.5.1).

7. 5 PROCESS OF DEVELOPING TRAINING GUIDELINES

The section below discusses the steps that were followed in the development of the training guidelines for promoting adolescents' knowledge and perceptions on SRHRs and services and also the reasoning process or logical reasoning followed in the development process**.**

7.5.1 Steps followed in the development of the training guidelines

Two sequential steps were followed in the development of the training guidelines for promoting of adolescents' SRHRs and services in the rural Arsi Zone, Ethiopia.

In step 1, the researcher conducted quantitative study design with aid of structured data collection instruments after checking for its validity and reliability. The results from phase 1(quantitative) and phase 2 (qualitative) of the study were used to develop the draft of training guidelines for the study. In this manner for the step 1, the researcher drew evidence for the development of training guidelines from the summary of the conclusions of phases 1 and 2 findings whereupon the conclusion statements from each phase as indicated in the text were summarised. Similar conclusion statements from both phases

were combined to form one conclusion. These were integrated according to themes as identified in phases 1 and 2 (see section 7.3). The actions for implementation of these training guidelines were generated from the conclusion statements of phase 1 and 2 and literature review.

For step 2, the drafted training guidelines were submitted to the research supervisor and five experts in the field of study for comments and inputs. The experts were defined as the one who have special skills or knowledge of a subject through professional training and experience. Experts are individuals undergoing the context of the study within the field of study to give immediate and accurate feedback (Campitelli, Connors, Bilalic & Hambrick 2015:2).

In this context, the researcher selected five experts in the field of study who had good experience and qualification on the subject matter (table 7.1). Lastly, the feedback and recommendations from the supervisor of the project and experts was supplemented in the drafted guidelines. In addition, it was supported with relevant literature for more accuracy and relevance.

Table7. 1 Evaluation criteria for experts

Sr. N0	Evaluation criteria
1	Irrelevant, totally not applicable
2	Unclear, applicability questionable
3	Applicable, but needs reformulation
4	Complete, clear, well formulated and highly applicable

Based on the given criteria, the five experts evaluated the drafted training guidelines and provided feedback. The criteria used a Likert scale because this scale is the most crucial and frequently used psychometric tools for observation and evaluation in educational and social sciences research (Taherdoost 2019:1).

In this case, 4-point Likert Scale was used as the following criteria: 1 = not applicable, not applicable at all; 2 = vague, questionable applicable; 3 = applicable but requires adjustment; and 4 = complete, clear, and developed. The scores registered were 4's and accepted, the 3's and 2's were re-adjusted, and the 1's were deleted.

In this study, most testers found 4, and a few guidelines for registering 2 and 3 were re-created, where there was a repeated one that was deleted. The modified training guidelines are shown in this chapter as the final developed training guidelines. Then the reformulated training guidelines were reflected in this chapter as the final ones accruing from the study. As shown in Table 7.2 below, the evaluators profile described two evaluators were from an academic area, two from government and one from Non-government (NGO) institutions.

Table 7. 2The description of the expert evaluators' biographic information

No	Qualification	Occupation	Professional experience	Evaluation method
1	Assistant Professor, MSc in reproductive health and BSc in public health	Lecturer	Lectures under and postgraduate university public health students	Electronically , word
2	MSc in maternity and reproductive health and BSc in Midwifery	Lecturer	Lecturers: Midwifery at a health sciences college	Electronically , Word
3	MPH, BSc in Nursing sciences	Assistant. Director of FGA District	Coordinating and managing of SRHs programmers	Electronically , word
4	MPH BSc in Nursing	Deputy manager for Zonal training Centre	Coordinating, youth & adolescent service training	Electronically , word
5	MSc in maternity and reproductive health	Focal person for Youth SRHs	Coordinating maternal and reproductive health services	Electronically , word

NOTE: *BSc, Bachelor of Sciences; FGA,* Family Guidance Association*; MPH, Master of Public Health; MSc, Master of Sciences; MCH, Maternal and child health.*

7.5.2 Logical reasoning process

According to (Burns & Grove 2011:8), reasoning is the processing and organising of ideas to reach a conclusion. Similarly, logical reasoning is used to break the whole into parts through inductive and deductive reasoning to understand and organise a condition under

study. For the purpose of these training guidelines development, both inductive and deductive reasoning approaches were utilised. Inductive reasoning is the process which starts with the specific aspect of the fact to come up with the general picture of the fact to give a likely conclusion on the phenomenon (Burns & Grove 2011:8). Hence, for the current study, inductive reasoning was used particularly during the first phase and second phase of the study. As interpretation, separate findings of both phases on different variables were utilised to know adolescents' knowledge and perceptions on SRHRs and services and finally led to the development of the training guidelines for promotion of adolescents' knowledge and perceptions on SRHRs and services.

The deductive reasoning starts with a general idea of the phenomena and goes to end with a particular conclusion (Burns & Grove 2011:9). Accordingly, for this study, the deductive reasoning was employed for the training guidelines development as overall findings from the first draft of developed guidelines. Similarly, the experts' inputs and feedback and relevant literature review also made use of deductive reasoning approach to supplement on initially developed specific guidelines.

7.5.3 The theoretical framework used to guide training guidelines development

The training guidelines were guided by the concept of the health beliefs model (HBM). The model is one of the oldest models of health behaviour but is still very relevant when discussing health behaviour change. This model addresses the readiness to act upon a health behaviour based upon several individual beliefs (Abraham & Sheeran 2015:30).
These beliefs include.

I. **Perceived susceptibility**: Refers to beliefs concerning risk or susceptibility to a condition or disease.
II. **Perceived severity**: Refers to beliefs concerning the possible severity of a disease or condition.
III. **Perceived benefits**: Refers to the perceived value or benefit of behaviour changes in reducing the risk of a condition or disease.

IV. **Perceived barriers**: Refers to any obstacles or barriers to the behaviour changes being considered to decrease risk.

V. **Cues to action**: That spurs individuals toward action. For example, adolescents by having knowledge of SRHRs and services avoid any risks in relation to sexuality.

VI. **Self-efficacy:** Refers to an individual's confidence that he or she can successfully carry out the indicated actions. If individuals do not believe they can successfully make a behaviour change, they are unlikely to do so.

Generally, if individuals perceive they are susceptible to a condition and that the condition could be severe, they will most likely take action to avoid the condition. The likelihood of action is enhanced if the perceived benefits outweigh the perceived barriers. For example, if adolescents believe they are at risk for SRH risks, they are more likely to adopt new health behaviour. Also, if they believe that the SRH problem has a risk on their future life, they may take steps to prevent such risks (Jeihooni et al 2016: 7).

Moreover, adolescents are more likely to act if they see that they can perform a set action successfully (Tarkang & Zotor 2015: 3). Therefore, this model has been well used to guide the development of training guidelines to promote adolescents' knowledge and perceptions on SRHRs and service.

Evidence showed that adolescents are at risk of SRH problems due to lack of knowledge and misconceptions towards SRH services (Manu, Mba, Asare, Odoi-Agyarko & Asante 2015: 12). This model can be very useful in developing training guidelines to promote adolescents' knowledge and perceptions on SRHRs and services. Additionally, the conceptual framework in figure 7.2 below shows how different elements came together in relation to HBM for development of training guidelines.

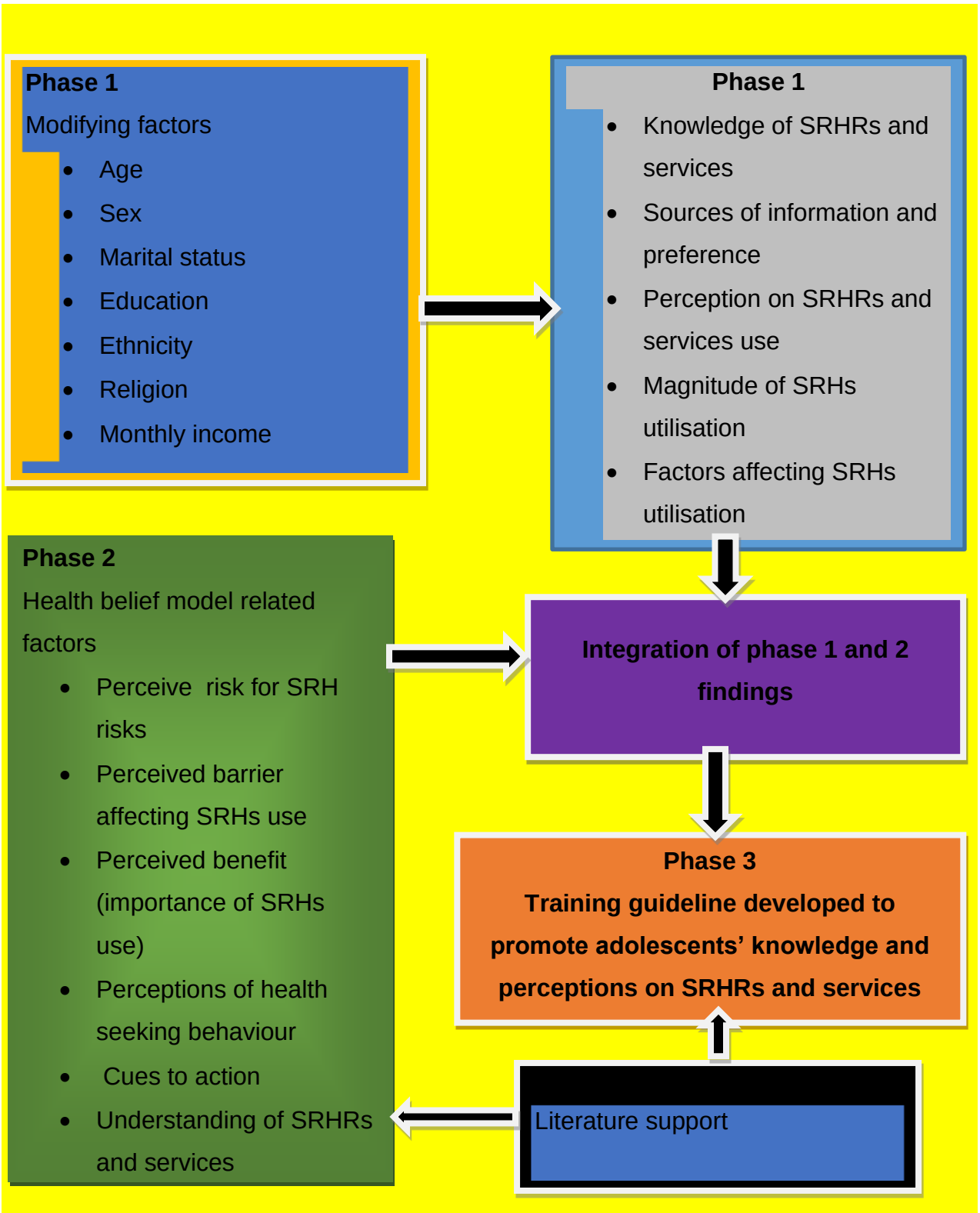

Figure 7. 2: Conceptual framework used to develop training guidelines

7. 6 DEVELOPED TRAINING GUIDELINES

The main purpose of developing training guidelines was to promote adolescents' knowledge and perceptions of SRHRs and services. As per the significant findings stipulated in this research, it is worth to develop the training guidelines to promote adolescents' knowledge and perceptions on SRHRs and services in rural Arsi Zone, Ethiopia.

The developed training guidelines need to have a well-known end-user; and the recommendations included in the guideline need to be tailored to the audience identified as the end-user (WHO 2014a:17). Thus, these training guidelines are one of the key contributions from this study; and would be delivered primarily to the study areas of secondary schools, health facilities, Zone and regional education and health offices, federal ministry of health (FMOH) and developing partners who are supporting the adolescents SRHRs and services in Ethiopia. Accordingly, for each identified training guideline, actions or recommendations were discussed with the information obtained from the current study and relevant literature as follows:

7.6.1Training guideline for curriculum-based education on SRHRs and services

Objective: The intention of this training guideline is to promote adolescents' knowledge and perceptions on SRHRs and service by implementing curriculum-based education at secondary schools.

Curriculum-based training is an organised set of educational activities or exercises. Evidence supports that curriculum based SRH training has a positive impact on improving adolescents' knowledge and perceptions (Haigh & Laura 2021:2). However, in the current study, the key informants mentioned that there were limited SRH contents incorporated in the existing curriculum. The researcher found limited SRH education at secondary

schools. The findings showed that many adolescents had poor knowledge and perceptions of SRHs (section 1.1.2

Activities:

- Design and develop a harmonised curriculum for adolescents SRHRs and services education at secondary schools.
- The curriculum includes the following components:
  - Understand human sexuality and puberty
  - Form healthy relationships
  - Prevent or delay pregnancy
  - Prevent or reduce risk of HIV and other sexually transmitted infections (STIs)
  - Prevent sexual coercion, sexual violence, or transactional sex.
  - Bad traditions affect adolescents in relation to SRHRs and services
- Pay attention for adolescents SRH education as any other subjects.
- Facilitate the education programs by trained health workers or well-trained teachers on SRHRs and services.
- The education program uses interviews, games, videos, demonstrations, role-plays, and exercises to help young people learn skills and knowledge.

7.6.2 Training guideline for supporting supplemental material at schools

Objective: To provide relevant materials/resources to improve adolescents' SRHRs and services education at school level.

This training guideline focuses on availing of training materials or resources and teachers' knowledge gap, intended to create a comfort training environment. In section, (Sub-category 1.1.4) teachers reported that during biology class, they provide limited contents of SRH. They also stated that they have limited knowledge and resources to support their students on basic SRH education.

Activities:

- Empower and support the teachers with important resources needed for the SRH education.

- Create an environment for emotional and social well-being and an important responsibility of a health-promoting and child friendly school.
- Provide updated training for teachers in the provision SRH lesson.
- Avail updated soft copy or hard copy of books, journals and guideline manuals at schools.
- Support the schools with information-education-communication materials on SRH issues, which would help to enhance training.
- Support teaching with audio-visuals (TV, and computer), flipchart, marker and white board.
- Ensure accessibility of family planning simulation dolls.

7.6.3 Training guideline for establishing mini media at school

Objective: To establish mini media at school level to enhance adolescents SRHRs and services knowledge and perception.

Knowledge on SRHRs and services is limited among Ethiopian adolescents. The first pillar in the HIV prevention roadmap of Ethiopia is prevention for gender-based intervention (UNFPA 2019:34). Although there was no separate output for HIV related interventions, there was HIV prevention and control interventions targeting out of school female sex workers and other most at-risk adolescent. Life skill training and SRH information dissemination through mini-media and other channels were relevant to address the knowledge and perceptions gap and build capacities of adolescents so that they will demand for services and make informed decisions on their SRHRs and services (UNFPA 2019:34). Therefore, the researcher intended to recommend establishing mini media to promote adolescents' knowledge of SRH issues.

Activities:

- Establish mini media for adolescent SRH information centres in schools
- Education with television/radio programme on adolescents SRH issues
- Establish Anti-AIDS clubs and adolescent SRH information centres
- Invite experts in the field of study to teach adolescents through mini medias at least once per week.

- Strengthen mini media by employing professionals to manage centres, select facilitators, and conduct training for facilitators.
- Equip the mini-media centres with electronic and printed materials.
- Teachers and school administrators monitor and evaluate the programmes regularly.

7.6.4 Training guideline for establishing peer educators' programme

Objective: To establish peer educators' programme for promotion of adolescents' knowledge and perceptions of SRHRs and services.

In the current study, researcher identified that adolescent's primary source of SRH information was their peer as indicated under (sub-category 1.1.4). Peer education occurs when people of similar interest, age or friends educate each other (Joar, Avni, Omar & Margaret 2015:13). This programme is important for adolescents because:

- It supports the adolescents to have awareness on sensitive issues like sexuality education.
- It used to reduce fear and shyness to talk and ask about their SRH matters.
- It is training with a friendly approach and offers opportunities to discuss their concerns in a relaxed environment.
- It creates an opportunity to ask any questions about prohibited subjects and discuss them without fear.

Activities:

- Develop appropriate criteria and select peer educators based on:
  - Their interest and capacity
  - Experience sharing of evidence and practice.
  - Being a role model in behavioural aspects and accepted in community
  - Fluency in language that young adolescents understand and speak.
- Provide training of trainers (TOTs) for peer educators on the subject matter.
- Motivate and reward peer educators' best performer for better achievements.
- Create network connection with health care providers in case for consultation.
- Support with updated resources like books, guidance and videos.
- Establish regular mentoring and coaching strategies and evaluation mechanisms

7.6.5 Training guideline for involving parents in SRHRs and service

Objective: To promote parents' involvement for improvement of adolescents' knowledge and perceptions of SRHRs and services.

In the current study during FGDs and IDIs, most adolescents had not accessed information from their parents. Most parents were reluctant to teach their children about their SRHRs and services (sub-category 2.1.2). However, evidence confirmed that parents are the trusted and crucial source of information for adolescents (Turnbull, Wersch& Schaik 2018: 2). Parents can bring a fundamental change on their children's behavioural and personal decision-making (Turnbull et al 2018:3). Therefore, this training guideline is intended to give tips on parents' involvement to promote adolescents' knowledge of SRHRs and services.

Activities:

- Promote parents' communication with their adolescents about their:
  - Sexuality and physical changes during puberty
  - Menstruation and hygiene
  - Sexual and reproductive rights (rights of education, services utilisation…)
- Establish training for parents to gain trustworthy information and to avoid misleading their children.
- Support parents to have adequate knowledge and positive attitude towards adolescents teaching on the issues. This is used to avoid the communication gap between parents and their children.
- Establish campaign and home visit programme to support and encourage parents on SRHRs and services education
- Access the relevant resources and training for adolescents SRHRs education depending on the local context and needs like:
  - Awareness-raising campaign at gathering sits (church, mosque and local meetings)
  - An online or digital message reminder
  - A month-long awareness-raising campaign Let's Talk Month,

- Calendars distributed to parents that feature monthly topics to discuss and questions to ask children on certain SRHRs and services.

- Strive to change the attitude on religious and culture of parents to discuss with their children on the SRH issues.

7.6.6 Training guideline for community involvement

Objective: To improve communities' involvement to promote adolescents' knowledge and perceptions on SRHRs and service.

In this study, many participants reported that community negative norms were directly influenced by adolescents' SRH decision-making and behaviours in the intended ways. Most adolescents were not utilising SRHs because of fear of being named bad by the community and seen at the health facilities by the community members (sub-category 2.1.2). In this case the reason for the application of this training guideline is to encourage community involvement for the sake of behavioural change and awareness creation among adolescents. Also, the literature supports that community acceptance of adolescent SRHs is important in determining the uptake of the services (Chimatiro, Hajison & Muula 2020:1). Communities should be provided with educational programs on SRHRs and services through community-based organisation and the establishment of youth friendly service facilities (Gautam, Soomro, Sapkota, Gutam & Kasaju 2018:10).

Activities:

- Guide the religious leaders and local authorities to support people in the community to have positive perceptions on adolescents' SRH service utilisation.
- Developing conceptual frameworks that enhance communities' awareness towards adolescents SRH risks.
- Motivate and involve community people to assist adolescents in the training of SRH issues.
- Involve communities and other stakeholders to work cooperatively to reduce the abusive adolescents' SRHRs and services.
- Involved communities protect adolescents' rights and respect irrespective of gender.
- Provide training for the community to have a positive attitude on the issues.

- Promote free discussion between the community and adolescents on sexuality issues and consequences.
- Conduct mass mobilisation in the community for SRH information and service.
- Establish collaboration programmes with civil society organisations in the community for educating people on the importance of adolescent SRHRs and services.
- Establish community involvement intervention and implementation in combating adolescents SRH problems.
- Establish networks with communities including governmental bodies and NGOs on adolescent SRH activities and social support.

7.6.7 Training guideline for promoting supportive health facility system

Objective: To promote health facilities system for adolescents SRHRs and service utilisation.

In this study, in section (sub-categories 3.2.1) most of the adolescents anticipated to see increased SRHs in rural areas. They desire that health care providers must be responsive and compassionate to their requirements. Moreover, the key informants proposed that alternative services would be delivered to the adolescents and the establishment of health facilities only for the young people to guarantee that they do not wait for services with the adults. Full access to young peoples in the SRHs and information necessary for the advancement of their human rights is still lacking in many SSA countries and this is due to the many barriers they face in accessing health facilities (Ndayishimiye, Uwase & Kubwimana 2020:1).

Activities:

- Establish accessible and affordable health institutions for adolescents SRHRs and services utilisation nearby their residence.
- Developing adolescent-friendly services for all adolescents
- Support for Menstrual hygiene awareness and resources (in partnership with WASH).
- Support and services for unmarried adolescent pregnancy.

- Supporting the expansion of HIV/STIs counselling/test and human papilloma virus (HPV) vaccine; exploring ideas for health check-ups integrated with HPV vaccination schedules
- Support with resources for SRH services, particularly in rural areas.
- Care providers must be compassionate and respectful without judgement
- Monitor and evaluate the health facilities youth-friendly services. In relation to privacy, confidentiality, and compassionate care
- Promote health care providers to be confidential and give priority for adolescents need (like STIs, condom and abortion services).
- Allocate relevant resources for adolescents SRH delivery service and financial support.
- Establish adolescents' free services to enhance their utilisation.
- Improve the quality of adolescents SRH service by providing all the content of the SRHRs and services key actions for the adolescents as per the guideline.

7.6.8 Training guideline for legal support of sexual and reproductive health rights

Objective: To support and improve the legal rights of ASRHRs in relation to human rights.

In this study, the researcher identified that most adolescents' rights are not respected yet. Literature supports that, the comparative study conducted in three countries (Ethiopia, Zambia, and Malawi) has shown that laws and rules make obstacles by rejecting or overlooking to address problems. Furthermore, young people seeking SRHS are banned disrespectfully, and their needs are considered insignificant, making them common victims of coercion, deprivation, or substandard care (Godfrey, Ernestina &Tamara 2020: 12). Interventions involving community engagement, skill-building to enhance voice/agency, and social-network expansion show promise to reduce adolescents' sexual violence (Yount, Krause & Miedema 2017:1).

Activities:

- Establish adolescents' legal rights of protection from any sexual violations.
- Encourage the community to be a watchdog in protecting adolescents' SRHRs and to report them promptly if sexual rights are violated to law enforcement agencies.

- Advocate and promote the supportive law counsellors for adolescents SRHRs at any community.
- Movements on protection and prevention of ASRHRs abuse and violence done to create community awareness.
- Involve national and regional mass media to work on sensitization of ASRHRs and legal protection.
- Create national and local SRH harassment awareness campaigns held annually.
- Establish legal frameworks for adolescents' protection SRHRs, education and protection from all forms of abuse, discrimination, discrimination, and exploitation.
- Establish appropriate mechanisms for the transfer of abused, discriminated and exploited minors from the community to law enforcement agencies.
- Communities establish structures and forums in informal settlements where adolescents can strengthen and protect their rights.

7. 7 SUMMARY

This chapter presented the combination and discussions of phases 1 and 2 findings. From the integrated findings of these phases, the training guidelines were developed. The purpose of developing training guidelines was to promote adolescents' knowledge and perceptions of SRHRs and services. In this way, there were eight training guidelines developed. Each recommended training guideline was developed for problems presented in both phases 1 and 2 findings. Chapter 8 presents the final section of the study.

CHAPTER 8

CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

8.1 INTRODUCTION

In Chapter 7, integration of phases 1 and 2 findings was described and presented. From these combined findings, the training guidelines were developed to promote adolescents' knowledge and perceptions of SRHRs and services. These training guidelines were evaluated by experts, after which recommendations were made. Chapter 8 is intended at giving a brief overview of the study, presentation of the limitations, and recommendations for policymakers, education and research.

8.2 OVERVIEW OF THE STUDY

The study used a mixed sequential explanatory study design, which was conducted in rural secondary schools in Arsi Zone, Ethiopia. In this situation, the mixing involves the integration of the two databases by merging the quantitative (phase 1) data with the qualitative (phase 2) data. The purpose of the study was to develop training guidelines for the promotion of adolescents' knowledge and perceptions of SRHRs and services. Then, the findings from both phases were used to develop the training guidelines.

In the phase 1 study, data were collected by means of a self-administered questionnaire to measure adolescents' knowledge, perceptions, and magnitude of SRHs utilisation and factors associated with SRHs utilisation. Complete questionnaire was analysed for 800 adolescents yielding a (96.7%) response rate.

In the phase 2 study, to explore adolescents' understanding of SRHRs and services, data were collected by using FGDs with purposively selected adolescents in rural secondary schools and IDIs with key informants of teachers and health care providers. Following the findings of phases 1 and 2, the training guidelines were then developed to promote adolescents' knowledge and perceptions of SRHRs and services (chapter 7). The experts

on the field of study and the research supervisor critically evaluated the training guidelines. Based on their critical evaluation, actions and recommendations were then documented. After this, the final training guidelines were developed.

8.3 OVERALL CONCLUSIONS

The general conclusion from this study revealed that adolescents in rural secondary schools do not have adequate knowledge and perceptions of ASRHRs and services. The study also showed that adolescents' SRH utilisation was very low which is majorly due to lack of knowledge and misperceptions toward the ASRHS.

The study has shown that inaccessibility of health institutions, fear, and communication gap between parents/guardian and adolescents. Therefore, developing training guidelines was required to promote adolescents' knowledge and perceptions of SRHRs and services. Furthermore, to the developed training guidelines, there are several aspects that are suggested to improve education and for further research.

8.4 RECOMMENDATIONS

Based on the study findings, the following recommendations were made

8.4.1 Recommendations for education

- There should be inclusion of the comprehensive SRHRs and Services content in the curriculum to secondary high school level.
- Comprehended school based ASRHRs and services education should be offered for all adolescents in rural schools.
- All the secondary high schools of the Zone should be trained in ASRHRs and services by knowledgeable programme coordinators, facilitators, and managers of the field of study.

- There should be training of many mentors of high school teachers and counsellors to address complex SRH issues faced by adolescents at school.
- Anti HIVAIDS clubs and mini medias should be established in all rural secondary schools to improve adolescents' access of SRH information.

8.4.2 Recommendation for health facilities

- There should be accessible health facilities for all rural adolescents in the Zone and well-trained health care providers.
- Health facilities should support the rural schools with providing updated training and materials on adolescents SRHRs and services.
- Health facilities should promote adolescents' SRHs awareness as a campaign.
- The health facilities should secure adolescents SRHs privacy, confidentiality and respect.
- Health facilities should offer free services for adolescents SRHs irrespective of their gender.
- The Zone, Regional and Federal Ministry of Health (FMOH) needs to cooperate with all the relevant stakeholders (NGOs) to promote adolescents' awareness and use of SRHs.

8.4.3 Recommendations for policy making

- There should be development and updating of policies of the ASRHs programme regarding SRH problems prevention among rural adolescents.
- Involvement of different relevant stakeholders (HCPs, schoolteachers, and parents) to assist in the development of policies, guidelines, and standard operating procedures (SPOs).
- There should be a need to align all laws that are to do with the issue of health for adolescents, education policies and the school curriculum needs to include information on adolescents SRHRs and services.

8.4.4 Recommendations for further studies

Based on this study, the following recommendations for future studies were:

- A comparative study between rural and urban adolescents in secondary schools to explore policy adjustments and formulation.
- There is a need to duplicate this study in other high schools of the Zone, in Ethiopia prior to generalisation of the research findings.
- A study to directly assess parents or families' view on their adolescents SRHsutilisation and associated factors.
- A study to explore the integration of ASRHs including risky behaviors such as drug and alcohol abuses, sexual behaviors, suicidal or accidents during adolescent stage.

8. 5 CONTRIBUTIONS OF THE STUDY

This study used a mixed-method study design to study the topic. Thus, it has addressed essential adolescent SRHRs and services. The study has contributed significant evidence that can help to narrow the gap about the adolescents' knowledge, perceptions and SRHs access and utilisation. In addition, it identifies barriers that hinder adolescents SRHs utilisation in rural secondary schools in Arsi Zone. The proposed training guidelines developed from the study will help policymakers and program managers for promotion of adolescents' knowledge and perceptions of SRHRs and service. Moreover, the study findings could assist as a foundation for further related research in different sites.

8. 6 LIMITATIONS OF THE STUDY

The study has investigated many affecting factors of adolescents' SRHs utilisation. However, being the nature of cross-sectional study, which may not show the temporal association between the dependent and independent variables it could be considered as a limitation of this study. As the nature of the subject matter (SRH issues) allied with personal sensitive issues of sexuality, it might have caused social desirability bias. Also, the limitations of this study may decrease the generalisability of the findings as it was

conducted only in rural settings secondary schools in Arsi Zone. Thus, the findings of this study may not certainly generalise for study participants living in urban settings and out-of-school in the Zone.

8. 7 CONCLUDING REMARKS

This study helped the researcher in understanding the adolescents' knowledge and perceptions of SRHRs and services. The access and use of SRHs utilisation with regard to challenging factors was identified. Based on the study findings, the training guidelines were developed to promote adolescents' knowledge and perceptions of SRH issues. It is expected that the developed final training guidelines will address most of the challenges encountered by rural secondary school adolescents of SRHs utilisation. This study could also support implementation of the developed training guidelines in the education curriculum secondary schools. Provision of adolescents SRHRs and service training, monitoring and evaluation, including parents and community involvement activities should be improved.

The present study meaningfully understands that parents, schools, mini media in school centers, communities and peers play remarkable roles to promote adolescents' knowledge and perceptions of SRHs utilization. As a result, the training guidelines targeting these factors were developed.

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APPENDICES

APPENDIX A: REQUEST FOR PERMISSION TO CONDUCT THE STUDY

DANIELBEKELE WAKJIRA
P.O.BOX 193/04
15 OCTOBER 2020

TO**:** ARSI ZONE EDUCATION DEPARTMENT OFFICE

Dear sir/madam,

Application to conduct a study: ***Training guidelines for promoting adolescents' knowledge and perceptions on sexual and reproductive health rights and services in rural schools of Arsi Zone Ethiopia.***

I, Daniel Bekele Wakjira, am currently enrolled for the Doctor of Nursing philosophy at UNISA. I hereby request to conduct a research study entitled above. The main purpose of this study is to develop training guidelines for promotion of adolescents' knowledge and perceptions of SRHRs and services. The study will involve adolescents aged 10 to 19 years in rural Arsi Zone at Bokoji, Sagure, Hetosa, Dodota and Tiyo secondary schools. I promise that I will inform the participants about the extent of utilisation of the data derived from the research. Any of the attendants who are willing to and volunteer to participate in the research project will be eligible. 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 shall 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.

My contact details are as follows:

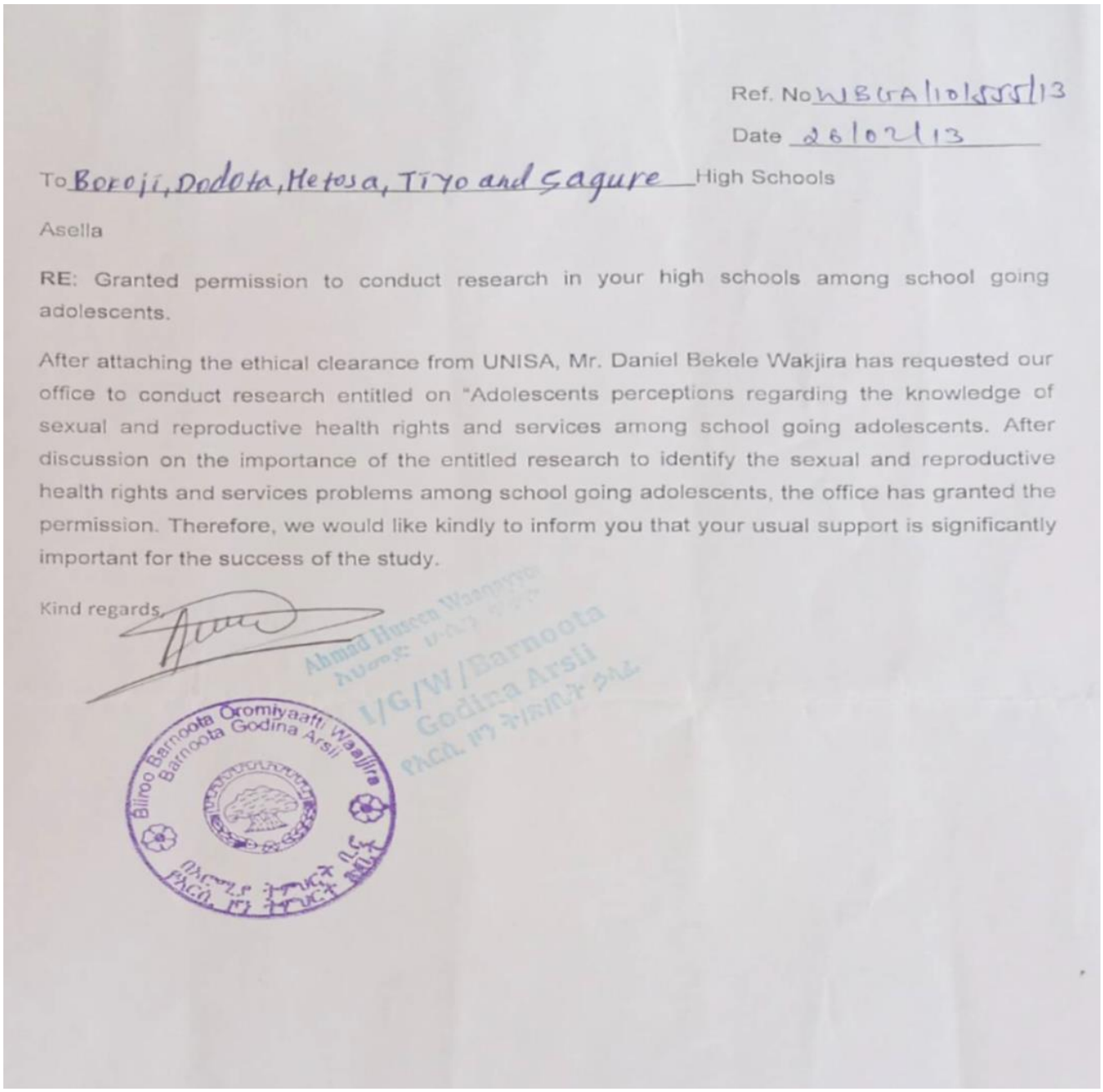
+251917096900 (Mob phone number) Email my Life: 84064175@mylife.unisa.ac.za

Email address: bekeled46@gmail.com

Yours faithfully

Daniel Bekele Wakjira

APPENDIX B: ARSI ZONE OF EDUCATION OFFICEPERMISSION



Ref. No WBGrA/10/555/13

Date 26/02/13

To Boroji, Dodota, Hetosa, Tiyo and Sagure High Schools

Asella

RE: Granted permission to conduct research in your high schools among school going adolescents.

After attaching the ethical clearance from UNISA, Mr. Daniel Bekele Wakjira has requested our office to conduct research entitled on "Adolescents perceptions regarding the knowledge of sexual and reproductive health rights and services among school going adolescents. After discussion on the importance of the entitled research to identify the sexual and reproductive health rights and services problems among school going adolescents, the office has granted the permission. Therefore, we would like kindly to inform you that your usual support is significantly important for the success of the study.

Kind regards,

Ahmad Hussen Waayyuu
I/G/W/Barnoota
Godina Arsii

Biiroo Barnoota Oromiyaafii Waajjira Barnoota Godina Arsii

APPENDIX C: UNISA ETHICAL CLEARANCE CERTIFICATE

UNISA university of south africa

RESEARCH ETHICS COMMITTEE: DEPARTMENT OF HEALTH STUDIES

REC-012714-039 (NHERC)

5 December 2018

Dear Daniel Bekele Wakjira

HSHDC/889/2018

Student Daniel Bekele Wakjira

Student No.:64084175
Supervisor: Dr DSK Habedi
Qualification: D Litt et Phil
Joint Supervisor: -

Decision: Approval

Name: Daniel Bekele Wakjira

Proposal: Adolescents perceptions regarding sexual and reproductive health knowledge of rights and services in rural Ethiopia

Qualification: PhD Nursing

Risk Level: Medium Risk

Thank you for the application for research ethics approval from the Research Ethics Committee: Department of Health Studies, for the above mentioned research. Final approval is granted from 5 December 2018 to 5 December 2023

The application was reviewed in compliance with the Unisa Policy on Research Ethics by the Research Ethics Committee: Department of Health Studies on. 5 December 2018

The proposed research may now commence with the proviso 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, as well as changes in the methodology, should be communicated in writing to the Research Ethics Review Committee, Department of Health Studies. An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.*

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
www.unisa.ac.za

3) *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.*

4) *You are required to submit an annual report by 30 January of each year that that he study is active. Reports should be submitted to the administrator HSREC@unisa.ac..az Should the reports not be forthcoming the ethical permission might be revoked until such time as the reports are presented.*

Note:

The reference numbers [top middle and right corner of this communiqué] should be clearly indicated on all forms of communication [e.g. Webmail, E-mail messages, letters] with the intended research participants, as well as with the Research Ethics Committee: Department of Health Studies.

Kind regards,

Prof JE Maritz
CHAIRPERSON
maritje@unisa.ac.za

Prof A Phillips
DEAN OF COLLEGE OF HUMAN SCIENCES

APPENDIX D: SUPPORT LETTER FROM UNISA, ETHIOPIA BRANCH

UNISA university of south africa

10 February, 2021

UNISA-ET/KA/ST/29/10-02-2021

TO WHOM MAY IT CONCERN

Dears Madam/Sir,

The University of South Africa (UNISA) extends warm greetings. By this letter, we want to certify that Mr. Daniel Bekele Wakjira (student number 64084175) is a PhD student in the Department of Health Studies at UNISA. Currently, he is about to embark on data collection on his PhD thesis entitled "***Adolescents' perceptions regarding sexual and reproductive health knowledge of rights and services in rural Ethiopia***".

This is to kindly request your cooperation in assisting the student by giving him access to data sources. We would like to thank you in advance for all the assistance that you would provide to the student.

Sincerely,

Dr. Tsige GebreMeskel Aberra
Director

UNISA REGIONAL LEARNING CENTRE
PO BOX 13836 ADDIS ABABA ETHIOPIA
TEL +251-114-350141
+251-114-350078
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Facsimile: +251 11 435 1242/ 43/ 44
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www.unisa.ac.za

APPENDIX E: PARTICIPANT INFORMATION SHEET

i. INFORMATION SHEET FOR ADOLESCENTS

Researcher's Name: Daniel Bekele Wakjira
Mob number: +2519 17096900
Email my Life: 84064175@mylife.unisa.ac.za
Email address: bekeled46@gmail.com

Title of study: ***Training guidelines for promoting adolescents' knowledge and perceptions on sexual and reproductive health rights and services in rural schools of Arsi Zone Ethiopia.***

What is this study about?

This is a research project being conducted by Mr. Daniel Bekele Wakjira at the UNISA for PhD in nursing philosophy. We are inviting you to participate in this research project because you can provide important information on stated topic above. The purpose of this research project is to develop training guidelines to promote adolescents' knowledge and perceptions of SRHRs and services. This would be through gaining insight into the knowledge and perceptions of adolescents' SRHRs and services. It is hoped that with your participation, an understanding of what influences the access and utilization of adolescent reproductive health services will be elicited which can help improve such services in the local government area.

What will I be asked to do if I agree to participate?

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 SRHS 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 in order to adequately collect all the information that is needed for the study. The interviews will not take more than one 60 minutes and the interviews will take place in a private room in your class at break time.

Would my participation in this study be kept confidential?

We will do our best to keep your personal information confidential. 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 audio-tapes 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.

What are the risks of this research?

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.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the researcher learn more about adolescents' knowledge and perceptions of SRHRs and services. We hope that, in the future, other people might benefit from this study from develop training guidelines to promote adolescents' knowledge and perceptions of SRHRS and 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.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is entirely voluntary, which means that you do not have to participate if you do not want to. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by Mr.Daniel Bekele Wakjira, Lecturer at Arsi university Midwifery department. If you have any questions about the research study itself, please contact:
bekeled46@gmail.com
Mob phone: +251917096900

ii. INFORMATION SHEET FOR KEY INFORMANTS

Researcher's Name: Daniel Bekele Wakjira
Mob number: +2519 17096900
Email myLife: 84064175@mylife.unisa.ac.za
Email address: Bekeled46@gmail.com

Title of study**:** ***Training guidelines for promoting adolescents' knowledge and perceptions on sexual and reproductive health rights and services in rural schools of Arsi Zone Ethiopia.***

What is this study about?

This is a research project being conducted by Mr. Daniel Bekele Wakjira at the UNISA for PhD in nursing philosophy. We are inviting you to participate in this research project because you can provide important information on stated topic above. The purpose of this research project is to develop training guidelines to promote adolescents' knowledge and perceptions of SRHRs and services. This would be through gaining insight into the knowledge and perceptions of adolescents' SRHRs and services. It is hoped that with your participation, an understanding of what influences the access and utilization of adolescent reproductive health services will be elicited which can help improve such services in the local government area.

What will I be asked to do if I agree to participate?

You will be asked to participate in an interview with the researcher. You will be asked about the challenges adolescents SRHS, your perception of quality of services offered and about suggestions on how to improve adolescents' knowledge and perceptions of SRHRs and services. During the interview we will be taking notes of our discussion and will also use an audio tape recorder in order to adequately collect all the information that is needed for the study. The interviews will not take more than an hour and the interviews will take place at your working place in private room.

Would my participation in this study be kept confidential?

We will do our best to keep your personal information confidential. To help protect your confidentiality, your real name will not be used during the interview or appear 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 audio-tapes 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.

What are the risks of this research?

All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimize 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.

What are the benefits of this research?

This research is not designed to help you personally; however, the results may help the researcher learn more about adolescents' access to and utilization of reproductive health 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. Refreshments will be provided after the interviews.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by Mr. Daniel Bekele Wakjira lecturer at Arsi university midwifery department. If you have any questions about the research study itself, please contact:

bekeled46@gmail.com
Mob +251917096900

iii. CONFIDENTIALITY AGREEMENT DURING DATA COLLECTION

Hereby, I Daniel Bekele Wakjira, student number 64084175, as a principal investigator on research titled: ***Training guidelines for promoting adolescents' knowledge and perceptions on sexual and reproductive health rights and services in rural schools of Arsi Zone Ethiopia*.**

Acknowledge that I am aware of and familiar with the stipulations and contents of the conditions of ethical clearance specific to this study. I shall conform to and abide by these conditions. Furthermore, I am aware of the sensitivity of the information collected and the need for strict controls to ensure confidentiality obligations associated with the study.

I agree to the privacy and confidentiality of the information that I am granted access to in my duties as an investigator. I will not disclose nor sell the information that I have been granted permission to gain access to in good faith, to anyone.

I also confirm that I have been briefed to the research team on the protocols and expectations of my behavior and involvement in the research as an investigator.

SIGNED: _____

Date: _____

APPENDIX F: CONSENT FORM

i. CONCENT FOR ADOLESCENTS

Researcher: Daniel Bekel Wakjira

+251917096900 (Mob phone number)

My Life: 84064175@mylife.unisa.ac.za

Email address: Bekeled46@gmail.com

Dear adolescent,

Research topic: ***Training guidelines for promoting adolescents' knowledge and perceptions on sexual and reproductive health rights and services in rural schools of Arsi Zone Ethiopia.***

As part of the requirements for the Doctor of Philosophy in Nursing that I am undertaking with the UNISA, a research study on a selected topic needs to be undertaken. My selected topic is as stated above. I am midwifery-nurse professional with MSc back ground working in Arsi university. This study is proposed to assess knowledge and perceptions among rural high school adolescents in order to develop training guidelines to promote adolescents' knowledge and perceptions of SRHRs and services. Information obtained from this study will provide an insight into the SRH of adolescents which could contribute both for decision and policy makers in develop training guidelines to promote adolescents' knowledge and perceptions of SRHRs and services.

The study will involve various intimate and private life questions. Here is a questionnaire for you to complete and there is no need to put your name on the questionnaire; no individual responses will be reported. Your answers are completely confidential. It is your full right to refuse to answer any or all of the questions and also 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 up to 30 to 60 minutes. Completed questionnaires have to be placed in the box provided by the researcher. In order 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,

ii. CONSENT FOR KEY INFORMANTS

Researcher: Daniel Bekel Wakjira
+251917096900 (Mob phone number)
Email address: Bekeled46@gmail.com

Dear Participants,

RESERACH TOPIC: ***Training guidelines for promoting adolescents' knowledge and perceptions on sexual and reproductive health rights and services in rural schools of Arsi Zone Ethiopia.***

As part of the requirements for the Doctor of Philosophy in Nursing that I am undertaking at the UNISA, a research study on a selected topic needs to be undertaken. My selected topic is as stated above.I am midwifery-nurse professional MSc back ground working in ArsiUniversity.

This study is proposed to assess knowledge and perceptions among rural high school adolescents in order to develop training guidelines to promote their' knowledge and perceptions of SRHRs and services. Information obtained from this study will provide an insight into the sexual and reproductive health of adolescents which could contribute both for decision and policy makers in develop training guidelines to promote adolescents'

knowledge and perceptions of SRHRs and services. In order to effectively attain the objective, we need to interview you. Your participations are completely confidential. It is your full right to refuse to answer any or all of the questions and also 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. The interview may take up to 30 to 40 minutes. In order 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.

Pease do not hesitate to ask the researcher any questions you may have.

Thank you for deciding to participate in the study.

Kind regards,

Daniel Bekele Wakjira

iii. PARENTAL CONSENT (For adolescents less than 18 years)

Researcher's Name: Daniel Bekele Wakjira
Mob number: +2519 17096900
Email my Life: 84064175@mylife.unisa.ac.za
Email address: Bekeled46@gmail.com

TITLE OF STUDY: ***Training guidelines for promoting adolescents' knowledge and perceptions on sexual and reproductive health rights and services in rural schools of Arsi Zone 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 involve no penalty or loss of benefits normally available for you or your child. If you have any questions about the study, please contact Mr Daniel Bekele Wakjira (researcher). The purpose of this study is to develop training guidelines for

promotion of adolescents' knowledge and perceptions of sexual and reproductive health rights and services based on the findings. There is a self-administered questionnaire to complete and focus group discussion interviews for your child and there is no need to put his/her name on the questionnaire. His/her honest answers to these questions will help us in better understanding of what adolescents think, say and do about certain sexual and reproductive health issues, so; we request your child's truthful and keen participation. Any information obtained from this study will remain confidential. Your child's responses will not be linked to his or her name. The data collected will be used for educational and publication purposes and presented in summary form.

SIGNATURES: You are making a decision about allowing your child to participate in this study. Your signature below indicates that you have read the information provided above and have decided to allow your child to participate in the study. You are free to withdraw consent for your child to participate in this study at any time by contacting the Mr Daniel Bekele Wakjira (researcher). You will be given a copy of this consent form for your records.

_____

Printed Name of Child Date

_____

Printed Name and Signature of Parent Date

_____

Printed name of investigator and signature Date

IV: **ASSENT FORM FOR ADOLESCENTS LESS THAN 18 YEARS**

Researcher's Name: Daniel Bekele Wakjira
Mob number: +2519 17096900
Email myLife: 84064175@mylife.unisa.ac.za
Email address: bekeled46@gmail.com

TITLE OF STUDY: ***Training guidelines for promoting adolescents' knowledge and perceptions on sexual and reproductive health rights and services in rural schools of Arsi Zone Ethiopia.***

The study has been described to me in a language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way.

Participant's name…….

Participant's signature……. Date……

APPENDIX G: STATISTICIAN'S CERTIFICATE

ARSI UNIVERSITY
COLLEGE OF HEALTH SCIENCES
Postgraduate Coordinator

To whom it may concern

RE: Letter of acknowledgment in involvement statistical Analysis of research project

This services as a formal acknowledgment that I, Tewodros Desalegn have assisted Mr.Daniel Bekele Wakjira to analyse data that he had collected inline with the objectives of his thesis. The support included the analysis of the data in SPSS using the consultatively agreed ideal statistical approaches with him.

I have MSc degree in Biostatistics obtained from University of Gondar and I am also assistant professor of Biostatistics in Arsi university Collage of Health Sciences.

For more detail and clarity on me and my profile please feel free to contact me on +251 912289098, Email teddy1312_d@yahoo.com

Kind Regards,

Tewodros Desalegn Nebi
(Assist. Professor)
PG and Community
Attachment Coordinator

APPENDIX H: LANGUAGE EDITING AND PROOFREADING CERTIFICATE

ADDIS ABABA UNIVERSITY
አዲስ አበባ ዩኒቨርሲቲ

የአዲስ አበባ ቴክኖሎጂ ኢንስቲትዩት
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Addis Ababa Institute of Technology
Zede Editorial office

ቀን: Date Oct.11. 2021

ቁጥር: Ref. No. Zede/0g22/2021

To: University of South Africa
Graduate Studies Program

Subject: Language edition and Proofreading

I certify that I edited and proofread **DANIEL BEKELE WAKJIRA's** Ph.D. thesis, entitled: **Adolescents' Perceptions Regarding Sexual and Reproductive Health Knowledge of Rights and Services in Rural, Ethiopia.**

I found his thesis to be quite simple and enjoyable to read. Much of my editing focused on technical elements of language that could have otherwise hampered the thesis's readability. His work, I believe, will be regarded to be of Ph.D. calibre.

Regards,

Berhanu Bekeko
Lecturer, School of Multi-Disciplinary Engineering, AAU/AAiT
Managing Editor, Zede Journal
Cell phone: +251911746944
Email: bekekoo@gmail.com
Berhanu-bekeko@aait.edu.et

Tel. 011 1232436 P.O.Box 385 Fax: 00251(011)-1239480 Cable: AAUNIV

APPENDIX I: SELF-ADMNISTARED QUESTIONNAIREY AND INTERVIEW GUIDE

A: self-administered questionnaire for adolescents

B: Interview guide for adolescents during FGDs

C. Interview guide for HCPs and teachers during IDIs

A: English version self-administered questionnaire for adolescents

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			
Serial No.	**Questions**	**Alternative choice**	**Skip**
1.1	What is your age?	……...Complete years	
1.2	Your gender is	1. Male 2. Female	
1.3	Which grade are you in?	Grade……...	
1.4	What is your religion?	1. Orthodox 2. Protestant 3. Muslim 4. Waqeffataa	
1.5	What is your ethnic group?	1. Oromo 2. Amhara 3. Gurage 4. Others, specify _____	
1.6	what is your current marital status	1. Single 2. Married 3. Divorced 4. Other specify_____	
1.7	Whom do you live with	1. Both parents 2. Father only 3. Mother only	

		4. Guardian /Relative 5. Alone in rental house	
1.8	Highest level of education of your father	1. No formal education 2. Primary school (1-8) 3. Secondary school (9-12)	
1.9	Highest level of education of your mother	1. No formal education 2. Primary school (1-8) 3. Secondary school (9-12) 4. Diploma and above	
1.10	Occupations of your father	1. Government employed 2. Merchant 3. Farmer 4. Daily labourer	
1.11	Occupations of your mother	1. Government employed 2. Merchant 3. Farmer	
1.12	Do you get pocket money for your daily expense?	1. Yes 2. No	
1.13	How much income do you think that your family gain per month? [specify in Birr]	_____	

SECTION 2: Knowledge on human rights that applies to adolescents SRHRs

		1.Yes	0.No
2.1	Adolescents have the right to life, liberty and security.	1	0
2.2	Do girls have the right to autonomous to reproductive choices without their partner's consent?	1	0
2.3	Adolescents have the right to consent to marriage.	1	0
2.4	Adolescents have the right to the full range of accessible and affordable SRHS.	1	0
2.5	All adolescents must be free to enjoy and control their sexual and reproductive life.	1	0
2.6	Adolescents have the right to not to be subjected to torture	1	0
2.7	Adolescents have the right to be free from sexual violence.	1	0
2.8	Adolescents have the right to education and information.	1	0

2.9	Does a married woman have the right to limit the number of her children according to her desire without her husband's consent?	1	0
Knowledge of sexual assaults			
2.10	Denial of providing SRH services is form of abuse/violations of SRRs	1	0
2.11	Forced marriage is form of abuse/violations of SRRs	1	0
2.12	Forced sex is form of abuse/violations of SRRs	1	0
2.13	Abusive sexual language is form of abuse/violations of SRRs	1	0
2.14	Non-consensual touch is form abuse/violations of SRRs	1	0
2.15	Punishment for discussing sexual issue is form of violations of SRRs	1	0
2.16	Discrimination for expression is form of abuse/violations of SRRs	1	0
2.17	STIs/HIV-based discrimination	1	0

	SECTION 3. Perceptions on SRHRs		1.Strongly dis agree	2.Disagree	3.Neutral	4. Agree	3.Strongly agree
	3.1	Unmarried couples have no right to use contraceptives other than condoms.					
	3.2	Right to be free from discrimination/abuse/ violence					
	3.3	Adolescents have a right to free and cost effective RHS and information					
	3.4	Adolescents have the right to use of reproductive health a service is kept confidential					
	3.5	Parents have the right to decide on SRH issues of their children					
	3.6	Right to abort a pregnancy					
	3.7	A man should get sex whenever he wants irrespective to his wife's wish					
SECTION 4: Knowledge of physical changes during puberty and fertility							

4.1	What do physical changes do girl notice during puberty? (More than one answer possible)	1. Growth of pubic hair. 2. Breast development 3. Starting of menstruation 4. Smooth voice 5. Need to have sex. 6. I don't know
4.2.	What do physical changes do boys notice during puberty? (More than one answer possible)	1. Growth of pubic hair 2. Growth of muscles 3. Experiencing wet dreams 4. Strong voice 5. I don't know
4.3	A woman who reaches menarche (have menses) can become pregnant after having sex	1.Yes 2.No 3. Not sure
4.4	A woman can get pregnant even with one act of sexual intercourse	1. Yes 2. No 3. Not sure
4.5	A woman is most likely to get pregnant if she has sexual intercourse half way between her periods	1. Yes 2. No 3. Not sure
SECTION 5: Awareness and knowledge of SRHs		
5.1	What sexual and reproductive health topic(s) have you ever heard? (More than one answer possible)	1. Family planning 2. Treatment of STIs 3. VCT for HIV/AIDS 4. Abortion service 5. ANC, delivery and PNC services 6. Others (specify)_____
5.2	What was the main source of your information about SRHS?	1. Parents 2. School education 3. Heath providers 4. Peers/friends

		5. Social media/ Television
5.3	Where you get adolescent friendly SRH services?	1. Public & Private health institutions 2. Traditional healer
5.4	What methods of contraceptive do you know? (More than one response possible)	1. Pills 2. Intrauterine device (IUD) 3. Inject able 4. Implants 5. Others specify (_____)
5.5	Have you ever heard about emergency contraceptives?	1. Yes 2. No
5.6	What types of STIs do you know about? (More than one response possible)	1. HIV/AIDS 2. Gonorrhoea/ Chlamydia 3. Syphilis 4. Others specify (_____)
5.7	What modes of HIV transmission do you know? (More than one response possible)	1. Contact with infectious blood 2. During pregnancy and child birth 3. Unprotected sexual intercourse 4. Using sharp materials 5. During breast feeding
5.8	Sexual abstinence is the best in HIV preventing methods	1. Yes 2. No

SECTION 6: Sexual and reproductive health service utilisation (SRHs)		
6.1	Have you ever heard about SRHS?	1. Yes 2. No
6.2	What was the main your sources of your information?	1. Health professionals 2. School/teacher 3. Parents 4. Peer 5. Media (Tv/Radio)
6.3	Have you ever used any SRHS in the last 12 months?	1.Yes

		2. No-------(if No go to 6.5)
6.4	If yes, which SRHS did you used? (Ticking more than one response is possible)	1. Family planning /Condom 2. STD treatment 3. VCT for HIV/AIDS 4. Abortion service 5. Pregnancy test 6. Other specify_____
6.5	What do you face as barriers hindering of SRH services? (**More than one response can be selected)**	1. Religious/cultural taboos 2. Lack of information 3. Economic constraints 4. Fear of parents 5. Distance to the health facility
6.6	Whom do you prefer to get SRH services for a health professional?	1. Same sex 2. Opposite sex 3. No preference
6.7	Which institution do you preferred to receive SRH services?	1. Government health facilities 2. Private health facilities
SECTION 7: Sexual and reproductive health behaviours		
7.1	Have you ever had sex in your life?	1. Yes 2. No (7.3)
7.2	If, yes at what age did you experience the first sexual intercourse?	Complete years----------
7.3	Did you or your partner use a condom the last time you had sexual intercourse with your partner?	1. Yes 2. No
7.4	What is the risk/danger of involving in sexual intercourse at an early age?	1. To fail school 2. Become pregnant 3. Contract STI/HIV/AIDS 4. No any impact
7.5	Have you ever discussed about sexual reproductive health issue in the last 12 months?	1. Yes 2. No (**If Go to Q.No.7.7)**

7.6	IF YES, with who did you discussed.	1. Parents/guardian 2. Peers 3. School teachers 4. Religious father	
7.7	What factors affect your discussion about sexual with your parents?	1. Culturally 2. Parents 3. Religious not allow	
SECTION 8: Perceptions on SRHs using the health belief model		**1.Yes**	**0. No**
8.1	**Perceived susceptibility**: Adolescence is at risk of unwanted pregnancy or STIs/HIV/AIDS.	1	0
8.2	**Perceived severity**: Unwanted pregnancy or STIs affect the life and social life of a single young people		0
8.3	**Perceived benefit: Knowledge** about contraception and STIs prevention methods are useful for single young people	1	0
8.4	**Perceived cues to action:** Adolescents are able to use prevention methods when they are at risk of unwanted pregnancy or STIs	1	0
8.5	**Perceived barrier:** Do you believe that reproductive health services and education for adolescents were adequate?	1	0

Name of Investigator……...Date……signature……...

Name of Assistant ……. Date……signature…….

Time……start……...Finished……...

Thank you so much!

B: Interview guide for adolescents (FGDs)

Interview No……

Name of School …….

Date of Interview……

Time of Interview……. Start……Finish……...

Background information	**Data**
Age	
Sex	
Marital status	
Ethnicity	
Religion	
Grade	

1. Let us discuss, have you heard the term “Sexual and Reproductive Health rights?

   Probing:

   If yes,

   a. What does it mean?
   b. Where did you hear it from?
   c. Which source of information do you prefer?

2. Have you ever heard of about sexual and reproductive health services?

   Probing:

   a. What about contraceptives information & services, HIV/STIs screening and treatment issues etc.?
   b. Do you think it is important for adolescents to know about these SRHRs and services? (If yes why?)

3. In your opinion, what are the common sexual & reproductive health problems of adolescents?

   Probing:

   a. What are the causes behind these health problems?
   b. Who are most likely to suffer from these health problems?
   c. Do you think you know enough about these health issues and rights?
   d. Do you want to know more about these issues and rights?
   e. What will you like to know more about?

4. Have you ever received any SRH services?
   a. If yes, how was your experience?
   b. If no, why?

5. How easy do you find it using SRH services such as contraceptives, counselling or information on sexual health?

Probing:

a. What other challenges do you face when seeking SRH services?
b. Do you have any perceptions that influence your decisions to use SRH services?
c. In your opinion what should be added to the existing SRH services to encourage more adolescents to utilize them?

Investigator Name……date ……...signature……...

Thank You for Your Time!

C. Interview guide for teachers and HCPs (IDIs)

Interview No……...

Place…….

Date of Interview…….

Time of Interview……. Start…….Finish……...

Back ground information	**Data**
Age	
Sex	
Marital status	
Ethnicity	
Religion	
Occupation	

Central Question

1. What do you understand about adolescents' sexual and reproductive health problems in your community? (And why it happens?)
2. In your view, what factors hinder access to sexual and reproductive health services for young people?
3. In your opinion, do you think it is important for adolescents to know about their SRHRs and services? (If yes why?)

4. Do you perceive that adolescent have adequate information about their SRHRs and Services? (If no how it is improved?
5. In your opinion, are teachers able to discuss about sexual issue with their students? (If no why?)
6. What do you think that factors promote access to sexual and reproductive health services for young people in the community?

Thank you for your time!

A. AFAAN OROMOO TRANSLATED QUESTIONERY FOR ADOLESCENTS

QAJEELCHA: Gaaffilee armaan gaditti dhiyaataniif deebii sirri filadhu ykn bakka gaafatametti lakkofsa sirrii barreessuun deebisi.

Maqaa M/B: _____

Lakk.	Gaffilee	Filannoo	Skip
101	Umurin kemeeqa?	_____waggaan	
102	Saala	1. Dhiira 2. Dhalaa	
103	Kutaa	1. _____	
104	Amantaa	1.Orthodosii 2.Protestantii 3.Muslima 4.Waaqeffataa	
105	Saba	1.Oromoo 2.Amhara 3. Gurage 4. kanbiroo _____	
106	Haala gaa'elaa	1.Hinfuune/ hinheerumne 2.Heerumera /fuudhera 3.Hiikera	
107	Eenyu waliin jiraattaa?	1. Abbaa fi haadha 2. Abbaa qofa 3. Haadha qofa 4. Fira	
108	Sadarkaa barnoota abbaa	1.Hooma hinbaranne 2.Sadarkaaduraa (1-8) 3.Sadarkaa 2ffaa (9-12)	
109	Sadarkaa barnoota haadhaa	1.Hooma hin baranne 2.Sadarkaaduraa (1-8) 3.Sadarkaa 2ffaa (9-12)	

		4.Dipiloomaa fi isaa-ol	
1010	Dalagaa abbaa	1. Hojjetaa motummaa 2. Daldalaa 3. Qoteebulaa	
1011	Dalagaa haadhaa	A. Hojjettumotummaa B. Daldaltuu C. Qotteebultuu	
102	Qarshii guyyaan argattu sii kennamaa?	1. Eyyee 2. Lakki	
103	Galiin maatii baatiin hagam?	----------	

Kutaa2ffaaBeekumsa mirga sirna wal-hormaata dargaggootaa			
	Dargaggoonni mirga armaangaditti eeraman qabatu jettee yaaddaa?	1. Eyye	0.Lakki
2.1	Mirga lubbuun jiraachuu fi eegamuu	1	0
2.2	Mirga tajaa jila Sirnawal-hormaataf ofiin murteeffachuu	1	0
2.3	Mirga gaa'elaa	1	0
2.4	Tajaajila sirnawal-hormaataa argachuu	1	0
2.5	Akka nama kamii ittuu bilisummaan jiraachuu	1	0
2.6	Mirga rukkutamuu fi dhiibba kamirraa bilisan jiraachuu	1	0
2.7	Biliummaa dirqiin gudee damuu	1	0
2.8	Mirga Odeeffannoo fi barumsa sirnawal-hormaataa argachuu	1	0
2.9	Dubartiin mirga karoora maatii fayya damuu fedhii abbaa manaa isheen alatti	1	0
2.10	Tajaajila sirnawal-hormaata yeroo barbaadan argachuu	1	0
2.11	Butiin ykn humnaan fuudhuun sarbinsa mirgasirnawal-hormaataati	1	0
2.12	Gudeeddiin sarbinsa mirga sirnawal-hormaataati	1	0

2.13	Arrabsoon ykn foggoruun sarbinsa mirgasirna wal-hormaataati	1	0
2.14	Eeyyama ofii malee qaama namaa tuquun sarbinsa mirgasirna wal-hormaataati	1	0
2.15	Odeffannoo sirna wal-hormaataa dhoggachuun sarbinsa mirgati	1	0
2.16	Beekumsi wal-qunnamtii saalaa dhorkuun sarbinsa mirga sirnawal-hormaataati	1	0
2.17	Nama HIV qabamee looguun ykn dhiibuun sarabaminsa mirgaati	1	0

Kutaa 3ffaa. Ilaalcha shamarreen ykn dargaggootaa dhimma mirga sirna wal-hormaataa irratti		1.Baay' eehin amanu	2. ittihinamanu	3.Hin beeku	4.Nan amana	5.Baayee' en amana
3.1	Shamarreen karoora maatii fayya damuuf mirga hin qaban					
3.2	Soda malee tajaajila sirna-wal hormmaataa argachuu					
3.3	Mirga tajaajila sirna wal-hormaataa bilisaan argachuu qabu					
3.4	Yemmuu tajaajila argatan iccitiin egamuuf qaba					
3.5	Fedha maatiin alatti mirga kamiyyuu hin qaban					
3.6	Mirga tajaajila ulfa baasuu qabu					
3.7	Fedhii haadha manaatiin alatti abbaan manaa yeroo brbaadetti wal-qunnamtii saalaa gochuu danda'a					

Kutaa 4ffaa: Beekumsa waliigalaa dhimma sirna wal-hormaataa irratti		
4.1	Mallattoo shamarree geesse?(tokkoool deebisuun danda'ama)	1. Rifeensa nanno saalaa. 2. Guddachuu harmaa 3. Marsaa laguu 4. Sagaleen qallachuu 5. Fedhiiqunnamtii salaa.
4.2	Dhiironni yeroo ga'an mallattoo akkamii irratti argamaa? (tokkoo ol deebisuundanda'ama)	1. Areeda baasuu 2. Maashaan guddachuu 3. Abjuun dhangalasu 4. Furdachuu sagalee

4.3	Shamarreen laguu eegale yoo wal-qunnamtii saalaa goote ulfaa'uu dandeetti?	1. Eyyee 2. Lakki 3. Hinbeeku
4.4	Shammarreen wal-qunnamtii saalaa al takkaan ulfaa'uu dandeetti?	1. Eyyee 2. Lakki 3. Hin beeku
4.5	Dubartiin kanulfooftu walakkaa marsaalaguutti yoo wal-qunnamtiisalaa gootedhaa?	1. Eyyee 2. Lakki 3. Hin beeku

Kutaa 5ffaa: Beekumsa tajaajila sirna wal-hormaataa		
501	Waa'e tajaajila sirnawal-hormaataa gosakamfaa beetta?(tokko-oldebisuundanda'ama)	1. Karoora maati 2. Yaala dhukkubawal-qunnamtisalandarban 3. Gorsaa fi qo'anno HIV 4. Ulfabaasuu 5. Ulfaa fi ulfabooda 6. Others (specify)_____
502	Dhimma sirna wal-hormaata irratti maddi odeeffannoo kee maali? (Tokkoo-oldeebisuundanda'ama	1. Maatii 2. Mana barumsaa 3. Ogeessotafayyaa 4. Hiriyyaa 5. Radio/TV
503	Tajaajilli sirnawal-hormaataa eessatti argamaa?	1. Bufatafayyaamotummaa fi dhuunfaa 2. Mala aadaa
504	Maloota karoora maatii maalfaa beetta? (tokkooldeebisuundanda'ama)	1. kininii 2. kangadamessakeessa taa'u(IUD) 3. lilmee /marfee 4. Implantii

		5. Kan biroo----------
505	Karooramaatii yeroo tasaa dhagettee beettaa?	1. eyye 2. lakki
506	Dukkubootawal-qunnamtiisaalan daddarban maalfaabeeta? (tokkooldeebisundanda'ama)	1. HIV/AIDS 2. Gonorrhea/ Chlamydia 3. Fanxoo 4. Kan biroo----------
507	HIV akkamiin daddarbaa? (tokkooldeebisundanda'ama)	1. Dhangala'aavayiresiinfalametuquun 2. Haadharaagaradaa'imaatti 3. Walqunnamtiisaalan 4. Meshaaqaraqabanwalinfayyadamuun 5. Hinbeeku
508	Rakkon Ijollummaan wal-qunnamtii saalaa gochumaali? (Tokkooldeebisuundanda'ama)	1. Barumsaaddaankutu 2. Ulfahinbarbaachifne 3. Dhukkuba HIV qabamuu 4. Rakkohomaatuhinfidu
509	Wal-qunnamtiisaalagochuudhiisunmalootaulfaitisankeessa is filatamaadha	1. Eyyee 2. Lakki

Kutaa 6ffaa:TajaajilaSirnawal-hormaataa		
6.1	Waa'ee tajaajila sirnawal-hormataa dhagetteebeek taa	1. eyyee 2. lakki (**If No go to 604**)
6.2	Gaffioliif , eyyeeyoo jette maddiodeeffannoke maali??	1. Radio/TV 2. Maatii 3. Hiriyyaa 4. Manabarumsaa
6.3	Wagga darbekeessatti tajaajila sirna wal-hormaata fayyadamtee bettaa?	1.Eyyee 2. Likki-------(if No go to 604)

6.4	Eyyee,yoojette sababa maaliif deemte?	1. Karooramatiif/kondemi 2. Dhukkubasaalaayaaluuf 3. Gorsaafqoranno HIV 4. Ulfabaasuuf 5. Ulfaqoratamuuf 6. Kan biroo_____
6.5	Tajaajila sirna wal-hormaataa akka hinfayyadamneef maaltu gufuu sittita'aa?	1. soda amantii 2.bakka wallaaluu 3.qarshii dhabuu 4. soda maatii 5. fageenyabuufatafayyaa
6.6	Tajaajila sirnawal-hormaataa ogeessa akkami irraargachuu feeta?	1. saalannaffakkatu 2. fallaasallakiyyaa 3. kamiyyu(dhiraykndubara)
6.7	Buufata fayyaa kamittitajaajila argachuufeeta?	1. kanmootummaa 2. kandhuunfaa
Kutaa 7ffaa: Amalaa fi wal-qunnamtii saalaa		
7.1	Wal qunnamtiisaalaa eegaltee jirtaa?	1. Eyyee 2. Lakki (**lakkiyoojette 7.4 tari)**
7.2	Deebiin keeeyyee yoota'e umuriin kemeeqa turee?	Waggaaguutuun_____
7.3	Eyyee, yoojette yerosanatti kondamii fayyadamtanii?	1. Eyyee 2. Lakki
7.4	Umurii ijoollumman wal qunnamtii saalaa gachuun rakkoo maali fidaa	1. Barumsa adda kutuu 2. Ulfaa'uu 3. Dhibee HIV 4. Rakko hin qabaatu
7.5	Waa'ee sirna wal-hormaata irratti marii gootee beettaa?	1. Eyyee 2. Lakki (**lakkigara 7.7 tari)**

7.6	Yoo, eeyyejettee enyufaawaliin marii'atte?	1. Maatii 2. Hiriyyoota 3. Barsiisota 4. Abbotiiamantii
7.7	Maatii waliin akka hin marii'anneef maaltusi dhogga?	1. Aadaa 2. Maatiinfedhidhabuu 3. Amantaanhineyyamu

Kutaa 8ffaa: Ilaalcha dhimma tajaajila sirna wal-hormaata irratti(HBM)			
8.1	**Dargaggoonni HIV/AIDS fi ulfa hin barbaachifneef Saaxilamoodha**a?	1.Eeyyee	0. Lakki
8.2	Ulfi hinbarbaachifnee fi HIV jireenya dargaggoowwanii nimiidhaa?	1	0
8.3	Beekumsiwaa'ee dhuukkuboota wal-qunnamtii saalan daddarbanii fi karooramaati barbaachisaadha	1	0
8.4	Dargaggoonni dandeetti rakkoowwan sirnawal-hormaatan dhufan ittisuu qabaatu?	1	0
8.5	Barumsii dhimma sirn awal- hormaataa irratti dargaggotaaf kennamuga'aadha jetteeyaaddaa?	1	0

Kutaa9ffaa. Ilaalchdhimmatajaajilafayyaasirnawal-hormaataa		1.Baay' ee hinamanu	2.Hinamanu	3.Hin beeku	4.Nan amana	5.Baay' een amana
9.1	Dargaggootaaf barumsi dhimma sirna wal-hormaataa kennamuu qaba					
9.2	Tajaajilli fayyaa sirna wal-hormaataa fi kondomiin barattootaaf dhiyootti argamuu qaba					
9.3	Tajaajilli fayyaa sirna wal-hormaataa dubartootaaf qofa kennamuuqaba					
9.4	Karoora maatii fayyadamuun maseenummaa fida					

9.5	Beekumsi sirna wal-hormaataa qabaachuun fedhii saala ijollee kakaasa					

Xumurame galatoomaa!

Maqaaqorataa:……Guyyaa…….Mallattoo…….

Magaagargaaraa……Guyyaa……..Mallattoo…….

B: AFAAN OROMOO TRANSLATED INTERVIEW GUIDE FOR FGDs AND IDIs

1: Gaaffii gareedargaggoota fi shammarren waliin

Gaaffii:

Lakkoofsa:……..

Mana barumsaa……

Guyyaa:…….

Yeroo jalqabbii ……xumura……..

Odeffannoo eenyummaa	**Deebii**
Umurii	
Saala	
Haala gaa'elaa	
Saba	
Amantaa	
Kutaa barnootaa	

1: Mee, haamari'annu, waa'esirnawal-hormaataodeeffannoqabdaa? Yoodeebinke eyyeeta'e,

a. maal jechuu sittifakkata?
b. Eessaa dhageette?
c. Eessaa dhagahuufilattaa?

2: Waa'eetajaajila sirna-walhormaata fayyaadargaggootaa dhageettee bektaa?

Gadi fageenyaan:

a. waa'eekaroora maatii, HIV qoratamuu fi yaalamuuhoo?

b. dargaggoonniodeeffannoomirgasirnawal-hormaataaqabaachuuqabujetteeyaaddaa? (Eeyyee,yoojettemaalif)

3: Akkayaadakeetitti rakkoowwan dargaggota mudatan dhimmaa sirna wal-hormaatan walqabatee maalfaati?

Gadi fageenyaan:

a. sababiinmaalijetteeyaadda?

b. eenyutuirracaalaasaaxilamaa?

c. Beekumsaga'aaqabnajettaniiyaaddu?

d. Do you want to know more about these issues and rights?

e. Waa'eemaali iirratti beekumsa argachuu feeta?

4: Tajaajila sirna wal-hormaata bara kana keessa fudhattaniibeektuu?

a. yoo, eyyee ,akkamiinibsita?

b. yoo lkki, maaliif?

5. Taajaajila karooramaatii fi gorsa HIV argachuun salphaa moo niulfaata jettaniiyaadduu?

Gadifageenyaan:

a. Yommuutajaajila kana feetan maaltu sin mudataa?

b. yaada kanbiraa qabdaa kan dhiibbaa isinirraanga'u?

c. akkaayaadakeessaniitti dargaggoonni tajaajila kana argatuu akkadanda'aniif maaltuta'uu qaba jettanii yaaddu??

Baay'eegalatoomaa yeroo kessaniif!

Maqaaqorataa……Mallattoo……..guyyaa……..

2: AFAAN OROMOO TRANSLATED GUIDING QUESTIONS FOR TEACHERS AND HCPs

Gaaffiiwwan barsiisotaa fi ogeessota Fayyaawaliintaasifame

Gaaffii

Lakk…

Bakka……..

Guyyaa:…….

Yeroo …….jalqaba …….xumura……..

Odeffannooenyummaa	**Raga**
Umurii	
Saala	
Gaa'ela	
Saba	
Amantaa	
Dalagaa	

Gaaaffiiwwan ijoo:

1. Naannooketti sirna wal –hormaata fayyaa dargaggootaan/shamarreen walqabatee rakkoowwan jiran maali? (maaliifmudatajetteeyaadda?)
2. Ijoolleen tajaajila kana akka hin fayyadamneef maaltu gufuuta'a?
3. Akkayaadakeetitti, ijoolleen beekumsa sirna wal-hormaataa qabaatu qabu jettee yaaddaa? (yoo, eeyyeejettemaaliif?)
4. Akkaailaalchakeetitti, ijoolleen dhimma kana irratti hubannooga'aa qabu jettee yaaddaa? (lakkiyoojette haalakamiin furuun danda'amaa?
5. Barsiisonni dhimmaa kana irratti baratoota ni mariisisuu?(yoo lakkijette maaliif?) Sirni barnootaa ga'aatti beekumsa kennu jiraa?
6. Akka yaada keetitti , ijoolleen tajaajila sirnawal-hormaataa akka sirriitti fayyadamaniif maaltu ta'uu qabaa?

Baay'ee galatoomi!

Maqaaqorataa……Mallattoo……guyyaa……