DEVELOPMENT OF BEHAVIOURAL CHANGE COMMUNICATION STRATEGIES TO PROMOTE THE USE OF INTRAUTERINE CONTRACEPTIVE DEVICE IN ADDIS ABABA, ETHIOPIA

by

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DEDICATION

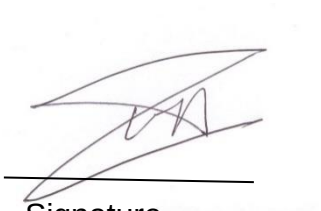
This thesis is dedicated to:

My wife Mihret Alemneh and my two sons Nathan and Barok. You were patient and understanding as I took time away from my family to conduct research.

DECLARATION

Student number: 55768067

Development of behavioural change communication strategies to promote the use of Intrauterine Contraceptive Device in Addis Ababa, Ethiopia is my own work and 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.



8 Nov 2021

Signature Date

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ABSTRACT

Intrauterine contraceptive devices (IUCDs) are one of the long-acting contraceptive methods that provide protection from pregnancy for duration up to 12 years. IUCD is the most efficient, cost-effective, and extensively used contraceptive technique in the world, yet it is rarely utilized in Ethiopia.

The purpose of this study was to develop social and behavioural change communication strategies (SBCC) to improve the utilization of IUCD in Addis Ababa, Ethiopia, through understanding intention and its determinants.

The research was conducted in Addis Ababa among users of family planning methods in health facilities using complex mixed research approaches. Reasoned Action Approach was used as the study's theoretical framework and the research was completed in three consequetive phases. In the first phase, qualitative data from users of a short and long-acting method of family planning was obtained, and the findings were utilized to help construct a questionnaire that was employed in the second phase of the study. Correlational quantitative cross-sectional approach was used in the second phase to collect data from representative samples of users of short-acting contraceptive methods in health facilities. Using the findings from the second phase, the SBCC model and communication strategy for IUCD promotion in Addis Ababa was developed in the third phase.

Only 8.4% of short-acting contraceptive have intention to use IUCD in the coming year. Unfavourable attitudes and a negative perceived social norm on the use of IUCD were the main drivers of poor intention. The specific underlying beliefs responsible for the observed low intention and its direct determinants were presence of fear and shyness related to the procedure of IUCD insertion, believing that IUCD is not allowed for them, perception that IUCD causes infertility, need for approval from husband, preference to do as their close friends and neighbours, and preference to hear experience from other IUCD users.

SBCC model and communication strategy were designed to address the identified underlying beliefs, to result in a positive attitude, supporting social norm, and enhanced intention toward the usage of IUCD, which will ultimately improve uitiliztion of IUCD and family planning method mix in Addis Ababa.

KEY WORDS: Intrauterine contraceptive device (IUCD/IUD); Family planning; long-acting contraceptive method; reasoned action approach (RAA); Theory of Planned behaviour (TPB); Dickoff survey list; social and behavioural change communication (SBCC); Behavioural change communication (BCC), communication strategy for IUCD promotion, Addis Ababa

LIST OF ABBREVIATIONS

AARHB	Addis Ababa regional health bureau
BCC	Behavioural change communication
DHIS	District health information system
FHT	Family Health Team
FP	Family Planning
HEP	Health Extension Program
HMIS	Health management information system
IUCD	Intrauterine contraceptive devices
LAPM:	Long acting and permanent method
LARC	Long-acting reversible contraceptive
LNG-IUS	Levonorgestrel releasing intrauterine system
M&E	Monitoring and evaluation
MCH	Maternal and child health
MoH	Ministry of Health
NGOs	Non-governmental organizations
RHB	Regional health bureau
SAC	Short acting contraceptive
SBCC	Social and behavioural change communication
UHEPs	Urban Health Extension Professionals
UNISA	University of South Africa

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

Figures **Page**

LIST OF ANNEXURES

CHAPTER 1
ORIENTATION OF THE STUDY

1.1 INTRODUCTION

This chapter presents the overall orientation of the research. It covers the following: background, statement of research problem, purpose and objectives, research questions, significance of the study, introduction to the theoretical framework used, operational and conceptual definitions, and scope of the research.

1.2 BACKGROUND TO THE STUDY

Ethiopia's contraceptive prevalence rate increased from 6% in 2000 to 42 percent in 2019, demonstrating extraordinary progress over the last two decades. The majority of contraception users used short acting contraceptive methods. Injectable contraception is the most used type of family planning, accounting for 72 % of modern contraceptive users in 2019. Long-acting contraceptive techniques are not widely used. In 2019, just 9% and 2% of people who used modern contraception used implants and IUCD, respectively (EPHI & ICF 2019: 9).

Long-acting reversible contraceptive techniques, particularly intrauterine contraceptive devices (IUCDs) and implants, are a type of family planning methods that prevents pregnancy for a long period. They are the most efficient in preventing pregnancy, are cost-effective, and are one of the recommended approaches for avoiding unwanted pregnancy because they do not require user adherence once placed (Ngo, Nuccio, Pereira, Footman & Reiss 2017).

For the prevention of pregnancy, intrauterine contraceptive devices have good efficacy, user satisfaction, and continuation rates. IUCDs are safe and effective for a variety of family planning users, including nulliparous, multiparous, adolescents, and women with a history of sexually transmitted infection, as well as in the postpartum and post-abortion periods. Women who are spacing their pregnancies or have finished childbearing can utilize IUCDs (WHO/RHR & CCP 2018: 155, 181; Nelson & Massoudi 2016: 128; ACOG Committee Opinion No. 405 2009: 1–2).

Countries that have high unmet need for family planning services and/or having high prevalence of unintended pregnancy will have advantage if a large proportion of the acceptors of family planning start to use long-acting contraceptive methods such as the

IUCDs (Blumenthal et al. 2013). A wider use of IUCD in resource limited countries will help to have sustainable family planning programs since the IUCD is the most cost-effective method than any other reversible contraceptive method (Trussell et al. 1995: 498).

Globally, IUCDs are the most popular reversible contraceptive technique among married women (13 %), and they are the second most popular method among all women of reproductive age. By the year 2019, 10% of women of reproductive age used male condoms as a contraceptive, followed by IUCDs (8.4%), oral contraceptive pills (8.0%), and injectable (3.9%). In 2019, 29.4 % women of reproductive age used some type of contraception in Africa. Injectables and pills are the most popular means of family planning in the continent, with 8.4% and 3.8%, respectively, using them. Only 2.6% of women in reproductive age use IUCD, with Egypt (22.1%) having the highest frequency in Africa in 2019 (PRB 2019: 7; United Nations 2019: 15,16).

Despite their effectiveness and widespread use around the world, IUCDs are not commonly used in Ethiopia. In Ethiopia, the majority of married women use injectable contraception (27.2%), followed by implants (8.5%) and pills (2%) in 2019. Only 1.5% of married women were using IUCD (EPHI & ICF 2019: 10).

In 2019, 47.6 % of currently married women in Addis Ababa, the study's location, utilized modern family planning methods, the highest percentage in Ethiopia. Like the rest of the country, injectable contraceptives are the most common method used in Addis Ababa (17%) followed by implants (13.3%) and pills (8.6%). Just 5.5 % of currently married women used IUCD, which is the highest in Ethiopia but well below the national target of 15% (EPHI & ICF 2019: 10; FMoH 2016a: 26).

In light of Ethiopia's skewed method mix towards short-acting family planning methods, the country's 2015-2020 costed plan for family planning established goals for increasing the availability and use of long-acting contraceptives, such as IUCD. It targets to expand the share of IUCD among users of contraceptive from 2.6% in 2014 to 15% in 2020 (FMoH 2016a: 26) although this target is unlikely to be achieved as the national survey of 2019 showed injectable contraceptive to be the single dominant method of contraceptive being used (EPHI & ICF 2019: 10).

Ethiopia's Ministry of Health has taken a number of steps to improve access and utilization of long-acting contraceptives, including scale up of IUCD in 2010, training health workers in

IUCD insertion and removal procedures, ensuring that methods are available in health facilities, mobilizing resources and financing, and other similar interventions (Guttmacher Institute 2019: 2; Tilahun et al. 2016: 17). The readiness of public health institutions in Addis Ababa to administer IUCD has been established in studies, with all visited public health facilities having trained health workers on how to provide IUCD and the method being available (PMA Ethiopia 2019: 10).

Various studies conducted in different parts of Ethiopia, on the other hand, revealed low intention and utilization of IUCD, owing to concerns about its side-effects, procedure of insertion, widespread misconceptions and myths regarding IUCD, a lack of partner support and other socio-behavioural factors (Gebeyehu et al. 2018: 9–10; Tilahun et al. 2016: 25).

Recognizing the need to dispel myths and misconceptions about the use of family planning, Ethiopia's Ministry of Health (MoH) has designated demand creation as one of the key priorities for family planning programming, with a special focus on long-acting contraceptive methods (FMoH 2016a: 13). The ministry has also issued family planning communication guideline that shows the steps and procedures needed for desining social and behavioural change communication intervention (MoH 2021:2-3).

Despite the fact that studies revealed the reasons that contribute to low IUCD utilization and MoH putting promotion of long-acting contraceptive methods as a priority, a communication strategy tailored to these challenges is not yet fully operationalized.

Additionally, over the last decade, MoH together with some development partners such as non-governmental organizations (NGOs) have developed behavioural change communication related projects that aimed at promotion of contraceptives and other health services. Most of them were focusing on promotion of all family planning methods including IUCDs (CCP 2021:8; PSI 2022). Despite increament in overall contraceptive accepatance rate over the last two decdes attributed to various improvments in demand and supply side of family plannings programming including the projects implemented by development partners, still the utilization of contraceptives in Ethiopia is skewed towards short acting contraceptive methods (FMoH 2016a:6-7). As presented in previous paragraphs, the accepatance rate for IUCD in particular is very low. There is a need to understand the determinants for its low utilization and design appropriate intervention while respecting the

right of the users' choice on the type of family planning method to use. That is what the current research is trying to contribute to by considering Addis Ababa as a study place.

1.3 RESEARCH PROBLEM STATEMENT

Despite the fact that IUCD is the most efficient, cost-effective, has fewer side effects, can provide long-term pregnancy prevention, has immediate reversibility of fertility, and is extensively used globally, its use in Ethiopia, including Addis Ababa, is still quite low. Ethiopia's Ministry of Health established a target of increasing IUCD use to 15% of all family planning users by 2020, but this is unlikely to be achieved because IUCD use was only 3.6% by 2019 (EPHI & ICF 2019: 10) indicating poor acceptance of IUCD in the country.

Myths and misconceptions regarding IUCD, fear of side effects, discomforts experienced by women during the insertion procedure, refusal by spouse, and other similar scenarios have all been linked to low IUCD utilization and intention (Gebeyehu et al. 2018: 9–10; Tilahun et al. 2016: 25). One of the objectives for the Ministry of Health is to enhance acceptance of long-acting contraceptives, including IUCD, but no special communication plan has yet been devised to address the issues associated with low uptake of IUCD.

Variables that are essential determinants for the usage of the targeted intervention in the population being addressed should be changed by health communication interventions. Less relevant variables are less likely to be the focus of communication efforts. As a result, before developing a communication strategy, it is necessary to determine whether or not the targeted community has formed the expected intention, and, if not, to determine whether or not that intention is influenced by attitudes, social norms, perceived behavioural control, or a combination of these factors (IOM 2002: 37).

As a result, the objective of this study was to assess if users of short-acting contraceptive methods in Addis Ababa, Ethiopia, intend to use IUCD in the near future (within one year). It also identified main predictors of IUCD use among users of the short-acting method of family planning. Based on the findings, a social and behavioral change communication (SBCC) strategy is designed to encourage the use of intrauterine contraceptive devices in Addis Ababa, Ethiopia. The communication strategy for expanding IUCD usage was created to address concentrated efforts to remove pre-existing barriers to IUCD use, ensuring that women have a wide option on range of contraceptive method mix (Castle et al. 2019: 10). It

was carefully considered not to over-promote one particular method over the other family planning methods available.

1.4 PURPOSE AND OBJECTIVES OF THE STUDY

The purpose of this research was to develop social and behavioural change communication strategies to improve the use of IUCD in Addis Ababa, Ethiopia.

The specific objectives of this study were to:

1. Explore and identify commonly held beliefs regarding the use of IUCD among users of family planning in Addis Ababa, Ethiopia.
2. Determine the intention of users of a short acting contraceptive method towards the use of IUCD within the next one year in Addis Ababa, Ethiopia.
3. Identify key determinants of intention to use IUCD among users of short-acting contraceptive methods in Addis Ababa, Ethiopia.
4. Develop and validate social and behavioural change communication strategies to promote the use of IUCD in Addis Ababa, Ethiopia.

1.5 RESEARCH QUESTIONS

The overall question addressed in this research was ‘why are current users of short-acting contraceptive methods not using IUCD and what communication strategy needs to be used to promote the utilization of IUCD?’ Specific questions answered by the research were:

1. Do users of short acting contraceptives in Addis Ababa have intention to use IUCD within the next one year?
2. What are the key determinants of intention for using IUCD which need to be modified in order to increase the utilization of IUCD among current users of short-acting contraceptive methods?
3. What should be the communication strategy for increasing the uptake of IUCD in Addis Ababa, Ethiopia?

Chapter 4 and 5 of this research provide response to the first and second research questions while third research questions is answered in chapter six.

1.6 SIGNIFICANCE OF THE STUDY

This study contributed to a better understanding of the level of intention to utilize IUCD in Addis Ababa, as well as the determinants that influence that intention. The SBCC model and

communication strategy for promoting the usage of IUCD in Addis Ababa was designed based on the study's findings. To enhance the use of IUCD in Addis Ababa, the communication strategy will give particular key messages, actions, and means of communication to family planning providers, urban health extension professionals, and health system managers of family planning and health extension programs.

The communication strategy can also be used by family planning program/project designers and SBCC professionals (such as the Ministry of Health, NGOs, organizations that promote long-acting contraceptives, and the media) to create tailored messages for women and men in order to increase IUCD use as one of the options of family planning. This study adds to the known knowledge on family planning by identifying major variables of intention to use IUCD and proposing the SBCC model for promoting IUCD in Addis Ababa. It also provides evidence to support Ethiopia's Ministry of Health and Addis Ababa's Regional Health Bureau in their efforts to increase the uptake of IUCDs.

The usefulness of the Reasoned Action Approach (RAA) for assessing intention to use IUCD was also investigated in this study. Due to the fact that RAA was only recently introduced compared to its predecessors, TRA and TPB, this research has added scientific understanding to RAA.

1.7 THEORETICAL FRAMEWORK

Two theoretical frameworks were employed in this study: one for data collecting and analysis, and the other for the construction of the SBCC model. The major theoretical foundation for data collecting and analysis was the Reasoned Action Approach (Eldredge et al. 2016: 81; Fishbein & Ajzen 2010: 19–20). The Reasoned Action Approach (RAA) is the most recent model developed based on the theory of planned behavior (TPB) and its precursor, the theory of reasoned action (TRA). The SBCC model for IUCD promotion in Addis Ababa was developed based on the research findings. Dickoff, James, and Wiedenbach's (1968: 422) survey list was employed as a theoretical basis for developing the SBCC model. Sections 2.5 and 2.6 of Chapter 2 contain a detailed description of the theoretical framework.

1.8 RESEARCH DESIGN AND PARADIGM

A pragmatic research paradigm was adopted by the researcher. The study's research design was exploratory sequential mixed techniques. It took three phases to complete. Phase 1

consisted of a qualitative investigation, which was followed by a quantitative study in phase 2. SBCC approach was designed in phase 3 based on phase 2 findings. The paradigm and research design are discussed in detail in Chapter 3 sections 3.2, 3.4, and 3.5.

1.9 ETHICAL CONSIDERATION

To ensure that the study completion with the values of beneficence, respect for human dignity, and justice, the researcher followed the ethical guidelines for conducting research. There were no minor age groups in this study, and all of the participants were adults over the age of 18. In chapter 3 section 3.8, all of the ethical issues observed are presented

1.10 DEFINITION OF KEY TERMS

1.10.1 Conceptual and operational definitions

A conceptual definition refers to the theoretical meanings of the concepts under study (Polit & Beck 2012: 57). An operational definition of a concept specifies the operations that researchers must perform to measure it. Operational definitions should be congruent with conceptual definitions (Polit & Beck 2012: 52).

The following conceptual definitions with their operationalization in this research were used in line with the theoretical frameworks used and purpose of the research.

Intention: intention (also called **behavioural intention**) is defined as a person's perceived likelihood or probability that he/she will engage in performing a given behaviour. Intention is a motivational factor that influences behaviour directly and is determined by attitude, perceived norm, and perceived behavioural control (Fishbein & Ajzen 2010: 21; IOM 2002: 31; Ajzen 1991: 181).

In this research, intention refers to whether current users of short-acting contraceptives are intending to use IUCD within the next one year. Intention to use IUCD was measured by asking respondents three Likert type of questions, with each question item having five possible scores of +1 (strongly disagree) up to +5 (strongly agree) through +3 of neutral option. The mean of the three questions was calculated to get the score for intention.

Intenders: In this research, intenders are those women that have intention to use IUCD within the next one year. Those respondents with mean intention score of ‘strongly agree’ and ‘agree’ were defined/categorized as intenders or having intention towards the use of

IUCD within the next one year.

Non-intenders: In this research, non-intenders are those women that have no intention to use IUCD within the next one year. Those respondents with mean intention score of 'neutral', 'disagree', and 'strongly disagree' were categorized as non-intenders

Attitude: refers to a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object (Fishbein & Ajzen 1975: 10).

In this research, attitude refers to if current users of short acting contraceptives method have a positive or negative predisposition to use IUCD within the next one year. Attitude was measured using four Likert types of questions with each question item having five possible scores of +1 (strongly disagree) up to +5 (strongly agree) through +3 of neutral option. The mean of the four questions was calculated to get the score for attitude. Those respondents with mean scores of 'strongly agree' and 'agree' were defined as having a favourable attitude towards the use of IUCD.

Perceived norm: is the degree to which a person perceives that a given behaviour is viewed as appropriate or inappropriate by members of the person's social network or society at large (IOM 2002: 34). Perceived norms include both perceptions of what others think one should do of the behaviour in question (**injunctive *norm***) as well as perceptions of what others are doing about the behaviour (***descriptive norm***) (Montano & Kasprzyk 2015: 79; Fishbein & Ajzen 2010: 183).

In this research, an injunctive norm refers to the perception of the user of a short-acting contraceptive method about the thinking of important people around her if she starts to use IUCD within the next one year. Similarly, the descriptive norm refers to the perception of users of short-acting contraceptive methods regarding 'if important people around her or women like her are using IUCD'. Perceived norm was measured with four different questions (two assessing injunctive and two assessing descriptive norm) with Likert type questions having +1 (strongly disagree) up to +5 (strongly agree) through +3 of neutral option. The mean of the four questions was calculated to get the score for perceived norm. Those respondents with mean scores of 'strongly agree' and 'agree' were defined as having a supportive social norm towards the use of IUCD.

Perceived Behavioural Control (PBC): PBC is one's perceived amount of control over

behavioural performance, determined by one's perception of the degree to which various environmental factors make it easy or difficult to carry out the behaviour of interest (Montano & Kasprzyk 2015).

In this study, PBC refers to perceived easiness or difficulty of using IUCD within the next one year by the users of short-acting contraceptive methods. It was measured using four Likert types of questions having +1 (strongly disagree) up to +5 (strongly agree) through +3 of neutral option. The mean of the four questions was calculated to get the score for PBC. Those respondents with mean scores of 'strongly agree' and 'agree' were defined as having positive PBC towards the use of IUCD.

Beliefs: Beliefs are an individual's available behaviour relevant information (Fishbein & Ajzen 2010: 20, 321).

In this research, beliefs are defined as information that the research participants held regarding the use of IUCD. There are three types of beliefs which are defined as follows.

Behavioural Beliefs: are beliefs held by individuals about the positive or negative consequences they might experience, if they performed a given behaviour. Behavioural beliefs are determinant to attitude (Fishbein & Ajzen 2010: 20).

In this research, behavioural beliefs are defined as a set of beliefs that the respondents hold about the positive or negative consequences they might be experiencing if/when they use IUCD for prevention of pregnancy within the next one year.

Normative Beliefs: are beliefs formed by individuals regarding important individuals or groups in their lives that would approve or disapprove of their performing of the behaviour of interest as well as beliefs that these important individuals or groups themselves perform or not perform the behaviour in consideration. Normative beliefs are assumed to be determinant to perceived norm (Fishbein & Ajzen 2010: 20).

In this research, normative beliefs are defined as important individuals or groups in the lives of the research participants that would approve or disapprove of their use of IUCD within the next one year as well as beliefs of the respondent that these referents themselves use or do not use IUCD.

Control Beliefs: are forms of beliefs held by individuals about personal and environmental

factors that can facilitate or inhibit their effort to carry out the behaviour. Control beliefs are determinant to PBC (Fishbein & Ajzen 2010: 21).

In this research, control beliefs are defined as beliefs that the users of short acting family planning methods held about factors that facilitate or hinder their possible use of IUCD within the next one year.

1.10.2 Additional Operational Definition

In this research, in line with RAA, which is the theoretical framework for the data collection, intention to use IUCD is a dependent variable whereas attitude, perceived norm and perceived behavioural control (PBC) are treated as *independent* variables as proximal determinants to intention. Behavioural belief, normative belief and control beliefs are also considered as part of the independent variables as distal determinants to intention to use IUCD. Each of these constructs in the theoretical framework of this research are measured according to the recommended approaches of Francis et al (2004: 9) and Montano and Kasprzyk (Montano & Kasprzyk 2015) for applying RAA. Detail description of measurement used for each of these variables/constructs is shown in chapter 3 section 3.7.8.

Other variables measured as part of the independent variables are individual characteristics (age, educational attainment, marital status, occupation, religion, family size), reproductive history (number of children, plan to have future pregnancy, purpose of taking contraceptive and history of taking LARCs) and current method of contraceptive method being used.

Contraceptives: are methods or processes that prevent pregnancy by interfering with ovulation, fertilization, or implantation **(**Sonfield 2014:3). In this study, all types of methods used for prevention of pregnancy including pills, injectable, female, and male condoms, diaphragm, spermicide, IUCD, implant, vasectomy, tuba ligation and all traditional methods like periodic abstinence are considered as contraceptives.

Family planning methods: throughout the body of this research, contraceptive and family planning methods have exactly the same meaning. The word contraceptive and family planning were used interchangeably.

Intrauterine Contraceptive Device (IUCDs): are small devices placed into the uterus of a woman through her cervix and vagina by a trained medical provider to prevent pregnancy (WHO/RHR & CCP 2018: 155,181). In this research, IUCD refers to both copper and

hormone-containing devices inserted into the uterine of a woman for prevention of pregnancy.

Short acting contraceptive (SAC) methods: Methods of contraceptives that provide prevention of pregnancy for short duration of time, usually for duration of less than a year are considered as short acting contraceptive methods (Philip et al. 2016: 291; Jacobstein 2007: 361). In this research, short acting contraceptive methods include pills (combined oral contraceptive pills, progestin-only pills, emergency contraceptive pills), injectable (depot-medroxyprogesterone acetate) and condom (male and female condom).

Long-acting reversible contraceptive (LARC) methods: methods of contraceptives that provide protection from pregnancy for more than one year and fertility resumes upon ceasing to use the method. In this research, LARC includes the use of implant, copper containing intrauterine devices or levonorgestrel releasing intrauterine devices (Roderique-Davies, Mcknight, John, Faulkner & Lancastle 2016; Belayneh, Abreha & Meskele 2015; Harvey, Mcnamee & Stewart 2013).

Permanent contraceptive methods: surgical procedures used by women or men for prevention of pregnancy. Once the procedure is applied by the user, pregnancy will be prevented for the rest of the life of the person, or couples and the method is irreversible. Vasectomy for men and tubal ligation for women are classified under the permanent contraceptive method (Philip et al. 2016: 291; Jacobstein 2007: 361).

Long acting and permanent method of contraceptives: comprise all types of contraceptives included in LARCs and permanent methods.

1.11 SCOPE OF THE STUDY

The study assessed *only* the intention to use IUCD and the scope didn't cover if intention leads to behaviour or not. Since there was no follow up data collection with the research participants, those who intended to use IUCD may not necessarily start to use IUCD within the stipulated period of one year.

The study was representative only among current users of the short-acting contraceptive method from public and private not-for-profit health facilities. The intention to use IUCD among women who are not using any contraceptive method at all or those that visited private for-profit health facilities might be different. Assessing the intention of non-users of

contraceptives was not in the scope of this research.

Based on its objective, this study assessed only the perspective of users of family planning methods. As evidenced in other studies, utilization of IUCD is also affected by health providers' attitude, health facility and the health system related factors. Although all the health facilities assessed in this research have trained human resources on IUCD insertion and removal and provide both short and long-acting contraceptives including IUCD, the perspective of the family planning service providers towards IUCD was not assessed as it was beyond the scope of the research.

1.12 CHAPTERS LAYOUT

The thesis is organized in seven chapter as follows:

- **Chapter 1: Orientation of the study** – provides background information about the study, research questions, objectives, research design and conceptual and operational definitions used in the research.
- **Chapter 2: Literature review and theoretical frameworks**: provides detailed information on family planning with particular focus on IUCDs and LARCs. It also covers the theoretical frameworks used for this research and experience of using the frameworks for developing social and behavioural change communication strategy.
- **Chapter 3: Research design and method**: It presented the research design, method, study area and population, sampling and data collection process, ethical considerations, data analysis and validity and reliability and limitation of the study over the three phases of the research.
- **Chapter 4: Qualitative research: findings and discussion:** presented the findings of the data collected from the qualitative phase of the research followed by discussion of the findings with literature control. The results from this phase of the study were used as input for development of the questionnaire, which was used as a data collection tool for the quantitative phase of the study.
- **Chapter 5: Quantitative research: findings and discussion:** this chapter contained findings from the quantitative phase of the research followed by discussion. The result from quantitative phase of the study was used as input to develop SBCC strategy.

- **Chapter 6: Development and validation of communication strategy to promote the use of IUCD in Addis Ababa**: presents social and behavioural change communication strategy which was developed using the findings from chapter 5 of this research.
- **Chapter 7: Conclusions and recommendations**: covers the conclusion from the three phases of the research followed by recommendations.
- **Annexure**: contained various data collection tools and ethical approvals and consent forms used in this research

1.13 SUMMARY OF THE CHAPTER

In this chapter, an overview on the background information about family planning and IUCD, the research question to be addressed and the research aim, and objectives are discussed. Definitions of key conceptual and operational issues as well as scope and significance of the study are covered. The next chapter will provide detailed information about IUCD and LARC in the literature review section. It also covers a section related to the theoretical frameworks used in the study and explanation on the use of the framework for developing social and behavioural change communication strategy to promote the use of IUCD in Addis Ababa.

CHAPTER TWO
LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 INTRODUCTION

Literature review helps researchers to understand existing evidence. It provides a foundation on which to base new evidence and usually is completed before data collection. The main purpose of the literature review is to recognise what is known and unknown about an area that has not been completely resolved in practice. It also determines how an issue is resolvable and managed based on research evidence and provides the background and the context within which research is conducted (Real, Wilkinson & Boswell 2020: 143; Polit & Beck 2017: 97).

Chapter 2 covers detailed discussion on reasoned action approach (RAA) which was used as the theoretical framework for the data collection of this research followed by sections on family planning including long-acting contraceptive methods with particular focus on IUCDs as part of the literature review. The last part of the chapter presents the experiences and gaps related to social and behavioural change communications (SBCC) to promote the use of IUCD in Ethiopia. The chapter is concluded by summarizing the content of the chapter.

2.2 THEORETICAL FOUNDATIONS OF THE STUDY: REASONED ACTION APPROACH

In health sciences research, theoretical frameworks are applied to predict and explain health related behaviours and to provide basis for social, behavioural, biological, and psychological interventions towards improved health outcomes. Theories and models are useful in identifying factors that influence health behaviours. Interventions designed based on theory and behavioural change methods are usually associated with greater intervention effect (Lopez, WGrey, Chen, Tolley & Stockton 2016: 6; Hall 2012: 74).

This research used *reasoned action approach* as its theoretical framework. Its historical evolution, main constructs and evidence of its use for family planning related researches are presented below.

2.2.1 Evolution of the Theory

The *Theory of Reasoned Action* was conceptualized in 1975 by Martin Fishbein and Icek Ajzen to understand and predict behaviour and its determinants (Fishbein & Ajzen 1975).

The Theory of Reasoned Action (TRA) by itself was developed as a continuation to previous work of Fishbein in the 1960s regarding attitude (Montano & Kasprzyk 2015; Ajzen 1991).

According to TRA, behaviour is predicted by the intention of the person to carry out the behaviour. In turn, intention is seen as determined by two factors – attitude towards performing the behaviour and the subjective norm associated with the behaviour (Fishbein & Ajzen 1975: 15).

The TRA was successful in predicting behaviour when volitional control of the behaviour is high (i.e., individuals exercising larger control of performing or not performing the behaviour). It was observed to have limitations in determining behaviours in which the person has limited volitional control. To address this limitation of the TRA, *Theory of Planned Behaviour* was conceptualized by Icek Ajzen in 1991 (Montano & Kasprzyk 2015; Ajzen 1991)

The theory of planned behaviour (TPB) was formulated by adding perceived behavioural control to the TRA, in an effort to account for factors outside someone's volitional control that may affect his/her intentions and behaviour. This extension was based on the idea that behavioural performance is determined by motivation (intention) and ability (behavioural control) (Ajzen 1991: 181).

According to the theory of planned behaviour (TPB), intention is the immediate determinant of behaviour while the predictors of intention are attitude, subjective norms, and perceived behavioural control (PBC). Additionally, PBC is viewed as a factor that directly influences both intention and behaviour (Montano & Kasprzyk 2015).

TPB was widely and successfully used and tested in predicting behaviour and behavioural intention in various disciplines including in areas of physical exercise, smoking, alcohol and substance use, contraceptive use, HIV testing, screening for cancer, use of safety helmet, nutritional choices, and many other health and non-health areas. It became an influential and most frequently used theory for predicting human behaviour (Montano & Kasprzyk 2015; Ajzen 2011). However, various researchers found other constructs and variables as determinant of intention and behaviour and recommended for modification of TPB (Gomes & Nunes 2016: 6; Sommer 2016: 104; Fen & Sabaruddin 2014: 114; Hasbullah, Mahajar & Salleh 2014: 102; Sniehotta, Presseau & Araújo-Soares 2014: 4; Bilic 2005: 256).

Then, in 2000, Martin Fishbein, one of the authors of TRA, expanded TPB by including constructs from other major behavioural theories and proposed revised approach called *Integrated Behavioural Model*, also called *Integrative Model* (Montano & Kasprzyk 2015; Fishbein 2000). In the integrated behavioural model (IBM), new constructs as determinants of intention and behaviour were added to what was already included in TRA/TPB. The IBM extended the TPB with the addition of a new source of normative social pressure (i.e., *descriptive norm*), a component of attitude (i.e., *experiential attitude*) and the concept of *self-efficacy*. Additionally, IBM recognized skills, ability, and environment as predictors of behaviour (Montano & Kasprzyk 2015; Fishbein & Ajzen 2010; IOM 2002).

Recently, Fishbein and Ajzen, the original authors of TRA, realized that both of them were working independently in refining the TRA for better prediction of behaviour and intention in their respective experiences and learned that their ideas were comparable. In 2010, two of them together published their renewed model called **Reasoned Action Approach** that reconciled the differences in their respective models of IBM and TPB (Eldredge et al. 2016: 81; Fishbein & Ajzen 2010: 19–20).

2.2.2 Theoretical framework of the study

Since the Reasoned Action Approach (RAA) is the most recent theory developed based on the experience and lessons of applying its predecessors over four decades, and presence of ample evidence in its ability to predict behaviour, this research has used reasoned action approach as its theoretical framework.

The section below describes each of the constructs of RAA and how they are operationalized in this research. In chapter 3, section 3.6, the process of data collection and indicators for measuring each of the constructs of RAA are discussed.

According to the RAA, intention of performing a given behaviour is the most important determinant of behaviour. Other factors that directly determine behaviour are ability and skills to perform the behaviour and presence of few or no environmental constraints which make behavioural performance difficult. Any given behaviour is most likely to occur, if one has a strong intention to perform the behaviour, has the necessary abilities and skills required to perform the behaviour, and if there are no environmental constraints preventing behavioural performance (Montano & Kasprzyk 2015; Fishbein & Ajzen 2010).

Intention has three direct determinants: attitude towards carrying out the behaviour, perceived norms concerning the performance of the behaviour, and perceived behavioural control. PBC is a direct determinant of behavioural performance in addition to its effect on behaviour through intention (i.e., PBC may have dual effect by being determinants for both intention and behaviour). Attitude, perceived norm and PBC are all determined by their respective underlying behavioural belief, normative beliefs, and control beliefs, respectively (Montano & Kasprzyk 2015; Fishbein & Ajzen 2010; Fishbein 2000).

Beliefs are the available facts about a person's behaviour. Beliefs can come from a variety of sources, including the media (radio, television, the internet), personal experience, formal and informal education, social contact, and so on. Beliefs guide the decision to do or not do the behaviour of interest, regardless of how the beliefs relating to the behaviour are developed. The three categories of beliefs (behavioural, normative, and control beliefs) eventually determine intention and behaviour under inquiry, according to RAA/IBM/TPB, because these beliefs are distal determinants of intention (Fishbein & Ajzen 2010: 20, 321). According to RAA, to influence intention and behaviour, there is a need to change in the relevant behavioural, normative, or control beliefs. By identifying and targeting the relevant underlying beliefs, effective behaviour change interventions can be designed to change intention and behaviour (Fishbein & Ajzen 2010: 321–322).

The conceptual framework used for this research using RAA is shown in figure 2.1. Brief description and definition of each of the constructs of the RAA and how it was used for assessing intention to use IUCD in Addis Ababa within the next one-year is further discussed below.

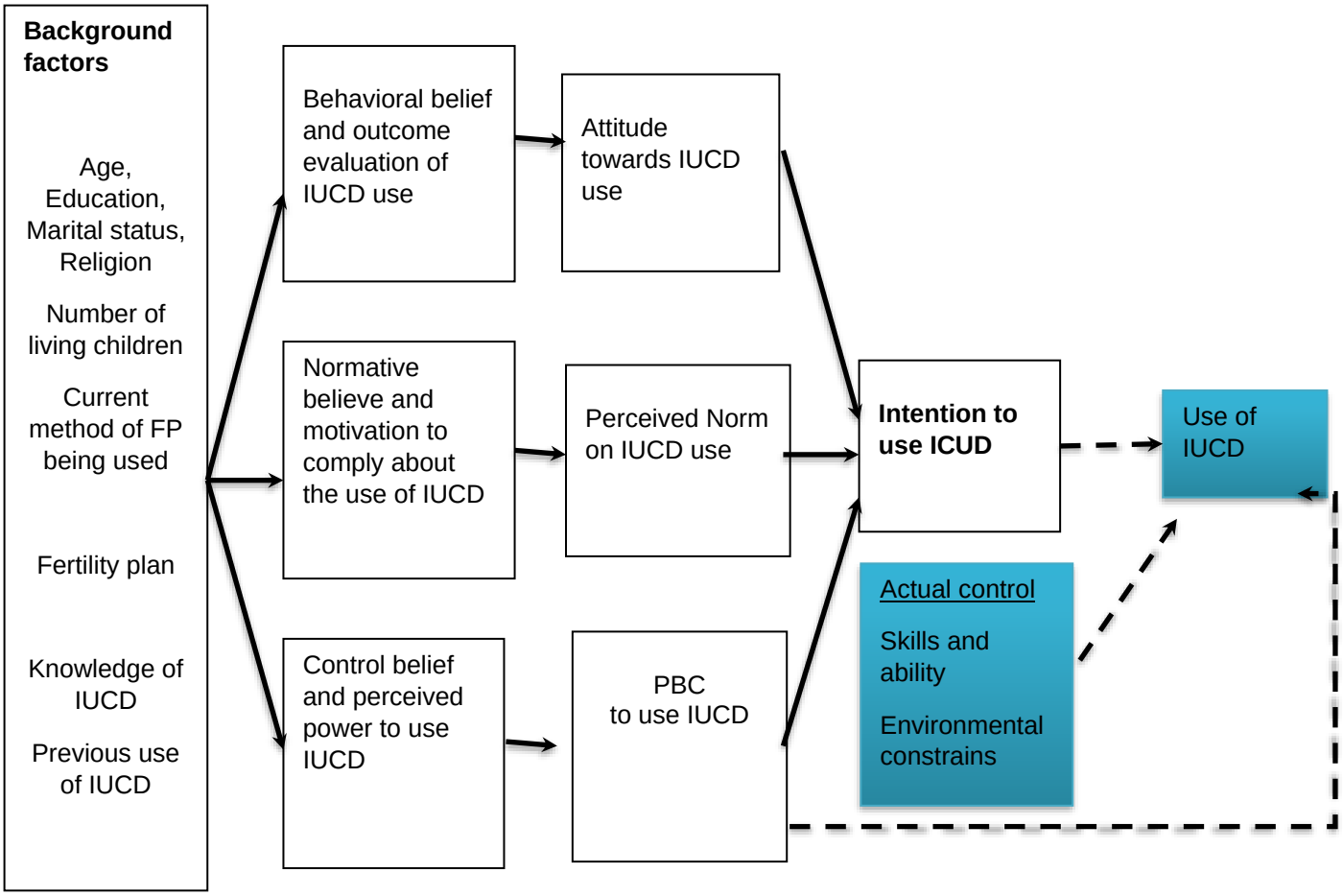

Figure 2. 1: Conceptual framework for assessing Intention to use IUCDs: the Reasoned Action Approach adapted from Fishbein & Ajzen (2010: 22)

Note: the research did not include the boxes shaded in colour and the directional arrows shown with broken lines (**- - - -**) as they were beyond the scope of the research

2.2.2.1 Attitude and behavioural beliefs

According to Ajzen *((*1991: 188)*, attitude towards a behaviour* or *behavioural attitude* refers to the degree to which a person has a favourable or unfavourable evaluation of the behaviour of interest. If a person has a more favourable attitude to personally perform a given behaviour, the more likely that he/she will perform that behaviour (IOM 2002: 33). According to RAA, there are two aspects of attitude: instrumental and experiential. Instrumental attitude measures the anticipated positive or negative consequence of performing the behaviour (such as harmful–beneficial) whereas experiential attitude measures the positive or negative experiences perceived to be attached with performing the same behaviour (such as painful–enjoyable) (Fishbein & Ajzen 2010: 83–84).

Attitude is determined by individuals' beliefs about the outcomes or attributes of performing the behaviour (which is called *behavioural beliefs*), weighted by evaluations of those outcomes or attributes (Montano & Kasprzyk 2015). Behavioural beliefs are beliefs that are held by someone about the positive or negative consequences he/she might experience if he/she performs that particular behaviour. Irrespective of the way how beliefs associated with a given behaviour are acquired, they provide the basis of the decision to do or not to do the behaviour of interest (Fishbein & Ajzen 2010: 20).

In this research, the attitude of women who use short-acting contraceptive methods towards the use of IUCD within the next one year was assessed that enabled the researcher to identify whether the women have a positive or negative attitude towards the use of IUCD. The theoretical framework also helped to identify specific beliefs that the women held regarding IUCD (i.e., behavioural beliefs) and its effect on attitude and intention to use IUCD. Those beliefs identified as having detrimental effect on attitude directly and on intention indirectly were specifically identified and included as input in the development of social and behavioural change communication strategy for promoting the use of IUCD in Addis Ababa.

2.2.2.2 Perceived norm and normative belief

Perceived norm refers to social pressure perceived by an individual to perform (or not to perform) a given behaviour. It is a special form of social influence towards an individual's behaviour. Perceived norm is a determinant for intention and is determined by normative beliefs. There are two sources of perceived normative pressure: injunctive and descriptive norms (Montano & Kasprzyk 2015: 71; Fishbein & Ajzen 2010: 130–131).

Injunctive norm (also called *subjective norm*) is perceptions of individuals concerning what should be done with respect to performing a given behaviour. For an injunctive norm, individuals may be motivated to behave in accordance with what they believe others think they should practice (Montano & Kasprzyk 2015: 79; Fishbein & Ajzen 2010: 131).

Injunctive normative beliefs and motivation to comply with the respective referent are assumed to be determinants of injunctive norm (Fishbein & Ajzen 2010: 137). *Injunctive normative beliefs* are beliefs that a particular referent individual or group thinks he/she should or should not perform the behaviour of interest. In forming an injunctive norm, various individuals and groups are taken into consideration but not every possible referent will be

important for a given behaviour. Rather, only salient, or readily accessible referents will influence the individual's injunctive norm (Fishbein & Ajzen 2010: 134).

Descriptive norm is perceptions of individuals that other individuals or groups important to the person are or are not performing the behaviour in question. Descriptive norms are norms of individuals based on perceptions of what other people are doing or not doing. In the case of descriptive norms, individuals may model their behaviour on the basis of others because they view others as experts or they want to be like them (Fishbein & Ajzen 2010: 132, 146).

Similar to injunctive norm, descriptive norm is assumed to be determined by descriptive normative beliefs and identification with the referent. *Descriptive normative beliefs* are subjective probabilities that particular referents are or are not performing the behaviour of interest. (Fishbein & Ajzen 2010: 146, 221, 152, 404).

Injunctive and descriptive norms show two different aspects of social pressure. At the same time, there is evidence of significant correlation within descriptive and injunctive norms. Thus, *the perceived norm* is the overall normative influence derived from both descriptive and injunctive norms (Fishbein & Ajzen 2010: 133, 150–151).

In this research, both injunctive and descriptive norms towards the use of ICUD by users of short acting contraceptives were operationalized to assess perceived norms of the research participants as presented in chapter 3.

2.2.2.3 Perceived behavioural control and control beliefs

Perceived Behavioural Control (PBC) is perception of people on the degree to which they are capable of, or have control over, doing a behaviour of interest (Fishbein & Ajzen 2010: 64). PBC is assumed to consider the person's available information, skill, opportunities, and resources needed to carry out the behaviour and overcome the potential barriers or obstacles. If individual believes that he/she has no control on doing the behaviour, he/she may not form strong intentions to conduct the behaviour even if he/she holds supportive attitudes and strong perceived social pressure to do so (Fishbein & Ajzen 2010: 155).

Similar to attitude and perceived norm, PBC has two aspects which should be considered during measurement of PBC: capacity and autonomy. Capacity refers to the aspect of PBC related to the ability to perform a behaviour including judgment of the perceived ease or

difficulty of performing the behaviour. Autonomy refers to the degree of control over performing the behaviour including judgments that performing the behaviour is “up to me” (Fishbein & Ajzen 2010: 165–166).

PBC determines behaviour in two different ways: serving as moderator of the intention as well as directly determining behaviour. When volitional control is limited and perceived control accurately reflects actual control of the behaviour, then PBC with intention will directly determine the behaviour. In situations where the volitional control is high, the effect of PBC decline and intention alone becomes the sufficient determinant of behaviour. Additionally, PBC is an independent determinant of intention, together with attitude and perceived norm (Montano & Kasprzyk 2015: 71).

PBC is the function of control beliefs on the presence or absence of facilitators and inhibitors to perform the behaviour weighted by their perceived power (effect of each control factor to inhibit or enable the behavioural performance) (Montano & Kasprzyk 2015).

In this research, PBC towards the use of IUCD by the users of short acting contraceptive users were assessed. To find the control beliefs for use of IUCD, the research participants identified factors that facilitates and inhibits/hinders their possible use of IUCD within the next one year. Those control beliefs that were found as determinants for PBC and intention to use IUCD were included in the SBCC strategy developed for promotion of IUCD use in Addis Ababa.

2.2.2.4 Intention

Intention is an indication of readiness of someone to conduct a given behaviour. It is the person’s estimation of the likelihood or perceived probability of carrying out the behaviour. Intention is the single most determinant for behavioural performance (Fishbein & Ajzen 2010: 21, 39).

Once attitudes, perceived norms, and PBC have been formed from their respective underlying beliefs, they are directly accessible and available to guide intentions and behaviour. Attitude, perceived norm, and PBC in combination lead to the formation of intention (Fishbein & Ajzen 2010: 21).

It should be recognized that, lack of required skill and ability and/or having environmental constraints can inhibit people from acting on the behaviour based on their intention. Intention is a good predictor of behaviour if people have control over carrying out the behaviour. Even if people have positive attitude towards performing a given behaviour and have supportive perceived normative pressure to carry out the behaviour, they may not develop intention to practice the behaviour, if they believe that they don't have control over performance of the behaviour (Fishbein & Ajzen 2010: 21–22)

In this research, the intention of users of short acting contraceptives towards the use of IUCD was assessed. Statistical tests were used to identify which of the three proximal determinants (i.e., attitude, perceived norm and/or PBC) to be predictors of intention for IUCD use within the next one year. Additionally, the distal determinants of intention from the underlying behavioural, normative and control beliefs were identified in line with the theoretical framework presented in fig 2.1. The SBCC framework and strategy development was designed in line with the intention of the research participants.

2.2.2.5 The role of background variables in reasoned action approach

All socioeconomic, demographic, environmental, personality and other individual difference variables such as age, gender, education, past experiences, etc. play a role on intention indirectly through the three primary determinants of behavioural intention. According to RAA, these background variables help to understand why people hold a given belief, but they are considered as distal variables that may influence intention and behaviour through the underlying beliefs of the proximal determinants of intention. These distal variables are not assumed to independently explain the likelihood of performing the behaviour of interest (Montano & Kasprzyk 2015: 81; Fishbein & Ajzen 2010: 252–253).

In this research, demographic, socioeconomic, reproductive history, practices of family planning are included as part of the background variables (see theoretical framework on fig 2.1). The effect of backgourd variables on intentntion and its determinants was assessed as presented in the finding section of this research.

2.2.3 Evidence of applicability of RAA/TPB for contraceptive related behaviours

RAA/TPB have been used and tested widely in different settings to understand health and non-health related human behaviours. This section presents evidence on how RAA/TPB

were used to predict intention and utilization of both contraceptives in general and a specific method of contraceptives (e.g., Only pills) with experience from different countries.

A meta-analysis that analysed 86 different studies conducted using a reasoned action approach found RAA as a theoretical framework that successfully predicted behaviour in a wide range of areas including physical activity, diet, use of condoms, screening for health, smoking, drinking and other related behaviours. Overall, the RAA explained 58.7% of the variance in intention. The researchers concluded that the constructs of RAA helped the researchers in understating determinants of health behaviour much better than TPB (Rosemary McEachan et al. 2016: 595, 606, 608). Similar findings on the applicability of RAA in predicting human behaviour were found by other researchers (Hagger, Polet & Lintunen 2018; Conner, Mceachan, Lawton & Gardner 2017).

An assessment conducted in Ghana to identify determinants of condom use among adolescents and youth aged 15-24 years found that only attitude and PBC on the use of condoms as significant determinant of intention. Intention was also a significant predictor for the use of condoms. Subjective norm was not associated with intention to use condoms (Teye-Kwadjo, Kagee & Swart 2017).

A study conducted in a rural area in Uganda among women in postpartum period using TPB showed attitude, perceived norm and PBC as significant determinants of intention to use contraception. PBC was the strongest predictor of intention to use contraceptives. The TPB model; however, was able to explain only 26% of variance in the intention to use contraceptives. Structural and community level factors such as poverty, culture, gender, and access to health care were justified as other variables that might have accounted for the variance not explained by the TPB (Kiene, Hopwood, Lule & Wanyenze 2014: 1572).

Research conducted in Iran on the intention to effectively use oral contraceptive pills (OCP) among users of family planning using TPB as theoretical framework found subjective norm, PBC and self-efficacy as predictors of intention and effective use of OCP. But self-efficacy was the strongest determinant of both intention and behaviour while attitude was not a determinant for intention (Peyman & Oakley 2009). In a similar study conducted in the USA among migrants, only attitude and subjective norms were able to predict intention to use

OCP with subjective norms being stronger predictors than attitude (Lee, Carvallo & Lee 2015).

In a study conducted in an urban setting of south-eastern USA to test the ability of TPB in identifying and predicting intention and uptake of LARC (i.e., IUCD or implant) and to assess the effectiveness of LARC campaign messages, intention to use LARCs was found to be good a predictor for actual utilization. Attitude and subjective norm were determinants of intention to use LARC whereas PBC was not associated with intention among the research participants. Lack of association between PBC and intention in the research was justified as presence of a greater sense of perceived behavioural control as most of the study participants were using some form of family planning method during data collection. When the research participants were exposed to posters campaigns that focused on promotion of IUCD and implant designed to change attitude and subjective norm, the participants showed increased interest in the use of IUCD and implant which demonstrated the ability and effectiveness of theory-based campaign messages in shifting the attitude and intention of women on the use of LARC. The authors concluded that a contraceptive choice campaign needs to be designed based on the constructs of TPB to be effective in changing LARC uptake and intention (Sundstrom et al. 2017).

Similarly, another study conducted in the USA to determine intention on use of LARC among women of reproductive age group using TPB found intention for uptake of LARC to be associated with attitude and subjective norm. The same study showed no association of PBC with intention for LARCs use (Demaria, Sundstrom, Faria, Saxon & Ramos-ortiz 2019: 2).

In a study conducted in Nepal to assess the uptake of IUCD in the postpartum period, attitude was found to influence intention to use IUCD in two different ways. Positive attitude towards the use of IUCD was not enough to result in actual use of IUCD whereas negative attitude towards use of post-partum IUCD was associated with not using IUCD. The same study showed that subjective norms play an important role in determining intention and use of IUCD. Influence from family, husband, and peers were also linked with the use of postpartum IUCD. Similarly, PBC played a role in shaping both intention to and use of IUCD during the postpartum period (Thapa et al. 2019: 6–7).

Research conducted to assess the intention of users of combined oral contraceptive (COC) pills to switch to use of implant or IUCD using extended TPB as a theoretical framework found that attitude, perceived norm and PBC predict intention on switching from COC to LARC. The study found that COC users were more likely to ask about the experience of IUCD/implant from other users of LARC than their sexual partner, physicians, or friends as influencers of perceived norm (Demaria et al. 2019: 6–7).

All these literatures provided evidences on TPB/RAA's ability as strong theoretical framework for understanding, explaining, and predicting behaviour related with use of contraceptives in general and some specific methods such as IUCD, pills or LARC as well as its applicability in other social human behaviours. It also shows that the determinants of intention and use of the specific contraceptive method varies from country to country based on their existing context and situation which calls the need to conduct research to understand the situation and develop tailored strategy based on the findings.

2.3 FAMILY PLANNING

Family planning is the ability of individuals and couples to anticipate and attain their desired number of children and timing of births. It is the voluntary use of contraceptives by individuals or couples. Use of contraceptives enables individuals and couples to realize their right to decide on if they want children, how many children and when to give birth freely and responsibly (United Nations 2017:2; FMoH 2019b:23).

Family planning is one of the essential components of various global development initiatives. For example, in 2014, the United Nations' General Assembly included family planning during endorsement of the 2030 Agenda for Sustainable Development. The Sustainable Development Goals (SDG) have specifically included two targets directly related with family planning to be achieved in 2030 as part of global development. Similarly, improving coverage and utilization of contraceptives was part of the millennium development goal (United Nations 2017: 2; WHO 2015: 8–9).

2.3.1 Global practice of family planning

Globally, most married, or in-union women are using some form of contraceptives. In 2019, about 62% of married women used contraceptives. However, there is a huge variation across regions and countries. The lowest rate of contraceptive use is in Africa (37%) while the rate

reaches as high as 74% in North and South America regions and 70% in Europe (PRB 2019: 7–13).

Within Africa, as well, there is variation across sub-regions. Countries in northern and southern African sub-regions have the highest contraceptive prevalence rate among married women at 52% and 55%, respectively, while the prevalence for the middle and western sub-region of Africa is 20% and 25%, respectively. The contraceptive prevalence rate of Eastern Africa is 42% which includes Ethiopia and is rapidly increasing (PRB 2019: 7–9; United Nations 2017: 6).

Female sterilization and intrauterine contraceptive devices (IUCDs) are the two most common forms of contraceptive methods being used with respective prevalence of 18% and 13% of married women in the world followed by pills (9%) and male condoms (8%). There is variation in the type and proportion of contraceptives being used across regions and countries. For example, in Africa, injectables and pills are the most commonly used methods of contraceptive (11% and 8% of married women, respectively). In Asia, female sterilization (23%) and IUCDs (16%) are the most frequently used methods with negligible proportion taking injectable contraceptives. In the Americas, female sterilization (21%) and pills (17%) are the most commonly used methods while in Europe, use of male condoms (21%) and pills (20%) are the dominant ones (PRB 2019: 7–13).

The number of users of contraceptives is expected to grow globally because of population growth and increasing contraceptive prevalence. Worldwide, the number of married women using family planning methods is projected to increase from 778 million to 793 million between 2017 and 2030. Most of the growth will be in Africa due to the increasing number of women in the reproductive age and expanding utilization of contraceptives (United Nations 2017: 6).

In 2017, worldwide, there were about 89 million unintended pregnancies of whom 84% were among those women that have unmet needs for modern contraceptives. About 14% of the unintended pregnancies occurred among users of short acting contraceptive methods while the rate of unintended pregnancies among users of LARC and sterilization was less than 2% of all the unintended pregnancies (Guttmacher Institute 2017: 2).

2.3.2 The practice of family planning in Ethiopia

With a projected population of over 100 million by 2020, Ethiopia remains to have one of the highest fertility rates in Africa with 2.6% annual population growth rate. About 45% of the population is young, aged less than 15 years. By 2030, the population is projected to reach 122.3 million (Bekele & Lakew 2014: 3; CSA 2013: 45).

By 2016, the country's total fertility rate was 4.6 children per woman. In about 21% of deliveries, the birth interval between two successive live births was less than 24 months, which puts both the new-born and the mother at increased risk of negative health outcomes including mortality. Using effective and long-acting family planning methods can contribute to increase the birth interval between two successive pregnancies to at least 24 months (CSA & ICF 2016: 79).

The unmet need for contraception among currently married women aged 15-49 years in Ethiopia was 22%, of which 9% were interested in limiting and the other 13% for spacing. The unmet need for modern contraceptives in Addis Ababa was 11% (United Nations 2017: 27; CSA & ICF 2016: 108, 119). Wider use of LARC is an option that can contribute to the reduction of unmet needs for family planning (Blumenthal et al. 2013).

According to the 2019 national mini-DHS survey, 41% of currently married women were using modern contraceptives while 1% used traditional methods in Ethiopia that makes the contraceptive prevalence rate to be at 42%. Injectable contraceptives were the most prevalent type of modern contraceptive used (27.2% of married women) followed by implant (8.5%). Only 1.5% of the currently married women used IUCD (EPHI & ICF 2019: 10).

In Ethiopia, utilization of modern contraceptives among married women has steadily increased over the last 20 years from 6% in 2000 to 27% in 2011, 35% in 2016 and 41% in 2019. Although there was a huge increment over the last two decades, the proportion of women that use long-acting contraceptive method, particularly IUCD, remained very low. In 2011, 0.2% of currently married women were using IUCD that increased to 2% in 2016 and remained at less than 2% in 2019 (EPHI & ICF 2019: 10; CSA & ICF 2016: 113; CSA & ICF International 2012: 96–97).

In 2010, the Government of Ethiopia launched the IUCD scale-up initiative to expand access and utilization of IUCD (Tilahun et al. 2016: 17). Although there is an increment in the absolute number of IUCDs inserted, the proportion of acceptors of IUCD among total users of family planning remains small – at about 2% as shown in DHS 2019 survey (EPHI & ICF 2019: 9).

According to Ethiopian DHS 2016 (2016: 111), a wide gap between the knowledge about IUCD and short-term methods were documented. Only 45% of currently married women have ever heard of IUCD while 97% have heard about injectable contraceptives. Even the knowledge level of IUCD was evidenced to be superficial and limited to identifying the name of the method. The women didn't have enough knowledge regarding the long-acting method of contraceptives (Gebremariam & Addissie 2014a: 3).

Other studies conducted in various parts of Ethiopia have also shown poor utilization of IUCDs. The proportion of women that use IUCD was 1.6% in Southern Ethiopia (Belayneh et al. 2015: 17), 1.7% in Mizan Aman town (Yemaneh & Birie 2017), 13.3% in Bahrdar town (Animen, Lake & Mekuriaw 2018: 3), 3.5% in Debre Markos town (Bulto, Zewdie & Beyen 2014: 6) and 0.1% in Janamora (Getahun, Wolde, Muchie & Yeshita 2018: 3). The higher rate of IUCD use in Bahrdar town was attributed to the small sample size as it was done in only one health centre (Animen et al. 2018: 3).

All these figures and data show that over the coming years, there will be an increased number of women that will use contraceptives worldwide including Ethipia which will be a huge investment on family planning programs for countries. Many of the women in Africa, including Ethiopia are mainly using short acting contraceptive methods which are more expensive and less effective than long-acting reversible contraceptive methods. The prevalence of IUCD use in Ethiopia is very low as less than 2% of women in reproductive age group uses IUCD as option of contraceptive. Although users have the right to choose their preferred method of contraceptive that suits them, it also calls for inquiry to understand why users of family planning methods are preferring short acting methods over long-acting ones. Based on the understanding, strategies to promote the long-acting method can be designed which is the focus of this research.

2.3.3 The practice of family planning in Addis Ababa

Addis Ababa, the capital city of Ethiopia and study place for this research, has the highest contraceptive prevalence rate in Ethiopia. About half of married women (49.9%) in the city used some form of contraceptive in 2019 with 47.6% using modern methods and the other 2.4% using traditional methods of family planning (EPHI & ICF 2019: 10; CSA 2013: 130, 134). On the other hand, in 2016, about 10.5% of married women in the city had unmet needs for contraceptives. Among the users of family planning, 70.5% were using for spacing while the rest 29.5% were using contraceptives for limiting birth (CSA & ICF 2016: 78, 117).

Like the rest of the country, however, the injectable contraceptive is the single most dominant method of contraceptive (17%) followed by implant (13.3%) among married women in 2019. About 5.2% of all married women in Addis Ababa were using IUCD. Although the proportion of married women that use IUCD in Addis Ababa is higher than the rest of the country (1.5% of married women in Ethiopia using IUCD), the contribution of IUCD to the overall family planning utilization is still very low as compared to the national target and expected method mix (see discussion below). Additionally, about 29.5% of users of family planning methods in Addis Ababa are using their contraceptive choice to limit their birth which shows the potential area that can better be addressed by LARC methods like IUCD or permanent methods (EPHI & ICF 2019: 10).

2.3.4 Policies, guidelines and strategies related with family planning in Ethiopia

Ethiopia has included family planning in its various policies, strategies, and guidelines with commitment to avail wide options of family planning service with perspective of the right to use family planning and considering it as one of the country's development agendas. The national health policy, population policy, the national family planning guidelines, the national reproductive health strategy of 2016-2020, the 2015-2020 Ethiopian adolescent and youth health strategy, and the national health sector transformation plans have all emphasized the need for availability of wide range and comprehensive family planning service for users (Gebeyehu et al. 2018: 7; FMoH 2015a: 100; FMoH 2016b: 31; FMoH 2016a:1; FMOH 2015b: 21).

The health sector transformation plan of 2021-2025 (HSTP II), which is national strategic plan of health sector for five years, aimed to increase the contraceptive prevalence rate from

41% in 2020 to 50% in 2025. Increasing demand for quality contraceptive service through BCC and othe demand creation mechanisms and expanding access to quality and comprehensive right-based family planning information and service are among the major strategic initiatives identified to increase the uptake of contraceptives in Ethiopia (MoH 2021a: 45 ,48)

Recognizing the absence of clear guidance on how to design and implement strategic communication interventions to address demand related barriers, recently, the Ministry of Health of Ethiopia has developed family planning communication guideline. The guideline aimed to provide guidance on how to design, implement, monitor and evaluate effective family planning communication intervention at national, sub-national and local level. It also gave guidance on the procedures, approaches and techniques to be followed during development and implementation of communication materials, messages and interventions. It recommended for local partners and implementers to conduct assessments and design interventions in line with the recommended approaches of the guideline to operationalize it (MoH 2021b:3).

Ethiopia planned to reduce the unmet needs for family planning from 24% in 2015 to 10% in 2020 and increase contraceptive prevalence rate from 42% to 55% in the same period (FMOH 2015: 41, 67) but the target was not achieved by the end of 2020 as the unmet need was still at 22% (MoH 2021a:19). Low utilization of LARC in Ethiopia is recognized as one of the challenges identified during planning for contraceptives (2016b: 13, 31; FMOH 2015: 41, 67). Recognizing the poor utilization of IUCD and other long-acting contraceptives and skewed contraceptive use towards short-acting contraceptives, the 2016-2020 national reproductive health strategy sets clear targets of increasing the proportion of LARC and permanent contraceptives to 50% with implants to account for 33%, IUCD 15%, female sterilization 1.5% and male sterilization 0.5% out of the total method mix (FMoH 2016b: 32).

The Ministry of Health of Ethiopia also developed costed-implementation plan on family planning for the period of 2015-2020 that detailed strategic priorities, major activities, and targets to be achieved by end of 2020 to increase contraceptive prevalence rate with right based approach. One of the priorities of the plan was to expand access to and utilization of long-acting contraceptives with particular emphasis on IUCD and implant. It aimed to increase the proportion of IUCD users from 2.6% in 2014 to 15% of all users of family

planning in 2020 to have a more balanced contraceptive method mix (FMoH 2016a: 1, 28). As discussed above, in 2019, only 1.5% of married women used IUCD while the prevalence of modern methods of family planning use was 41% in the country. That means, the proportion of users of IUCD among all users of family planning is just 3.7%. Considering this reality, it is unlikely to achieve the target of 15% share for IUCD by 2020 which calls the demand to understand why the low acceptance and utilization of IUCD in Ethiopia.

This research will contribute to the understanding of the reasons and determinants of low utilization of IUCD by taking Addis Ababa as a case study. Based on the findings from the study, social and behavioural change communication strategy to promote the use of IUCD in Ethiopia is designed (see chapter six).

2.3.5 Family planning service delivery in Ethiopia

The public health services in Ethiopia are provided by a network of health facilities arranged in a three-tier health care delivery system as primary, secondary and tertiary health care. The primary health care unit consists a health centre in urban areas whereas in rural areas, it contains a health centre, five satellite health posts and a primary hospital. General hospitals and specialized hospitals are considered as secondary and tertiary level of the health care system, respectively. Additionally, private health facilities provide health care service as primary, medium and higher level of clinic, specialized clinics as well as generalized and specialized hospitals (MOH 2021a:94; FMoH 2019b:31-33)

According to the national guideline for family planning, all public health facilities in Ethiopia including health posts, health centres and hospitals are expected to provide comprehensive family planning service to their community. At health post level, short acting contraceptives are provided while long-acting methods including IUCD will be provided, if there are competent service provider. At health centres and hospitals, both short-acting and long acting methods of contraceptives including IUCD are provided. Both short and long acting method of contraceptives can be provided in private clinics and hospitals based on availability of needed human resource and organizational capacity (FMoH 2019b. 31-33)

In Ethiopia, almost all public health facilities have the capacity to provide short-acting family planning. Most of them also have basic infrastructure and trained health care workers to

provide LARC (FMoH 2016a: 8). In public health facilities, all family planning services including IUCD insertion and removal are provided free of charge to users (FMoH 2011: 49).

Most users of family planning in Ethiopia got their method modern contraceptives from public health facilities (83.8%) followed by private-for-profit health facilities (14.4%) and facilities managed by non-governmental organizations (1.3%). For the case of IUCDs, 92.7% of the users of IUCD received their method from public sector health facilities while 4.2% and 2.9% of users got the IUCD from private sector and NGO managed health facilities, respectively (CSA & ICF 2016:114)

Family planning service in Ethiopia is provided through various service delivery modalities. Facility based health service is the most frequent method of service provision where the client visits the health facility to use any preferred contraceptive method. Outreach and mobile sessions are organized sessions of family planning services where team of competent providers traveling from health facility to the community to provide family planning services in areas having limited or no access to contraceptive service. Social marketing is another service delivery strategy that promotes, distributes and sells of contraceptives at affordable price through existing channels such as private pharmacies. Short acting contraceptive methods are the usual methods for social marketing. Social franchising, work-place and school based services are other strategies used for delivering contraceptives to potential users. In social franchising, capacity of private sector health facilities and their staff are built to provide selected family planning methods that requires clinical procedures. In organizations that employ large number of workers such as factories and large farms, workplace-based family planning service is encouraged to be available as part of expanding access and utilization of contraceptives. Similarly, availing family planning service in higher learning institutions such as universities is part of school based health services (FMoH 2019b:30-37).

Various development partners such as non-govermental organizations, UN agencies, donors and professional associations provide technical, financial, logistical and other support to strengthen the family planning programming in Ethiopia, particularly to strengthen the public health system. Capacity building focusing on quality counseling and service provision, quality assurance, strengthening commodity supply and service provision in alignment with national policies and programs are among the prioritized areas for support by non-govermental

organizations. Some of the development partners are engaged in development of guidelines for faly planning promotion while others are engaged with strengthening the data management, quality of family planning service provision, etc (FMoH 2019:37; MoH 2021:91)

2.4 LONG-ACTING REVERSIBLE CONTRACEPTIVES (LARCs)

As defined in chapter 1, long-acting reversible contraceptives (LARCs) include IUCDs and implants that serves as prevention of pregnancy for more than one year. Despite their high initial cost and the need for health facility visits for insertion and removal, LARCs have the following wide range of advantages over other methods of contraceptives.

They are reversible with rapid return of fertility after their removal. LARC are independent from user motivation, adherence and coitus and minimize frequent visits to health facilities for re-supply. Once inserted, there is no need for additional costs to be incurred for continued use within the lifespan of the method. In terms of effectiveness, IUCD and implants are about 20 times as effective as oral contraceptive pills. High satisfaction rate and less discontinuation rate among users of LARC were documented from various countries as compared to users of short-acting contraceptives (Curtis & Peipert 2017: 462; Staveteig, Mallick & Winter 2015: 462; ACOG Committee Opinion No. 405 2009).

Initial cost during insertion of LARC is high. But, with their continued use over a long period, LARCs become cost effective. A study conducted in the USA showed that, when LARC methods are used for a duration of more than 2.1 years, it will become less costly than most of the short-acting contraceptives. Continued use beyond this period is cost saving as compared to short-acting methods. Slightly longer period of use is needed (at least 3 years of LARC continued use) to become cost effective when compared with condoms (Trussell, Hassan, Lowin, Law & Filonenko 2015: 53).

LARCs are safe for use after abortion, delivery as well as during lactational period. They are good options for women who need an oestrogen-free contraceptive method. Almost all women in the reproductive age group including adolescents and young women can use LARC as it is safe to use and having only few contraindications (ACOG Committee Opinion No. 735 2018: 130; Curtis & Peipert 2017: 462; Staveteig et al. 2015: 462; ACOG Committee Opinion No. 405 2009: 257).

LARCs can play an important role in addressing the unmet need for contraceptives. A multicounty LARCs expansion research project conducted in Latin America, Asia and Africa indicated that promotion of LARCs resulted in reducing unmet need in the intervention areas. (Blumenthal et al. 2013).

The main concerns for both IUCDs and implant are related with side effects such as change in menstrual bleeding pattern (like excess bleeding during menses, being ammenoric or experiencing spot bleeding) and users' fear of procedures of insertion and removal. Proper counselling about the side-effects and reassuring the users can help in addressing the concerns (ACOG Practice Bulletin No. 186 2017: 259–260; Curtis & Peipert 2017: 462)

Although LARCs have all these advantages, as described in section 2.2.4 above, very few women in Ethiopia are using LARC as their preferred means of contraceptive method. Of the two LARC methods, IUCDs are the least used in Ethiopia. In this study, the researcher targeted to understand why women in Ethiopia are not using LARCs and will develop social and behavioural change communication strategy based on the findings by taking Addis Ababa as the study place. Of the two methods of LARC, the researcher will specifically focus on IUCD as it is the least utilized as compared to implants and other methods of modern contraceptives.

2.5 INTRAUTERINE CONTRACEPTIVE DEVICES (IUCDs)

Intrauterine contraceptive devices (IUCDs) are small devices inserted through the cervix and positioned in the cavity of the uterus for the purpose of preventing pregnancy (NCCWCH 2013: 38). Taber's Cyclopaedic Medical Dictionary (2017: 1292) defined IUCD as 'an artefact inserted into the uterine cavity to interfere with conception or implantation. Many such devices are impregnated with progestin or copper'.

2.5.1 Evolution of IUCDs

IUCD has a long history of development. For human use, the placement of devices in the uterus for preventing pregnancy was first reported in the 1800's (Takeshita 2015: 254; Pollack, Ross & Perkin 2006: 9). Scientific literatures start to report about devices in the uterus as means of contraceptives in the early 1900s (Kaneshiro & Aeby 2010: 211). In 1902, Hallwig designed a device inserted in the uterus and a stem extending into the cervical canal and vagina (Takeshita 2015: 254; Pollack et al. 2006: 9).

In 1909, Ralph Richter, a German physician, developed a model of intrauterine device with silk and catgut rings covered in bronze and nickel wire. Because of infection associated with its use, the device's popularity was limited (Takeshita 2015: 254; Pollack et al. 2006: 9).

About 20 years later, Ernst Grafenberg, another German physician, reported the use of silkworm gut coiled silver into a ring inserted in the uterus in 1928. This ring, widely known as the Grafenberg ring, was considered as the first modern IUCD. Its use was associated with risk of infection and expulsion rate that made it unpopular for wider use (Takeshita 2015: 254, 256; Pollack et al. 2006: 9; Christopher 1965: 78).

A revival of interest in the IUCD surged after 1959 when favourable trials were reported from Israel and Japan. An International Conference on Intrauterine Contraception was organized in 1962, which was attended by IUCD investigators from all over the world to evaluate the suitability of the IUCD as a tool for population control. Various products of IUCD were presented and compared at the conference (Takeshita 2015: 256).

In the 1960s, the IUCD was reinvented by various researchers in the form of inert, plastic IUCDs in different sizes and shapes. In the 1970s, the copper addition to the plastic devices showed improvement to the efficacy of the methods that allowed the device to be smaller in size which makes the procedure of insertion easier. The copper also contributed to improving the side effects of IUCDs including decreased pain, bleeding, and spontaneous expulsions (Takeshita 2015: 265; Kaneshiro & Aeby 2010: 211; Christopher 1965: 79). The Dalkon Shield IUCD, which is composed of polyethylene and has a multifilament string thread attached to it and is dropped through the cervix and vagina, was of particular interest because of its widespread use and serious complications such as infertility, septic abortions, and even deaths. Unacceptably, a substantial percentage of women who used Dalkon Shield IUCD became pregnant. Despite the product's adverse effects and lack of efficiency, it was widely promoted in the 1970s until it was outlawed in 1980. In the 1980s and beyond, medical complications caused by Dalkon Shield IUCD prompted a backlash against IUCD use in the United States and other nations (Takeshita 2015: 259, 280; Teal & Romer 2013: 36; Knowles 2012: 12).

In 1972, WHO established the Human reproduction programme (HRP) in collaboration with UNDP, UNFPA and World bank. HRP is an organ within the United Nations that has an international mandate to lead research in human reproduction (WHO 2012: 4).

Between 1972 and 2007, 21 randomized controlled clinical trials were conducted under the leadership of HRP in different countries and research centres. Additionally, non-randomized studies on menstrual blood loss, mechanisms of action, safety, exploring options of new IUCD and other issues related with IUCD were conducted in both developing and developed countries (WHO 2008: 6). The TCu380A, one of the available copper containing IUCDs, was found to be more effective than other copper containing devices after a review of 34 distinct randomised controlled clinical trials involving over 50,000 women (Grimes, Lopez, Manion & Schulz 2007: 56).

In 1994, the United States' Food and Drug Administration (FDA) approved the TCu380A type of IUCD for 10 years of use based on the evidence from HRP research. In 1996, WHO included IUCD as one of the safe contraceptive options in its publication of the medical eligibility criteria for contraceptive use. In 2004, evidence on effectiveness of TCu380 for 12 to 13 years of preventing pregnancy was presented for FDA (WHO 2008: 5)

As a result of these research, it was recommended that TCu380A be used for at least 10 years. The TCU380A kind of IUCD is a dependable alternative to female sterilization because of its high level of efficiency and ability to prevent conception for more than ten years without committing to permanent and irreversible methods. Because it is the most successful and safest type of all reversible contraceptives available today, the TCu380A is now considered the reference IUCD for safety and effectiveness (WHO 2008: 8).

The first study report on the use of levonorgestrel-containing intrauterine devices, often known as the levonorgestrel releasing intrauterine system (LNG-IUS), was published in 1980 (Turok 2013: 391). A meta-analysis of eight randomized control studies evaluating the efficacy of LNG-IUS found that a levonorgestrel intrauterine system delivering 20g per day (LNG-20) has efficacy comparable to copper IUCDs with a surface area of more than 250mm^2 (Joshi, Khadilkar & Patel 2015: s62; Grimes et al. 2007: 56).

Later, additional types of levonorgestrel-releasing intrauterine systems were developed and approved for use that have varying amounts of daily levonorgestrel released and the duration of prevention from pregnancy (ACOG Practice Bulletin No. 186 2017: 252; Turok 2013: 391).

2.5.2 Types and description of IUCDs

The types of IUCDs that are accessible vary per country. In the United Kingdom, for example, U-shaped (such as multiload Cu375), plain T-shaped (such as Nova T 380), banded T-shaped (such as T-safe Cu 380A), and frameless (such as GyneFix) copper incorporating ICUD are routinely available. Stainless steel rings are frequently utilized in China, despite having greater expulsion and failure rates than copper TCu380A (NCCWCH 2019: 38; Staveteig et al. 2015: 2; Buhling, Zite, Lotke & Black 2014: 168).

Currently, two types of highly effective intrauterine contraceptive devices (IUCDs) are being marketed in the world: the TCu380A copper containing IUCD (Tcu380A) and the levonorgestrel releasing intrauterine system (LNG IUS) (ACOG Practice Bulletin No. 186 2017: 253). The LNG IUS is also called *hormonal IUCD* because of its hormonal content (WHO/RHR & CCP 2018: 181). These two types are recommended types of IUCD by WHO on its global handbook for family planning providers (WHO/RHR & CCP 2018: 155, 181).

Because TCu380A is the type of copper-containing IUCD recommended for use by WHO, the focus of the discussion on copper-containing IUCDs in this study will be on TCu380A. Unless otherwise stated, copper-containing IUCD will refer to just the TCu380 type in this study. Both copper-containing IUCD and levonorgestrel-releasing intrauterine systems are referred to as IUCD.

The most effective kind of IUCD is TCu380A, which can prevent against pregnancy for more than ten years. It has a 380 mm^2 copper surface area, which is supplied by a 32mm solid copper sleeve on each of the arms on both sides, which is wrapped in a copper wire along the 36mm vertical stem. A monofilament polyethylene thread is attached at the base to create two white tail strings measuring 10.5cm in length to aid detection and removal. The TCu380A is intended for women with uterine cavities that are 6–9 cm deep (WHO/RHR & CCP 2018: 62).

The levonorgestrel intrauterine system is a device made of polyethylene T-shaped frame with a steroid reservoir around a 32 mm long vertical stem. It releases a fixed amount of daily dose of levonorgestrel into the uterus after insertion in the uterine cavity (NCCWCH 2013: 62).

LNG-IUSs are divided into five sub-types. All of the subtypes release varying amounts of levonorgestrel on a daily basis, and their service lifetime varies as well. Mirena releases 20g/day and prevents pregnancy for up to 5 years, Skyla releases 14g/day and serves for 3 years, Liletta releases 18.6g/day and serves for 4 years, and Kyleena releases 17.5g/day and serves for 5 years of contraception, all are available on the market (ACOG Practice Bulletin No. 186 2017: 253).

In Ethiopia, the type of IUCDs currently being provided in health facilities for users of family planning is mainly TCu380A. Few facilities provide Mirena in addition to the TCu380A.

2.5.3 Who can use IUCDs?

Both hormone releasing and copper containing IUCDs are safe to use and suitable for almost all group of women including adolescents, those who have or not yet have child, immediately after abortion, post-partum, lactating women, those infected with HIV and those that had history of pelvic inflammatory disease (WHO/RHR & CCP 2018: 158, 184).

2.5.4 Additional functions of IUCDs

Both types of IUCD have other advantages in addition to effective prevention of pregnancy. Copper releasing IUCD may provide protection against endometrial cancer while LNG-IUS provides effective treatment for heavy and long menstrual bleeding. LNG-IUS may also help in cases where progestin is needed for hormone replacement therapy. Copper releasing IUCD can be used by women who cannot or do not want to use hormonal contraceptives. Copper releasing IUCD can be used as emergency contraceptive, if used within five days after unprotected sexual intercourse but LNG-IUS is not recommended for this purpose (WHO/RHR & CCP 2018: 430)

2.5.5 Side-effects, disadvantages and contraindications to use IUCDs

With use of copper containing IUCD, changes in menstrual patterns are common including irregularity, prolonged and heavy menstrual bleeding, and cramp pain during monthly bleeding (WHO/RHR & CCP 2018: 156)

Although increased amount of menstrual bleeding is a common side effect of copper containing IUCD, there is no significant change to the level of haemoglobin unless the woman is known to have low iron stores in her body. Thus, presence of iron deficiency anaemia is not contraindication for use of copper containing IUCD (Gupta & Jain 2016: 16; Jacobstein 2007: 362)

One of the rare complications of IUCD is risk of ectopic pregnancy, if the women became pregnant while IUCD is in uterus. Among women that became pregnant while using IUCD, about 6-8% of them may develop ectopic pregnancy. However, due to its high effectiveness in preventing pregnancy, IUCD is protective from ectopic pregnancy. Women that use copper containing IUCD have 91% less risk of ectopic pregnancy than those that do not use any contraceptive at all (Jacobstein 2007: 362).

Other rare complications to the use of IUCD includes risks of pelvic inflammatory disease if the woman has chlamydial infection at the time of insertion, miscarriage, or preterm birth if the woman became pregnant while using IUCD and uterine perforation from either the instrument used for insertion or the IUCD itself (WHO/RHR & CCP 2018: 156). The risk of uterine perforation is, usually, associated with inadequate training of service providers (Gupta & Jain 2016: 16).

Changes in bleeding patterns such as irregularity, infrequent, prolonged, or fewer days of bleeding are common side effects among users of LNG-IUS. Some women might develop mood changes, gaining weight, headache, and acne (WHO/RHR & CCP 2018: 182).

According to the WHO's medical eligibility criteria, the following group of women should never use either types of IUCDs: those who are pregnant; having infection of the cervix, uterine or pelvic area; undiagnosed abnormal uterine bleeding; distorted uterine cavities; and cervical or endometrial cancer. Having breast cancer is contraindication for insertion of hormonal IUCD (LNG-IUS). Copper containing IUCD is not recommended for use by women

with systemic lupus erythematosus, severe thrombocytopenia, solid organ transplants, gestational trophoblastic disease, and pelvic tuberculosis. Similarly, LNG-IUS is not recommended for use if the woman has, ischemic heart disease, systemic lupus erythematosus, history of breast cancer, severe liver cirrhosis, liver tumours, solid organ transplants, gestational trophoblastic disease, and some AIDS therapies (WHO/RHR & CCP 2018: 184; Nelson & Massoudi 2016: 128–129).

2.5.6 Mechanisms of action of IUCDs

The main mechanism of action for copper containing IUCDs is mainly by preventing fertilization because of a cytotoxic inflammatory reaction which makes the uterine cavity to be spermicidal. The copper also affects the motility, quality, and viability of sperm. The endometrial changes become hostile for implantation (Kaneshiro & Aeby 2010: 212; Kulier, O'Brien, Helmerhorst, Usher-Patel & D'Arcangues 2007: 2). Evidence shows that the use of copper containing IUCD doesn't interfere with pregnancy and doesn't cause abortion (ACOG Practice Bulletin No. 186 2017: 252). Additionally, the copper IUCD has post fertilization contraceptive effects. Inserting a copper containing IUCD, in the first few days of conception, is effective emergency contraceptive (Kaneshiro & Aeby 2010: 212)

The mechanism of prevention of pregnancy by LNG-IUS is through its hormonal effects in the locality of the uterine cavity. It prevents the endometrial growth, thickening of cervical mucus, and inhibition of sperm motility and function (Jacobstein 2007: 364)

2.5.7 Efficacy of IUCDs

Both types of IUCDs are the most effective types of reversible contraceptives. With common use, 0.8% of copper containing IUCD users might get pregnant in the first year of use while the rate is 0.7% for LNG-IUS (WHO/RHR & CCP 2018: 383). The risk of pregnancy beyond the first year remains small. Over a period of 10 years, the risk of pregnancy while using copper bearing IUCDs is 2 for every 100 women users (WHO/RHR & CCP 2018: 155). After 12 years of use, the cumulative pregnancy rate was 2.2 per 100 women (Kaneshiro & Aeby 2010: 212).

2.5.8 Cost-effectiveness of IUCDs

Although the initial cost is high, copper containing IUCD is the most cost effective reversible contraceptive available today. The cost reduces as the number of years used by the woman

increase. At the end of first year use, injectable was found to be less costly than other types of modern contraceptives. Copper releasing IUCD becomes less costly than injectable contraceptive in approximately 2 years (Trussell et al. 1995: 496, 500).

One of the drawbacks of LNG-IUS is its cost. This device is 30 to 80 times more expensive than the Copper TCu380A (Jacobstein 2007: 364).

2.5.9 Summary about IUCD

In summary, IUCD is a well-tested form of contraceptive that has high effectiveness and safety in preventing pregnancy. Almost all groups of women in reproductive age can use IUCD including adolescents, those with or without children, had history of STDs, postpartum, lactating and after abortion. It can be used for the purpose of limiting or spacing birth as it serves for over 10 years of protection from pregnancy. In addition to its high effectiveness in preventing pregnancy, copper IUCD is the most cost-effective type among all reversible contraceptives. It is the most widely used form of reversible contraceptive among married women globally, particularly in Asia. But its prevalence in Ethiopia is very low.

In subsequent sessions of this chapter, the research will further explore the factors associated with and determinants for utilization of IUCD in Ethiopia with particular focus in Addis Ababa.

2.6 FACTORS ASSOCIATED WITH INTENTION AND UTILIZATION OF IUCDs

Various studies have demonstrated demand as well as supply side related factors as reasons for underutilization of IUCD in Ethiopia and other parts of Africa. The following sections presented evidences on the issues associated with low utilization and intention towards the use of IUCD.

2.6.1 Demand related factors influencing utilizaiton of IUCD

In many parts of Africa, the low utilization of IUCD is attributed to the attitude of both the health service provider and client sides. Socio-cultural and health system related barriers also contributed to poor adoption of the method. Fear of side effects, belief that IUCD causes infertility, thinking IUCD disappearing in the body of the women or being embedded in the body of infants if they become pregnant while in use and lack of partner approval were documented in different parts of the continent as reasons for not using IUCD. Structural

barriers including fear and discomfort of pelvic examination during insertion, preference for female family planning service provider, cost, lack of training on how to insert and remove IUCD and service providers' misconceptions about eligibility criteria like the method is not suitable for women with HIV infection were other reasons for low utilization of IUCD. Preference of health service providers for other family planning methods that require less time for insertion/admission were also documented in some parts of Africa (Castle et al. 2019: 2; Gbagbo & Kayi 2018:8; Builu & Naidoo 2015:30). Similar findings were identified from India, Indonesia, and Pakistan (Titaley et al. 2017: 58; Jabeen & Umbreen 2016: 126).

Like the other countries in Africa, similar reasons for low utilization of IUCD in Ethiopia were identified in various studies. A meta-analysis of 10 studies conducted in Ethiopia showed pooled prevalence for use of long acting and permanent method at 13.5% (8.2% - 18.7%) and intention at 42.7% (3.5%-53.8%) among women of reproductive age group (Moges & Tilahun 2015: 166).

Intention to use IUCD was also assessed in many parts of Ethiopia and was found to be low. In Wolaita Zone, Southern Ethiopia, the intention to use IUCD among short acting contraceptive users was only 2.2% (Meskele & Mekonnen 2014). In Debre Markos Town, north-western Ethiopia, the intention to use IUCD among women of reproductive age was 11.6% (Bulto et al. 2014: 5). Similarly, the intention to use IUCD among users of short-acting contraceptive methods in Addis Ababa was 12.3% (Sandy, Mavhandu-Mudzusi, Tirfe & Mundeta 2015: 11).

Number of factors were identified as determinants for and associated with the use of IUCD in Ethiopia. Unfavourable attitudes towards the use of IUCD and negative social norms were the main factors associated with not using IUCD in most parts of Ethiopia as discussed below. The role of perceived behavioural control was also reflected in some of the studies. For example, a study conducted in Adigrat, Northern Ethiopia, evidenced that women didn't use IUCD because of concerns about return of fertility, fear of insertion and removal procedure, the beliefs of the need to eat special food if using IUCD, discomfort during sex and concerns about the side effects of IUCD (Gebremariam & Addissie 2014a: 3). Another study conducted in Mizan Aman town, Southwestern Ethiopia, showed that users of short-acting contraceptive methods didn't prefer IUCD or implant because of misconceptions about

long-acting methods (32%), fear of side effects (18.2%), fear of infertility (5%) and preference for using short-acting method (43.5%) (Yemaneh & Birie 2017).

In a study conducted in Bahrdar town, north-western Ethiopia, lack of husband support and concern about side effects were the two main reasons for not using IUCD. Need for additional children, fear of migration of IUCD to other parts of the body, fear of vaginal examination during insertion and religion were also mentioned as reasons for not using IUCD (Animen et al. 2018: 4).

In a study conducted in Debre Markos town, north-western Ethiopia, the reasons for not intending to use IUCD were concerns about the side effects (58.4%), health concerns (37.0%), preference for short acting contraceptive (36.3%) and religious prohibition (24.2%). The same study also identified the presence of misconceptions. IUCD as the cause of infertility and genital infection was mentioned by about two-fifths and one-fifth of the respondents, respectively (Bulto et al. 2014: 5–6).

In qualitative research conducted in Southern Ethiopia, fears of side effects, the procedure of insertion, myths and misconceptions including IUCD causing cancer, death, and infertility, were reported as reasons for not preferring to use IUCD. Partner opposition, religion and need for more children were identified as other reasons not to use any long-acting contraceptives (Endriyas, Eshete, Mekonnen, Misganaw & Shiferaw 2018: 5–6).

A study conducted to assess the effect of IUCD expansion in Ethiopia found lack of awareness about IUCD and disapproval by partners as factors cited as reasons for not using IUCD (Tilahun et al. 2016: 25).

A study conducted in Arada sub-city, one of the districts in Addis Ababa, showed the presence of widespread misconception and myths regarding IUCD. Of the research participants, only 37.3% had some knowledge about IUCD. Among those that were considered as ‘knowledgeable’, IUCD was mentioned as cause for infection (47.7%), excessive vaginal bleeding (11.7%), pain (11.7%), goes to brain (6.3%), discomfort during sexual intercourse (8.7%), causing permanent infertility (13.2%), uterine cancer and bad smell to vagina. A multivariate analysis showed that education, marital status, occupation, receiving health education by community-based health workers (urban health extension professionals) and being counselled by health workers were found to be determinants for

use of long-acting and permanent method of contraceptive (Teshome, Woldeyohanis & Deyessa 2018: 4–6).

On the other hand, those women that have a positive attitude towards the use of IUCD were more likely to use IUCD showing the role of attitude towards the use of IUCD. Educational status, employment, being properly counselled by health workers, age of the woman and approval from partner were found to be associated with use of IUCD in Ethiopia. For example, in Bahrdar town, north-western Ethiopia, use of IUCD was statistically associated with older age, women's educational level and being counselled on IUCD. Women aged 35-49 years were five times more likely to use IUCD than those aged 15-24 years. The higher educated women were more likely to use IUCD. Those counselled on IUCD were three times more likely to use IUCD than those who were not counselled (Animen et al. 2018: 3).

A study conducted in Southern Ethiopia found that young women aged less than 30 years are more likely to accept long-acting and permanent methods (LAPM) of contraceptives than women aged more than 30 years [AOR=2.8: 95% CI, 1.1-7.0]. Employed women were also three times more likely to use LAPM (Belayneh et al. 2015: 18).

In Debre Markos town, north-western Ethiopia, demand for LAPM was statistically associated with age, desire for more children, number of children ever born, knowledge of modern family planning, use of modern family planning, experience of discussion with husband about modern family planning and partner approval (Bulto et al. 2014: 7).

In summary, a meta-analysis of 34 studies and 8 policies and strategy related documents conducted to assess the barriers on utilization of LAPMs in Ethiopia showed that individual level, gender, and socio-cultural factors as key barriers. Lack of awareness, fear of side effects, health concerns when using the LARCs like cancer and infertility, and lack of education to understand written documents were identified as individual level barriers. Gender barriers were partner's opposition, lack of discussion with partner, absence of male support and lack of women decision-making power. The socio-cultural factors include misconceptions and myths being learned from the community as the society in many parts of the country believed that LARC can cause infertility and other health concerns. The culture of pronatalist thinking and religious beliefs were contributing to not using contraceptives at all and long-acting in particular. To address the barriers, the researchers recommended

development of specific interventions and strategies including training of providers and demand generation activities through mass media/other appropriate methods (Gebeyehu et al. 2018: 9–10)

2.6.2 Health system related factors influencing utilization of IUCDs

Absence of adequately trained health personals for insertion and removal of IUCD, lack of supplies, insufficient space in health facilities for insertion and removal of IUCDs leading to privacy concerns, and feeling of being discomfort to be served with a male provider for inserting IUCDs are among the factors identified from supply side of the health system. Access, quality of care and readiness of health facilities to provide service were additional supply side factors for low uptake of LARC including IUCDs. Negative attitude of health workers towards the provision of IUCD has also been documented in some studies. Capacity building/training, mentoring and supportive supervision to enhance capacity of staff and health facilities, review meetings, supporting data management and reporting and ensuring consistent supply are among the factors that has been identified to enhance the quality and utilization of family planning including IUCD (Tilahun et al. 2016:25; Woldeyohannes, Arega and Mwanri 2022:5; Gebeyehu et al. 2018:4; Castle et al. 2019:7-8).

A national assessment on readiness of health facilities for provision of services showed that health facilities in Addis Ababa to be more ready to provide family planning service than other regions in the country. About 76% of the health facilities in Addis Ababa had six out of eight tracer items which were used as criteria for assessing readiness of facilities to provide contraceptive service. Nationally, only 63% of the health facilities had an average of five family planning tracers out of the eight. The tracer items to assess readiness were availability of family planning guideline, trained staff, equipment and contraceptive methods (EPHI 2018:21). Another recent national study showed that public health facilities in Addis Ababa to be ready to provide IUCD as all assessed health facilities had health workers trained in insertion and removal of IUCD as well as presence of IUCD during days of visit (PMA 2019: 10).

That means, although both demand and supply side of the health system contributes for low utilization of IUCD in Ethiopia, relatively, the health facilities in Addis Ababa are better equipped and ready to provide family planning services including IUCD. On the other hand, evidences as presented above, showed presence of huge gap on demand creation on area

of IUCD utilization in Ethiopia and Addis Ababa that needs to be addressed. This research will contribute to the understanding of the reasons for low intention towards the use of IUCD and will develop strategy for promoting its use as part of demand creation by taking Addis Ababa as a place to generate evidence.

The next section covers the current status of behavioural change communication regarding contraceptives utilization in Ethiopia with particular emphasis on IUCD and the gaps that this research contributes to fill.

2.7 BEHAVIOURAL CHANGE COMMUNICATION FOR PROMOTION OF IUCD

To develop successful behavioural change interventions, there is a need to identify the key determinants of any given behaviour, which is the first essential step that needs to be completed. The more one knows about the key determinants of a given behaviour, it will be more likely to develop an effective behavioural change communication to change that particular behaviour (Fishbein & Cappella 2006).

Behavioural change communication interventions on health, including contraceptive campaigns, are proven to be more successful if they are designed based on a strong conceptual framework to guide the implementation (Lopez, WGrey, et al. 2016; Sundstrom, Billings & Zenger 2016). Effective behavioural change communication strategy for contraceptives heavily rely on availability of evidence-based research to identify current level of knowledge, barriers to use contraceptives, attitude, and other relevant information (Bongaarts, Cleland, Townsend, Bertrand & Gupta 2012: 61).

Evidence from evaluation of projects have shown effectiveness of BCC strategies to increase acceptance and utilization of LARC including IUCD by addressing gaps in the health system, myths and misconceptions in the community and other issues based on findings from situation analysis. It also shows the role of perceived norms such as partner engagement and PBC issues such as improving access for LARC in health facilities (see below).

In a project implemented in Democratic Republic of Congo (DRC), to increase the use of family planning in general and IUCD in particular, about 40% of new users of family planning chose IUCD as their preferred method of contraception at the end of 5th year of the project as compared to 0% IUCD utilization prior to the project and 10% during the first 2 years of

the implementation. The community engagement strategy targeting women, men, and community stakeholders such as religious and traditional leaders on all forms of contraceptives including IUCDs was implemented based on findings from situation analysis. Particular emphasis on overcoming fears and shame associated with pelvic examination for insertion were identified as effective messages for increasing IUCD use (Castle et al. 2019: 5–7).

Evaluation of a multi-country project implemented in 14 Sub-Saharan African countries to expand the utilization of LARC with particular focus on IUCD using demand creation as one of the strategies. The communication included promotion of the entire range of available contraceptives, addressing specific misconceptions about IUCD and other family planning methods, working with community and religious leaders and peer education. Comprehensive counselling on family planning was part of the communication strategy. Interpersonal communication using a mixed media approach while ensuring availability of a wide range of methods of contraceptives were among the recommendations from the evaluation (Ngo et al. 2017). Similarly, the effect of demand creation on increasing utilization of IUCD was documented from evaluation of LARCs expansion projects implemented in low- and middle-income countries in Africa, Asia, and Latin America (Cleland, Ali, Benova & Daniele 2017).

To increase utilization for contraceptives including LARCs, the Ethiopian national reproductive health strategy identified development of counselling tools and tailored family planning communication materials to bring behavioural change among potential users of family planning as one of its strategic priorities. Similarly, the national guideline for family planning also stated the need for development of tailored SBCC interventions to address myths, misconceptions, and concerns of the community regarding contraceptives (FMoH 2019b: 47-49, 2016b: 32).

In Ethiopia, demand for family planning including LARCs is promoted through various channels including health education and promotion in health facilities, counselling to users of family planning during sessions of providing contraceptive, posters, media (such as radio and television messages), pamphlet/posters/leaflets and community-based promotion through health extension workers. In Addis Ababa, urban health extension professionals (UHEPs) are responsible for providing community-based and house-to-house health education where promoting family planning is one of the 15 packages of health promotion.

But promotion of family planning through UHEPs is suboptimal. A study conducted in Addis Ababa found that only 36% of households trained by a health extension program remembered family planning discussed with them while the rate for solid and liquid waste management was 76% which shows less coverage for family planning. Similar findings where family planning covered less often by urban health extension professionals was found in nearby towns (Tafesse, Gesessew & Kidane 2019: 1, 6; Gebreegziabher, Astawesegn, Anjulo & Kerie 2017: 6; CSA & ICF 2016: 120–121)

Counselling is one of the activities that the family planning providers conduct during sessions of family planning service to users of contraceptives. During counselling, the service providers include information about available options of family planning including LARC methods but, usually, the counselling doesn't cover all the options available and their side-effects. The commonly held negative beliefs regarding IUCD remain inadequately addressed that may result in less utilization of IUCD. For example, a study conducted in a hospital in Addis Ababa found that 74% of users of family planning were not told about side-effects of the method they use. Another recent study conducted in Ethiopia showed that the counselling provided to over 50% of users of family planning was poor or inadequate quality (Abdulreshid & Dadi 2020: 3; Hrusa, Spigt, Dejene & Shiferaw 2020: 8).

All the above evidence in this chapter showed the presence of myths, misconceptions, and concerns by the community, negative social norms and other similar factors in Ethiopia including Addis Ababa. The promotion and counselling on family planning being implemented by family planning providers and UHEPs is not yet fully addressing the existing gaps related with the community's level of understanding and concerns on IUCD. Even if the national policies planned to develop tailored BCC to increase demand for LARCs including IUCD, so far, it is not yet fully operationalized. On the other hand, public health facilities in Addis Ababa are ready to provide IUCD as they have trained health workers on insertion and removal of IUCD and presence of the device in the facility. Additionally, the above evidence showed the possibility of increasing demand for LARC including IUCD when targeted BCC strategy is used. That means, developing social and behavioural change communication strategy to address the misconceptions, myths, concerns, social norm and PBC of the community on IUCD is a gap that needs to be addressed in Ethiopia.

Before developing the SBCC strategy for promotion of IUCD in Addis Ababa, which is the goal of this research, there is a need to understand the key determinants for its use within the existing context of Addis Ababa (Fishbein & Cappella 2006). This research filled this gap of information by collecting data from users of short-acting contraceptives and analysing it followed by development of specific communication strategy that will contribute to increase the utilization of IUCD in Addis Ababa using RAA as its theoretical framework.

2.8 SUMMARY OF THE CHAPTER

This chapter covered wide topics including discussion on long-acting family planning methods with particular emphasis on IUCD, use of reasoned action approach as theoretical framework for this research, and factors and determinants related with intention and utilization of IUCD in Ethiopia. It also discussed experiences and evidence on development of behavioural change communication strategy to promote the use of IUCD and the current gap related with the promotion of IUCD in Ethiopia.

IUCD is the most efficient, cost effective and popular type of reversible contraceptive method being used globally. Almost all women in the reproductive age group including adolescents, nulliparous, multiparous, those having HIV infection, those who want to space or limit their family size and other groups can use IUCD. Although it is widely used worldwide, its utilization is very limited in Africa, including in Ethiopia. Only 1.5% of married women in Ethiopia use IUCD. Ethiopia has planned to expand the use of long-acting and permanent contraceptives including IUCD but still most of the users of family planning are relying on short-acting contraceptives. Negative attitudes towards the use of IUCD, lack of support and approval by partners and other social norms as well as issues related with perceived behavioural control were found in literature as factors associated with not using IUCD. Gap in behavioural change communication strategy to address the low utilization of IUCD in Ethiopia was also documented.

Therefore, this chapter explored and identified a clear gap of low utilization of IUCD in Ethiopia and the need for development of BCC strategy to promote the use of IUCD. By taking Addis Ababa, the capital city of Ethiopia, as study place, this research will contribute to address the observed gap.

The next chapter will focus on the specific steps and procedures followed for conducting the research as part of the research methodology.

CHAPTER 3
RESEARCH DESIGN AND METHOD

3.1 INTRODUCTION

This chapter presents the research design and methods used to complete the study. The research was done in three consecutive phases. The first phase focused on exploring and identifying commonly held beliefs about the use of IUCD among users of family planning methods in Addis Ababa using a qualitative approach. Second phase focused on identifying determinants of intention to use IUCD among users of short acting contraceptive methods in Addis Ababa using qualitative methods. In the third phase of the research, behavioural change communication strategy for promoting the use of IUCD in Addis Ababa was developed using the findings from the second phase of this study. This chapter presents the methods followed for completing the three phases of the research.

3.2 RESEARCH APPROACH AND PARADIGM

Research approaches are plans and procedures for research that cover the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation. Selection of a research approach is identified based on the nature of the research problem or issue being addressed, the researcher's personal experiences, and the audiences for the study. Broadly, research approaches are categorized into three main types: quantitative, qualitative, and mixed approaches (Liamputtong 2019: 4; Creswell & Creswell 2018: 40–41). Detailed discussion about quantitative, qualitative, and mixed methods are shown in section 3.4 below.

Considering the complexity of research questions, purpose and objectives of this study, the researcher decided to use mixed method research approach to fully understand and answer the research questions. Additionally, as shown in the previous chapter, the theoretical framework of this research is the reasoned action approach (RAA), which recommends a qualitative study followed by quanitative. According to Bunniss and Kelly (2010: 359), the theoretical framework used in a study also influences the choice on the type of research approach and research paradigm.

Polit and Beck (2017: 31) defined paradigm as a worldview general perspective on the complexities of the world. Paradigms are a basic set of beliefs that guide a researcher's

actions indicating a general philosophical orientation about the world and the nature of research that an investigator brings to the study (Creswell & Creswell 2018: 44).

In this study, the researcher used the pragmatic research paradigm as it is relevant for conducting mixed method research. In a pragmatic paradigm, researchers are allowed to choose the method, techniques and procedure of research that best address their need and purpose. Rather than taking a position on the nature of knowledge itself and adhering to only one method, pragmatism primarily focuses on the selection of methodological tools that are most relevant in solving the research question. This paradigm allows the researcher to use quantitative as well as qualitative data to better understand the research problem. Pragmatism is a practical approach that enables selection of any method that works better to get good evidence for the research question as appropriate (Creswell & Creswell 2018: 48; Polit & Beck 2017: 813; DePoy & Gitlin 2016: 47).

The researcher believes that intention to use IUCD among users of short acting contraceptive methods needs exploration on commonly held beliefs using qualitative methods followed by quantitative research for identifying the determinant variables of intention. Furthermore, validation of the SBCC strategy to be developed for promoting the use of IUCD in Addis Ababa needs additional qualitative data from potential users of the strategy. That is why the researcher believed that a mixed *research approach* and *pragmatic paradigm* was appropriate for this research.

3.3 STUDY SETTING

Study setting is the location in which research is completed (Grove & Gray 2019: 59). In this research, the data for both qualitative and quantitative phases of the study was collected from public health facilities (health centres) that provide short acting and long-acting reversible contraceptive methods within the management of Addis Ababa City Health Bureau. Private health facilities that provide short and long-acting reversible family planning services owned/managed by NGOs and other private-not-for-profit organizations were also included in the study. Private health facilities established for profit whether they provide family planning services or not were not included in the study.

Public and private-not-for-profit health facilities were included in this research as they are the main source of long-acting reversible contraceptives in Ethiopia. According to the 2016 Ethiopian demographic and health survey, 95.6% and 96.8% of users of IUCD and implant,

respectively, received their family planning services either from public or NGO owned health facilities (CSA & ICF 2016: 114).

Addis Ababa, the largest and capital city of Ethiopia, had a population of 3,435,028 in 2017 and is projected to reach 5,131,892 in July 2037 (CSA 2013: 131, 135). The city is divided into 10 sub-cities[1]. Each sub-city is further divided into 10-15 woredas/districts. Overall, there are 116 woredas in the city (Office of the Mayor Addis Ababa n.d.).

As discussed in section 3.7.4.2.1 below, according to HMIS data of Addis Ababa health bureau, there are 99 public health centres, 15 public and 27 private-for-profit-hospitals, 29 private-not-for-profit health facilities managed by NGOs and over 1000 private-for-profit clinics that provide health service to the residents of the city.

3.4 RESEARCH DESIGN

Research design is an overall plan to get answers for research questions. It is a type of inquiry *within the selected research approach* that provides specific direction for procedures. Research design guides selection of study population, sampling procedures, methods of measurement, and plans for data collection and analysis. Choosing the type of research design depends on what is known and unknown about the research problem, the experience of the researcher, the objective of the study, and the need for generalization (Grove & Gray 2019: 68; Creswell & Creswell 2018: 49; Polit & Beck 2017: 98).

As presented above, this research will apply mixed research approach. *Mixed method* is one of the research designs where both quantitative and qualitative methods are systematically integrated in a single study. Typical character of a mixed method includes rigorous data collection and analysis of both qualitative and quantitative data either concurrently or sequentially. The data for the quantitative and qualitative aspect of a research can be collected either from the same or different study participants. Integration of both types of data can be at the stage of data collection, analysis or at the time of discussion of the research findings (Liamputtong 2019: 696).

According to Creswell and Clark (2019: 122-123), there are three core types of mixed research desings: convergent, explanatory sequential, and exploratory sequential. In

[1] Recently (in late 2020), the number of sub-cities in Addis Ababa has increased from 10 to 11 after restructuring. The researcher maintained the number of sub-cities and woredas in Addis Ababa during data collection for this research.

concurrent mixed method, the results of both quanitative and qualitative data analysis are combined with the intention of getting more complete understanding of a problem or validating one set of findings with data from another source. In concurrent mixed method, the two data set are essentially combined. In the case of explanatory sequencial mixed method, quanitative data collection and analysis is completed followed by qualitative data collection and analysis, ususally with purpose of explaining the findings from the quantitative set of data. For exploratory sequential design, data collection and analysis of qualitative study is followed by quanitative data collection and analysis with aim of generating new variables, designing instrument or development of activities for intervention (Creswell and Clark 2018:122-123).

When any of the core mixed research designs are added to another design, methodlogy or theoretical framework the research desing is called complex mixed method (Creswell and Clark 2018:170).

As described in the previous chapter, this research used theory of reasoned action (RAA) as its theoretical framework to assess intention and its determinants on the use of IUCD in Addis Ababa. For application of RAA, the first step is exploration of commonly held beliefs concerning the behaviour using qualitative methods for development of survey tool/questionnaire followed by quantitative data collection and analysis to understand and predict intention and behaviour (Fishbein & Ajzen 2010: 327). That means, this research will add the RAA framework and methodology to the exploratory sequential mixed method. Therefore, for this research, *complex mixed methods* is the appropriate research design, which was used for completion of the study.

3.5 RESEARCH METHOD

According to Polit and Beck (2017: 33), research methods are techniques that are used to structure research for data collection and analysis relevant to the research question.

In line with the research design, which used complex mixed methods, the researcher followed independent procedures for sampling, data collection, analysis and ensuring trustworthiness/validity for the qualitative and quantitative phase of the research. The two phases were merged when the researcher developed a questionnaire for quantitative study using the results from the qualitative phase of the research (Liamputtong 2019: 64; Creswell & Creswell 2018: 306–307). Based on the purpose of this research discussed in chapter 1,

the findings from the quantitative phase of the research were used for development of social and behavioural change communication strategy to promote the use of IUCD in Addis Ababa. That means, the quantitative phase of the study is the dominant type of data collection and analysis as it was used directly for development of the SBCC strategy.

Therefore, to facilitate the discussion, the method part of this research is categorized into three distinct and sequential phases. Schematic presentation of the phases of the research is shown in fig 3.1. The three phases are:

- Phase 1: Qualitative study (also called elicitation study)
- Phase 2: Quantitative study and
- Phase 3: Development and validation of communication strategy

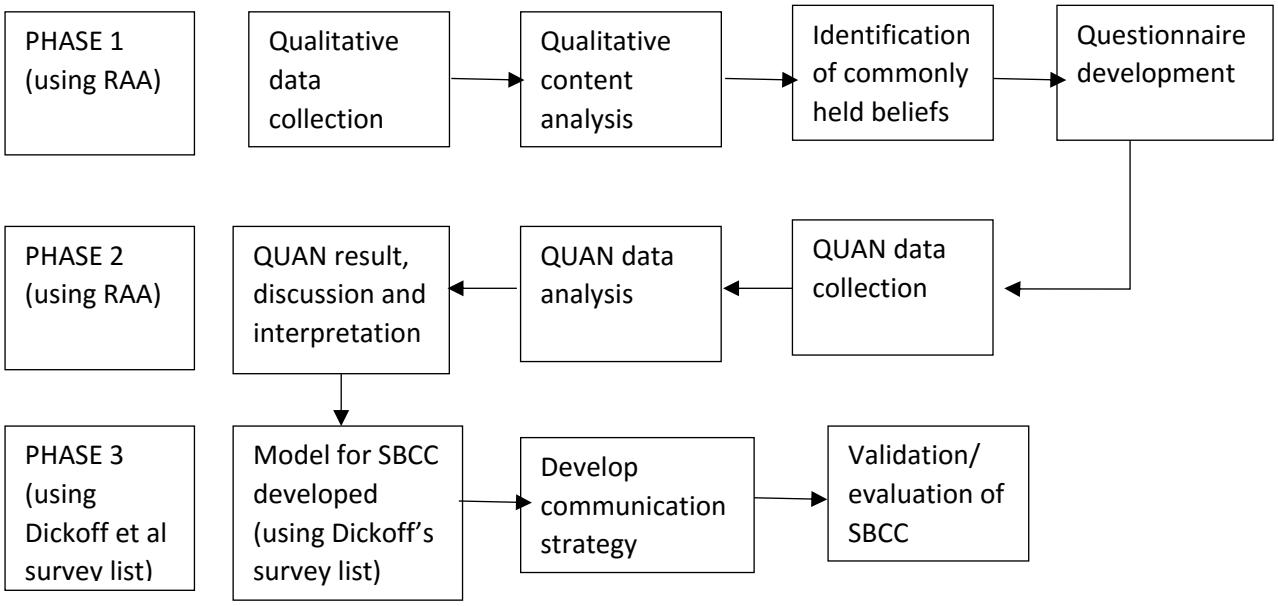

Figure 3.1: Schematic presentation of phases of the research

3.5.1 Phase 1: Qualitative study (Elicitation study)

This section described the objective, design, sampling procedure, analysis and trustworthiness steps followed for conducting qualitative study.

Qualitative research is used to generate knowledge of social events and processes by understanding what research participants mean, explore and document how people interact among themselves and mechanism of interpretation and interaction with their surroundings.

Generally, qualitative research aims for an in-depth understanding of the experiences of people. Qualitative methods use narrative to understand meaning. It thrives to answer issues of why, how, and under what conditions things arise (Long, Silva & Boswell 2020: 190; Liamputtong 2019: 10–11; Tolley, Ulin, Mack, Robinson & Succop 2016: 4–5).

When RAA is used as the conceptual framework of a study, one of the initial steps is identification of commonly held salient beliefs about the behaviour of interest in the target population using open ended questions. This phase of qualitative study in RAA is also called *elicitation study*. Elicitation study in RAA is defined as "a qualitative investigation of a subset of a population under investigation and to discover the salient behavioural, normative and control beliefs about the behaviour." The commonly held beliefs identified from findings of an elicitation study are used for developing a questionnaire of the quantitative study Identifying salient beliefs through elicitation prior to conducting quantitative study helps to construct an instrument that is appropriate to the population (Fishbein & Ajzen 2010: 327, 452; Francis et al. 2004: 32).

3.5.1.1 Objective of the qualitative study

The objective of the qualitative study in this research was to explore and identify behavioural, normative, and control beliefs held towards the use of IUCD among users of family planning methods in Addis Ababa, Ethiopia.

3.5.1.2 Method of the qualitative study

The purpose of the qualitative study in RAA is to identify themes related with commonly held beliefs on a given behaviour using the constructs of RAA as its theoretical framework. The themes identified from the qualitative content analysis are expected to be input for developing a questionnaire which will be used as a data collection tool for the quantitative study. Therefore, *descriptive qualitative study* was the appropriate research method for the qualitative phase of this research (Polit & Beck 2017: 678; Fishbein & Ajzen 2010: 452). Descriptive qualitative study is a study that collects in-depth qualitative data and usually uses content analysis without having roots in a particular qualitative study tradition (Polit & Beck 2018: 546).

3.5.1.3 Study population of qualitative study

Population is an aggregate of objects, events, or elements that the researcher is interested to study. Target population is a set of cases about which the researcher is interested to draw

conclusions. Accessible population is a subset of the target population that is readily available to the researcher, confirms pre-defined criteria and represents the target population as closely as possible. Sample is taken from the accessible population (Fain 2017: 134–135; Polit & Beck 2017: 365).

In an elicitation phase of the study during application of RAA, it is recommended to include both users and non-users of the behaviour of interest to get information on commonly held beliefs from different segments of the population (Montano & Kasprzyk 2015).

For the qualitative phase of this research, the target population was women aged 18-49 years that visited public or private-not-for-profit health facilities to use *long or short-acting* contraceptive methods in Addis Ababa. The accessible population was all women aged 18-49 years that visited public or private-not-for-profit health facilities to use any type of contraceptive method in the sampled health facilities in Addis Ababa during the period of data collection.

3.5.1.4 Inclusion and exclusion criteria

Inclusion criteria are characteristics of the accessible population that should be fulfilled to be considered for participation in a study. It shows the characteristics that all research participants should possess in common. On the other hand, exclusion criteria are characteristics of the study population that, if present, would make the individual not eligible to be in the sample, even if he/she met all of the inclusion criteria (Polit & Beck 2017: 226).

3.5.1.4.1 Inclusion criteria for qualitative study

- Participants should be 18-49 years old
- Women that visited public or private-not-for-profit health facilities in Addis Ababa to use any type of family planning method
- Volunteer to participate in the study

3.5.1.4.2 Exclusion criteria for qualitative study

- Women who were not using any modern family planning method at the time of their visit to sampled health facilities
- Age over 49 or under 18 years of age
- Mentally ill or not able to communicate verbally

3.5.1.5. Sample and sampling of qualitative study

Sampling is “the process of selecting individuals for a study in such a way that individuals represent the larger group from which they were selected.” Sample is a subset of the population identified for research. The individuals or elements included in a sample are participants of the study (Grove & Gray 2019: 69; Fain 2017: 135)

Broadly, sampling is classified into two types: probability and non-probability sampling.

In probability sampling, every member of the population has a known and equal chance of being selected and the sample is assumed to be representative of the study population. In non-probability sampling, the samples are selected by a non-random method in which the sample representing the population is unknown. In non-probability sampling, usually, not every element in the study population has a chance for inclusion in the sample (Fain 2017: 135; Polit & Beck 2017: 367).

Qualitative researchers are rarely concerned about generalizability of the result. The aim of most qualitative studies is to deeply understand human experience within the context of the study participants through intensive study of a few cases (Polit & Beck 2017: 706). For the qualitative phase of this research, non-probability sampling was used as the study’s aim was to understand the commonly held beliefs about the use of IUCD and this phase of the study was not aiming for generalization. Among the non-probability sampling methods, the research used a purposive sampling method. Purposive sampling is used for selecting samples that will most benefit the research (Polit & Beck 2017: 696).

For the elicitation phase of study during application of RAA, at least 15-20 individuals are recommended for interview using open ended questions. About half of them are expected to be users or intended to use the behaviour under investigation while the other half should be those that are not practicing the behaviour (Montano & Kasprzyk 2015).

For this study, the researcher selected four health facilities purposely in Addis Ababa that provide both short-acting and long-acting contraceptives in three sub-cities: one health centre from Arada sub city and two health centres from Yeka sub city and 1 hospital from Lideta sub city. In each of the health facilities, at least 3 users of short acting and 3 users of long-acting reversible contraceptive methods were interviewed. The interview continued until there was no new information i.e., the data collection continued until it reached a point of saturation.

3.5.1.6 Qualitative Data collection

Data collection is the process of systematic collection of information for addressing the study's purpose, research questions, or hypotheses of the study. The choice for selecting data collection method and instrument depends on the nature of research problem, research design, and variables under investigation. An instrument is a device used to record or collect data on a particular concept (Grove & Gray 2019: 70; Fain 2017: 214–215).

For the qualitative study, the research used semi-structured face-to-face interviews using an interview guide developed according to the recommended approaches of conducting elicitation study. The interview guide contained 15 different open-ended questions to address each of the constructs in the theoretical framework. The questions were prepared in line with the research questions having six questions assessing behavioural outcome and behavioural beliefs, four questions assessing issues related with normative believe and refernats, four questions to assess control factors related with the use or not use of IUCD and one general question at the end of the interview to give opportunity to the woman to express any additional point that she would like to add. The interview guide also contained information on the type of method the women is using, age and name of the health facility. The interview guide is shown in Annexure F. Semi-structured interviews help to ensure that the researcher covers all specific topics of discussion to be included during the interview process (Fain 2017: 233; Polit & Beck 2017: 720; Fishbein & Ajzen 2010: 451–452).

The researcher translated the interview guide from English to Amharic, the local and official language in Addis Ababa. The Amharic version of the interview guide was pre-tested in two health centers with two participants from each facility. Based on feedback from the pre-testing, some of the wordings in the interview guide were modified/changed. One additional question was added to the questionnaire to give oppoutunity for the research partcipnats to add or say any additional point about IUCD.

One-to-one in-depth interviews with each of the samples were carried out in a private room within the sampled health facility after getting written informed consent. The researcher himself conducted all the qualitative interviews. Probing and paraphrasing were used for any response that was not clear or needed more information. Audio recording of the interviews were done with permission of the study participants. Field notes of the interview and any observed non-verbal cues were taken by the interviewer. Each interview took about 25-35 minutes. The interviews were conducted during working days and hours both in the morning

and afternoon over a period of three weeks in May/June 2018. The interviews were conducted after the women received contraceptives of their choice within the sampled health facility.

The in-depth one-to-one interviews were used as an approach for data collection in this phase of the study as it is a recommended approach for conducting elicitation study (Fishbein & Ajzen 2010: 451). Both the Amharic and English version of the interview guides are shown in annexures F and G.

A total of 29 women were interviewed using the the interview guide. Of the 29 women, 12 were users of long-acting contraceptives while the rest 17 were users of short acting contraceptive methods. Detailed presentation on the profile of the research participants is shown in section 4.2.

3.5.1.7 Qualitative data analysis

According to Polit and Beck (2017: 748), data analysis is a process of organizing, structuring and getting meaning from data. Data analysis helps to provide answers to the research question, hypothesis testing or both (Fain 2017: 264; Polit & Beck 2017: 748).

For the data collected, the researcher conducted verbatim transcription for all the audio recorded interviews. The transcription was done the same or next day after the interviews. Since the interviews were done in Amharic language, the researcher translated the verbatim transcription into English language. To ensure consistency of meanings, the researcher compared the transcribed document in English while opening the Amharic interview on the audio tape. The transcribed data was entered into Atlas.ti 7 qualitative data analysis software. All the transcripts and the subsequent analysis were kept in a password protected computer. Regularly, back up for the data was kept in an electronic form through sending to personal and UNISA email of the researcher.

In this research*, qualitative content analysis* was used for analysing the qualitative data as recommended for application of RAA. Additionally, content analysis is a relevant approach to analyse data collected for a descriptive qualitative study (Polit & Beck 2018: 281; Drisko & Maschi 2016: 87; Fishbein & Ajzen 2010: 102–103).

Polit and Beck described qualitative content analysis as “the analysis of the content of narrative data to identify prominent themes and patterns among the themes.” It is a way to

summarize a voluminous word of text data into a few content categories and naming codes according to the content they represent. The final product of content analysis is the identification of codes, categories, themes, and patterns (Assarroudi, Nabavi, Armat, Ebadi & Vaismoradi 2018: 2; Polit & Beck 2018: 397).

There are three subtypes of qualitative content analysis: 1) conventional content analysis in which codes and coding process emerges during data analysis; 2) directed content analysis in which the researcher begins with theory or previous relevant studies. Some of the codes are defined before starting analysis and the codes expand during data analysis, and 3) summative content analysis where keywords are used as starting point and codes defined before analysis of the data (Assarroudi et al. 2018: 2; Polit & Beck 2017: 760; Hsieh & Shannon 2005: 1278).

Of these three approaches, the research used *directed qualitative content analysis* as the coding process for analysis was done based on the constructs of the RAA. Directed content analysis combines both deductive and inductive approaches of coding (Assarroudi et al. 2018: 2; Polit & Beck 2017: 760).

As the objective of the elicitation study in this research was related with exploration and identification of commonly held beliefs among the study participants about IUCD, the analysis used manifest and latent content analysis. Manifest content is what the transcribed text actually tells - its visible components. In case of latent content, it includes researcher's interpretation of the meanings of transcribed texts (Polit & Beck 2017: 759).

The following steps were followed for conducting directed content analysis as recommended by Assarroudi et al (2018: 4) and Tolley, Ulin, Mack, Robinson & Succop (2016: 175).

3.5.1.7.1 Familiarization/ immersion in data

To be fully familiar with the data, initially, the researcher read all the transcribed interviews and field notes. In the second round of reading the transcripts and field notes, the researcher took notes on his notebooks on who is saying what, why are people using or not using IUCD, who are using IUCD, what are the advantages and perceived disadvantages of IUCD being mentioned by the study participants, who are the possible influential people for using and not using IUCD, what are possible codes, etc. These reviews helped the researcher to be familiar with the data and enabled him to extract meaningful codes in the analysis

(Assarroudi et al. 2018: 8; Tolley et al. 2016: 176).

3.5.1.7.2 Coding

The three main beliefs in the framework of RAA (i.e., behavioural, normative and control beliefs) were used as the theme for the analysis. These three themes were clearly defined in line with their theoretical meaning in RAA. Within each of the themes, 2-3 categories were created. Main questions included in the interview guide were used as *categories* during the coding stage of analysis. It is customary to use the theoretical components as major coding categories or themes deductively driven from existing theory when using the approach of directed qualitative content analysis (Assarroudi et al. 2018: 9; Tolley et al. 2016: 27, 179).

Using Atlas.ti 7 qualitative data analysis software, new *codes* were created using the first six transcripts. In this research, codes were developed/created for each text, sentence, or paragraph within the transcripts inductively. For each of the codes created, brief definitions/explanations were given to ensure consistency in their subsequent coding and to differentiate the meaning of one code from another code. These codes were used in coding subsequent transcripts. When a new concept emerges during the coding process, a new code is created. The process of coding in Atlas.ti 7 continued until all the 29 transcriptions were reviewed and completed.

In this research, each of the codes reflected specific beliefs that the study population held regarding IUCD use (i.e., each of the codes were considered as *beliefs* held by the research participants).

3.5.1.7.3 Displaying data

Once all the codes in a qualitative data are created, the next step is to examine them closely. Displaying data means reviewing an inventory of what is known related to a theme; identifying the variation or richness of each theme; and recognizing differences between individuals or among subgroups (Tolley et al. 2016: 199).

For this research, using Atlas.ti 7, the researcher listed out all the codes created in the above step of coding and reviewed for their similarity and difference closely. Codes that were found to have very similar meanings were merged and given new codes. Then, the codes were grouped into their respective categories and themes.

3.5.1.7.4 Data reduction: getting the big picture

Data reduction is the process of filtering the codes and themes to identify essential concepts and relationships and make them visible. This step of analysis will result in the development of conceptual and logical link between themes and main categories. The goal of this step is to get an overall picture of the data and separate themes and categories, differentiate the essential from the nonessential codes (Assarroudi et al. 2018: 10; Tolley et al. 2016: 204).

In this research, at the stage of displaying data, the researcher found that the number of codes included in each of the themes and categories were long. Atlas.ti 7 was utilized to visualize the relationship between themes, categories, and individual codes where diagrams were created for each theme by networking. Additionally, tables were created to list out the most frequently mentioned beliefs/codes for each of the themes and categories. Based on the purpose of a research, findings from qualitative content analysis can be presented in summarization (in a tabular form) or describing the events and concepts or both ways of presentations (Drisko & Maschi 2016: 89).

In this research, both tabular frequency and descriptive presentation were used. The diagram, frequency table from the content analysis and description of events with quotations enabled the researcher to identify the list of beliefs that users of family planning held regarding IUCD within each of the three constructs/themes.

3.5.1.7.5 Interpretation/reporting

Interpretation is the identification, and it provides explanation to the core meaning of the data. It involves communicating the research's essential concepts to a wider audience while remaining faithful to participants' perspectives. It includes systematic presentation of findings of qualitative data analysis (Assarroudi et al. 2018: 10; Tolley et al. 2016: 207).

In this research, main findings from the qualitative analysis were presented systematically along the main constructs of the theoretical framewok. Additional review and comparision with other litrutures in smilar study area was completed (see chapter 4 for the detail).

3.5.1.8 Trustworthiness

In qualitative studies, the research should be able to show the trustworthiness of the data collected and analysed. To make the data trustworthy, there is a need to ensure that the results accurately reflect the experiences and viewpoints of research participants rather than the investigator's perceptions. Usually, five criteria are used for ensuring trustworthiness of

qualitative data: credibility, dependability, conformability, transferability, and authenticity (Polit & Beck 2017: 103, 787). Various steps and processes were conducted to confirm the trustworthiness of the qualitative study as follows.

3.5.1.8.1 Credibility

Credibility refers to the confidence in the truth of the data collected and its interpretation. The researcher needs to show the confidence that the findings reflect the truth for study participants within the context of the study. Credibility, or truth value, is comparable to validity in quantitative research. It is achieved by having enough time with study participants and collecting adequate information (Nieswiadomy & Bailey 2018: 71; Polit & Beck 2018: 415).

In this phase of the research, credibility was ensured through prolonged engagement with the research participants using common local language (Amharic) during data collection to develop trust and get deeper understanding of the research questions. The researcher developed relationships and rapport with family planning users during the interview and provided enough time to create a favourable environment. Probing, paraphrasing and reflection on the answers provided by the respondents were used to capture the truth in the information provided during the interview. Audio recording and verbatim transcription also helped not to miss any of the information shared from research participants.

Additionally, the guiding questions for the interview were developed based on the recommended approach of completing elicitation study for applying RAA. As the questions in the guide were interrelated and an attempt to explore intention with its well-tested determinants, the interview triggered the respondents to respond to the question by cross-checking their responses leading to providing truthful information. The pre-testing of the interview tool also contributed in development of relevant tool to the study question and the research participants.

3.5.1.8.2 Dependability

Dependability refers to stability of the data over time and condition. It answers questions related to getting similar findings, if the study is repeated with same or similar participants and contexts and can be demonstrated by audit. An audit is a process in which an outsider to the research can assess the study, challenge the procedures used, evaluate the adequacy of data, and provide feedback to enhance the study (Nieswiadomy & Bailey 2018: 71; Polit & Beck 2018: 416)

In this research, the data was collected until it reached a point of saturation that enabled it to collect sufficient information available in the study participant's context that improved the dependability of the study.

All the transcribed data, analysis and the results were shared with the research advisor for her review, comment, assessment, and feedback. The research was revised and improved with the input and recommendations of the advisor.

3.5.1.8.3 Conformability

Conformability is the objectivity of analysis and findings. It shows the results representing the information as obtained from the study participants and interpretation of the data is not imagined by the researcher. Conformability can be demonstrated in various ways, including creating a clear audit trail so that another researcher can reasonably follow the procedures in the study, triangulation using different data sources, and thoroughly planning and follow each step carefully to avoid researcher bias (Nieswiadomy & Bailey 2018: 71; Polit & Beck 2018: 416).

In this research, conformability was attained as the research analysis and interpretation of findings was carefully followed and application of all the recommended steps for conducting directed qualitative content analysis was done. The field notes taken by the researcher during audio-recorded interviews was also used as an additional source of information for the analysis.

3.5.1.8.4 Transferability

Transferability is the extent to which the results of the study have applicability in other contexts. Sufficient description of data for possible application to other settings is recommended to be provided through thick description and then the reader of the research to decide if the findings can be transferred to or not. Thick description is a detailed account of all elements of the research and provides context to the data (Nieswiadomy & Bailey 2018: 71; Polit & Beck 2018: 416).

In this research, thick descriptions of the study are given in the findings section (chapter 4) that shows the details of all the interview guide/questions, coding produced, and quotations used in the analysis from the transcribed interviews.

3.5.2 Merging findings from qualitative study to quanitative study

The primary objective of the qualitative data of this research was to identify a list of commonly held salient beliefs among users of family planning method in Addis Ababa and include these beliefs in the questionnaire development which will be used in the next (quantitative) phase of the study.

One of the final steps in the elicitation phase (qualitative study) for RAA application is to decide on the number of beliefs to be incorporated in the questionnaire of the quantitative study. According to Fishbein and Ajzen (2010: 102–103), there are three options to decide on the number of beliefs to be included in the modal set of beliefs. The first option is to simply take the 10 to 12 most frequently mentioned outcomes/beliefs. The second option is to use those beliefs that exceed a certain threshold (i.e., deciding to take all beliefs mentioned by at least 10% or 20% of the samples). The third and recommended option by Fishbein and Ajzen is to choose beliefs by their frequency of occurrence until a certain percentage of the beliefs are included, perhaps 75% of all responses listed.

In this research, the second option was used to decide on the number of beliefs to be included for the next phase of the study. The researcher used 10% as cut off point i.e., among the 29 research participants in the qualitative study, codes (beliefs) mentioned by at least 3 respondents were considered as commonly held beliefs among the study participants and were used as input for the questionnaire development. By using this approach, more than 80% of all beliefs identified within each theme were included in the questionnaire which is more than the recommended scale (i.e., 75% of all beliefs elicited) by Ajzen and Fishbein.

Among the beliefs identified from the qualitative content analysis, the researcher concluded seven behavioural beliefs, four normative beliefs and five control beliefs associated with use of IUCD in Addis Ababa. These beliefs were included in the development of a questionnaire for the next phase of this research (phase 2). Detailed discussion on the findings of the qualitative analysis is shown in chapter 4. Additionally, specific procedures taken for development of the questionnaire and the specific questions included are shown in section 3.5.3.6.1 below.

3.5.3 Phase 2: Quantitative study

Quantitative research is a formal, objective, rigorous, and systematic process for generating numerical data about the world. It is conducted to describe new situations, events, or

concepts, assess relationships among variables, and/or determine the effectiveness of interventions towards outcomes. Usually, findings from quantitative research are generalizable to other similar situations and/or populations (Cannon 2020: 172; Grove & Gray 2019: 54).

This sub-chapter provides detailed information on the research method of the quantitative phase of the study.

3.5.3.1 Objective of quantitative study

The objective of the quantitative phase of this research was to assess the intention to use IUCD among users of short acting contraceptive methods in Addis Ababa. It also aimed to identify the determinants for the intention to use IUCD within the next one year. The quantitative phase of the research is used to answer the first and second research questions shown in section 1.5.

3.5.3.2 Method of quantitative study

For the quantitative phase of this research, *correlational quantitative cross-sectional* method was used as this phase of the research aimed to learn for a possible relationship between variables (i.e., intention to use IUCD, its proximate determinants and the underlying beliefs towards the use of IUCD) from a representative sample. Correlational research, one of the quantitative research methods, involves systematic assessment of relations between variables. The main purpose of correlational studies is to describe the nature of relationships in the real world and is not to predict cause and effect (Grove & Gray 2019: 55).

3.5.3.3 Study population for the quantitative study

For the quantitative research, the target population was women aged 18-49 years that visited public or private-not-for-profit health facilities to use short acting contraceptive methods in Addis Ababa. The accessible population was women aged 18-49 years that visited sampled health facilities for use of short acting contraceptives during the period of data collection.

3.5.3.4 Sample and sampling of quantitative study

During application of RAA as a theoretical framework of a study, a representative sample collected from a study population using questionnaires having close-ended questions is a recommended approach of data collection (Fishbein & Ajzen 2010: 329; Francis et al. 2004: 10). Therefore, for this phase study, the quantitative research method is relevant as this

stage of the study collects quantitative data from a representative population aimed at identifying intention and its determinant (Grove & Gray 2019: 54).

3.5.3.4.1 Sample size

Since a representative sample is recommended during application of RAA, the researcher used probability sampling method. Probability sampling involves random selection of subjects from the target population. Random sampling is selection of subjects or individuals in which each subject in the population has an equal and independent chance of being selected. Probability sampling is a reliable method of obtaining representative samples from the target population (Polit & Beck 2017: 373, 2018: 247).

As this phase of the study used correlational quantitative cross-sectional research, the researcher used a single proportion sample size calculation formula to get the needed sample size as follows (Naing, Winn & Rusli 2006: 9; Lemeshow, Jr, Klar & Lwanga 1990: 1,25).

$$N = \frac{z^2_{\alpha/2} * p * (1-p)}{d^2}$$

Where:

N = required sample size

α = probability of type I error

p = anticipated population proportion

d = the desired level of absolute precision

A study conducted in Addis Ababa among users of modern family planning found that 12.3% of the users had intention to use IUCD in the near future (Sandy et al. 2015: 11). For calculation of the sample size in this research, the anticipated proportion for intention to use IUCD among current users of family planning was assumed to be 15% (by approximating the 12.3% and considerations for possible increment in intention for the period since the reference research was conducted). With 95% confidence level (α value of 1.96) and desired precision of 0.05, using the above formula, the sample size yielded 196 participants. Since the sampling used a two-stage cluster sampling method, there is a need to multiply the sample size by its design effect. For health facility surveys, the median design effect of 1.5

is recommended for use by WHO (Naing et al. 2006: 13; WHO 2003: 22). Additionally, the sample was increased by 10% for possible non-response rate. With all these parameters included, the needed sample size became 324 women.

3.5.3.4.2 Sampling procedure

Because of the wide geographic boundary and administrative structures of the study area (i.e., Addis Ababa city), *two-stage cluster sampling* was found to be appropriate for this study. Cluster sampling is a type of random sampling in which larger groups called clusters are selected followed by successive sub-sampling of smaller units in a multistage approach (Polit & Beck 2017: 376).

In the first stage, health facilities were selected randomly with *probability proportional to size*. Health facilities that provide both short and long-acting contraceptives in Addis Ababa city were considered as primary sampling units (PSU). In the second stage of sampling, users of a short-acting family planning method that visited the sampled health facilities during the time of data collection were selected using *systematic random sampling*. Detailed procedure of selection of primary and secondary sampling units is discussed below.

- **Sampling PSUs: selection of health facilities**

Initially, the number of women that received contraceptives by type of method for all health facilities in Addis Ababa city was collected from Addis Ababa Health Bureau monthly report database (DHIS2) for a period of three months prior to the data collection (Jun to Aug 2020). In that period, there were 249 health facilities that reported to provide some form of family planning methods in Addis Ababa as follows.

- 95 public health facilities (87 health centres and 8 hospitals) reported providing contraceptives. Four of the public health facilities (one health centre and three hospitals) did not report provision of IUCD while the remaining 91 provided both short and long-acting contraceptives including IUCD.
- Eight private-not-for-profit health facilities owned by non-governmental organizations (NGO) provided family planning services. Four of them didn't report providing IUCD.
- 147 private-for-profit health facilities reported providing family planning.

Based on the exclusion criteria of this research, those facilities that do not provide both short-acting and IUCD were excluded from the sampling frame. Additionally, all private-for-profit health facilities were excluded using the exclusion criteria. This resulted in 95 health facilities to remain in the sample (91 public and 4 private-not-for-profit health facilities).

With further consideration of inclusion criteria, facilities that had an average daily caseload of three or more clients of short acting contraceptive users per day were included. This gave a total of 65 health facilities that have an average of three or more clients of short acting contraceptives per day (2 private-not-for-profit and 63 public health facilities). According to WHO (2003: 18), when health facilities are excluded from sampling frames because of their low client volume, the proportion of the clients seen in the excluded facilities is recommended to be not more than 25-30% of all cases. The analysis of data from DHIS2 showed that the 65 health facilities that were included in this research accounted for 87.3% of total clients of short acting contraceptive users in public and private-not-for-profit health facilities. Therefore, including only the facilities having average daily client flow of three or more women is within the acceptable recommendations and will not affect the representativeness of the data to the study population.

The 65 health facilities were arranged in alphabetic order. The order was done by geographic administration (i.e., sub-city) followed by alphabetic order of the name of the health facility. The alphabetically ordered list of the 65 health facilities was used as a *sampling frame* for the first stage of sampling. Sampling frame is a complete list of subjects in a study population from which samples are identified (Polit & Beck 2017: 1045).

Based on field and statistical experience, WHO (2003: 21) recommends including 25-35 clusters (facilities) when conducting health facility-based surveys in multi-stage cluster sampling approach. Considering the logisitics arrangement, the researcher decided to include 25 clusters (i.e 25 health facilities) to be sampled in the sampling process. The 25 clusters were randomly selected using PPS *(probability proportion to size*). Number of women that received short-acting contraceptives in the three months prior to data collection from each of the 25 health facilities was used for identifying the sample health facilitiy using PPS (MEASURE Evaluation 2016: 23).

- **Secondary sampling units- sampling users of short acting family planning methods**

The selected 25 health facilitie from PSU above were included for sampling the users of short acting contraceptives in the second stage of the sample. Dividing the total sample size for this study (i.e., 324 women) by the number of clusters which resulted in 12.96. That means, 13 users of a short-acting contraceptive method were needed for the interview in each of the clusters for the second stage of sampling. Considering the logistics arrangement and average client flow, it was planned for the data collection from each cluster to be completed in three days in each sampled facility.

For selecting the research participants from each health facility, *systematic random sampling* method was applied. All women that used short-acting contraceptive methods from the sampled health facilities during the time of data collection in that facility were used as a sampling framework for the second stage of sampling.

The sampling interval for each health facility was calculated by dividing the average expected number of short acting contraceptive clients for three days of data collection divided by 13.

To calculate the three days expected number of cases per cluster, the monthly caseload of each sampled health facility (i.e., number of women that used short acting contraceptive method) from DHIS2 report was divided by 21 (the working days) and multiplied by 3 (the number of days for data collection). For each of the data collectors, the researcher calculated this sampling interval and shared it to the data collectors and supervisors for use during data collection. Random start was identified by lottery method between 1 and the sampling interval of that particular health facility. This random number became the first client to be interviewed on exit interviews. The subsequent clients were interviewed for every sampling interval within the three days of data collection. The data collection in the sampled health facility continued until the end of the third day. Which means, the number of women interviewed from each facility varied with some more than 13 women interviewed while for others it was less than the expected 13 women interviewed within the three days. As a result of this variation on number of interviwees per facility, the total number of women intvited for interview from the sampled health facilities became 331 (see section 5.2 under findings section). It is the length of time spent that determines the proper probability, not the quota of thirteen clients (Turner, Angeles, Tsui, Wilkinson & Magnani 2001: 62).

In each of the sampled health facilities, arrangement was made with family planning

providers to identify the women who used short acting contraceptive method during the days of data collection and inform to the data collectors. Based on the sample interval of that health facility, among the short acting users, the sample women are identified and the data collectors invite these women for interview. All the interviews were completed within the health facility in private room after the women used their preferred method of contraceptives.

If a sampled woman refuses to participate in the research, no replacement was done. Rather, she was counted as one of the interviewed research participants and recorded as refusal.

3.5.3.5 Inclusion and exclusion criteria for quantitative study

The inclusion and exclusion criteria used for the two stages of sampling in the quantitative phase of the study are shown below.

3.5.3.5.1 Inclusion criteria

The following inclusion criteria were used for selection of health facilities in the *first stage of sampling*:

- Public health facilities that provided IUCD and short-acting contraceptives in Addis Ababa city
- Health facilities that provide IUCD and short-acting contraceptives owned or managed by NGOs or other not-for-profit organizations in Addis Ababa city

The inclusion criteria for selection of study participants for interview *in the second stage of sampling* were:

- Women who are currently (i.e., at the time of data collection) using short acting contraceptive method (pills, injectable or condom) from the selected health facility during the days of data collection
- Willing to participate in the interview
- Participants between 18-49 years of age

3.5.3.5.2 Exclusion criteria

In the first stage of sampling, health facilities having the following characteristics were excluded from the sampling process as part of the exclusion criteria:

- Public or private health facilities that do not provide family planning services

- Public or private health facilities that provide only short acting or only long-acting contraceptives method (irrespective of whether providing permanent method or not)
- Health facilities that reported to have low volume of short acting family planning users (defined as having less than 3 clients of short acting family planning users per day in average)
- Private health facilities established for profit
- Health facilities out of Addis Ababa city administration catchment area

Exclusion criteria for selection of study participants in the second stage of sampling:

- Women who visited the sampled health facility for health service other than family planning
- Women who are currently (i.e., at the time of data collection) using long-acting (IUCD or implant) or permanent contraceptive methods
- Age over 49 or under 18 years of age
- Mentally ill or not able to communicate verbally

3.5.3.6 Quantitative data collection

Structured questionnaire was used as a data collection tool for the quantitative phase of the study design as correlational and the RAA was used as a theoretical framework. The questionnaire contained close-ended questions and was conducted through face-to-face interviews by data collectors (Francis et al. 2004: 10).

3.5.3.6.1 Development of questionnaire

The commonly held beliefs identified from the findings of the qualitative research were used as input to develop questions related with measuring belief-based constructs of RAA (see detailed discussion below for the belief-based constructs). With this input from the qualitative study, a questionnaire for the quantitative study was developed following the recommended approaches of Ajzen (2006: 12–13), Francis et al (2004: 24) and Fishbein and Ajzen (2010: 449–463) within the framework of RAA.

The questionnaire was designed to ensure that the questions address all the six constructs of RAA included in the theoretical framework of session 2.2.2 (i.e., intention, attitude, perceived norm, PBC and behavioural, normative and control beliefs) related with the use of IUCD. Each of the constructs were measured with at least three questions/interview items

(Francis et al. 2004: 24) and are described below. Additional questions related to demographics, employment, reproductive health and use of contraceptive history were included in the questionnaire. Both English and Amharic versions of the questionnaire are shown in annexures H and I, respectively.

- **Measuring behaviour**

One of the most crucial steps in application of the TPB/RAA is to clearly define the behaviour of interest. According to RAA, a behaviour of interest needs to be defined with a combination of four elements: the *action* to be performed, the *target* at which the action is directed; the *context* in which the action is performed and the *time* during which the action is performed. Once these four elements are clearly set, then, behaviour of interest is considered as defined (Fishbein & Ajzen 2010: 29–30).

In this research, the behaviour of interest for investigation is to understand if current users of short acting contraceptives who are living in Addis Ababa intend to use IUCD within the next one year. The behaviour of interest in this research fulfils all the four elements: action (to use of IUCD), target (current users of short acting contraceptive method), context (living in Addis Ababa) and time (within the next one year).

Once behaviour is defined, the measurement of all the constructs in RAA should follow similar action, target, context, and time elements to be compatible with the behaviour to ensure principle of compatibility (Fishbein & Ajzen 2010: 75, 105, 155, 283).

In this research, principle of compatibility was ensured as all the constructs definition and operationalization considered all the four elements consistently with the definition of the behaviour.

Although behaviour was clearly defined in this research, it was not assessed in the quantitative phase of the research as it is beyond the scope of the study. The research identified the intention and its determinants towards the use of IUCD in Addis Ababa within the next one year. When applying RAA as a conceptual framework, intention is the single best predictor of behavioural performance that gives the confidence to the researcher to consider the intention as a good predictor for use of IUCD.

- **Questions to measure intention**

Intention to use IUCD was measured using a generalized intention method with Likert-like five-point scale having endpoints of ‘strongly disagree’ and ‘strongly agree’ with values ranging from +1 (strongly disagree) to +5 (strongly agree). In this research, *three* questions were used to assess intention to use IUCD in Addis Ababa within the next one year (Francis et al. 2004: 11–12).

- **Questions to measure attitude, perceived norm and PBC**

According to Fishbein and Ajzen (2010: 104), direct measurement of attitude is recommended to be done with standard scaling procedures, such as Likert or semantic differential methods. The measurement uses bipolar ends (i.e., pairs of opposites) that are evaluative (e.g., good – bad) (Francis et al. 2004: 13). In this research, *attitude* was measured using 5-points semantic scale (e.g., pleasant-unpleasant, good-bad, strongly agree-strongly disagree, etc.) with corresponding scoring values of a +1 (strongly disagree) up to +5 (strongly agree). Four questions were included in the questionnaire to directly measure attitude. Two of them measured *instrumental attitude* while the other two measured *experiential attitudes* as recommended by Ajzen and Fishbein (2010: 84).

Measuring perceived norm contains questions referring to the opinions of important people in general (Francis et al. 2004: 17). In this research, the perceived norm was assessed using four questions with end points of ‘should/shouldn’t’ or ‘strongly disagree/strongly agree’ on a five-points scale of +1 (strongly disagree) up to +5 (strongly agree). Two of the questions measured *subjective norms* whereas the other two questions were used for assessing *injunctive norms.*

Similarly, four questions were used for measurement of *perceived behavioural control (PBC)* by having ‘strongly agree/strongly disagree’, ‘easy/difficult’ type of end points with 5-point scale having value of +1 (very difficult) to +5 (very easy). Two of the questions assessed *perceived capacity* whereas the other two were used to measure *perceived autonomy* of the research participants.

- **Questions to measure belief-based constructs of the framework (RAA)**

Questions to measure behavioural belief, normative beliefs, and control beliefs towards the use of IUCD were developed using the findings of the qualitative (elicitation) study. The most common beliefs identified in section 4.8 of chapter 4 were used to develop questions to assess the belief-based constructs of the RAA framework.

Measuring the behavioural, normative and control beliefs using belief-based approach is sometime called *indirect measurement* for attitude, perceived norm and PBC, respectively as the former are determinants for the latter constructs (Fishbein & Ajzen 2010: 104; Francis et al. 2004: 14, 18, 25).

To measure *behavioural beliefs*, each of the most commonly held beliefs identified as advantages and disadvantages of IUCD from the elicitation study were converted into questions/sentences in the questionnaire as behavioural belief. Each of the behavioural belief questions or statements in the questionnaire was accompanied by another question to evaluate the strength of the belief statement held by the research participant herself (this evaluation is called *outcome evaluation* of the behavioural belief). The behavioural belief questions were on a 5-point scale of 'unlikely' to 'likely' endpoints with respective scores of +1 (most unlikely) to +5 (most likely). The outcome evaluation questions were given a 5-point scale of 'extremely bad' to 'extremely good' with the corresponding score of -2 (extremely bad) to +2 (extremely good) through a value of zero for neutral opinion. A total of seven behavioural beliefs and seven outcome evaluation questions were included in the questionnaire.

In the qualitative phase of this research, four groups of people were identified as potential sources of social pressure towards the use of IUCD and were used to develop questions to measure normative beliefs. Ajzen and Fishbein (2010: 151) recommends including injunctive normative beliefs and descriptive normative beliefs as components of measuring normative beliefs.

Based on the findings from qualitative study, four questions for assessing the strength of *injunctive normative beliefs* in respect to each reference group influence on the use of IUCD were developed using five-point scale (extremely likely/unlikely 'strongly approve/disapprove' or 'definitely true/false' etc) with score of -2 (extremely unlikely) up to +2 (extremely likely). Each of the injunctive normative belief questions were accompanied by corresponding four questions to assess the *motivation of the research participant to comply* with each reference group using a five-points scale of 'not at all/very much' with a score value of +1 (not at all) to +5 (very much).

Similarly, three questions to assess *descriptive normative belief* with a scoring value of -2 (extremely unlikely) up to +2 (extremely likely) were included followed by three

corresponding questions to assess *identification of the study participants with the referents* with scoring value of +1 (not at all) to +5 (very much).

Control beliefs and the corresponding *perceived power of control factor* in influencing the use of IUCD was measured as follows. Control beliefs identified from the qualitative/elicitation study (i.e., the perceived factors that facilitates or inhibits the use of IUCD) were included in the questionnaire with five-point scale of 'most unlikely/likely' endpoints and scoring value of +1 (most unlikely) up to +5 (most likely). Then each of the control beliefs was converted to sentence/question to assess its power of influencing the use of IUCD with five-point scale of less likely/more likely or much more difficult/much easier endpoints with value of -2 (most difficult) up to +2 (most easy). Total of six questions for control belief and six questions for perceived power of control factor were included in the questionnaire.

In the questionnaire, the questions were constructed to have a mix of both positive and negative endpoints of the scale at the beginning of the sentences (i.e., for some questions, the scale started with a positive tone like agree/disagree while for other questions, the sentence scale started with a negative tone like disagree/agree). Mixing of the positive and negative endpoints is a recommended approach to minimize potential tendency of respondents answering questionnaire items in a similar manner irrespective of their content (Francis et al. 2004: 13).

3.5.3.6.2 Translation of quantitative questionnaire

Initially, the researcher developed the questionnaire in English with guidance and input from the research advisor. It was translated to Amharic, the language in the study area, by translators who were familiar and experienced with similar research approaches. The Amharic questionnaire was then back translated to English by another translator to ensure consistency in meaning with the original content of the questionnaire. Any deviation found on the Amharic translated questionnaire during the back-translation was corrected before the questionnaire was used for any data collection. The researcher also reviewed and verified consistency of conceptual meaning between the English and Amharic version of the questionnaire as he is well-conversant with both languages.

3.5.3.6.3 Pre-testing

The Amharic version was pre-tested among current users of a short-acting family planning

method in two selected health centres in Addis Ababa. Minor modification to the phrasing of questions was made based on the feedback from pre-testing. The pre-testing was done in health facilities that were not part of the sites for data collection.

3.5.3.6.4 Procedures performed to ensure quality of data collection

A total of 10 data collectors and 2 supervisors were involved during the data collection. All the data collectors were health professionals with at least a diploma level of educational qualification. The researcher provided two days training to both data collectors and supervisors on the objectives of the study, sampling procedure, steps and processes of interviewing, ethical issues, clarification on the intent of each question in the questionnaire and communication during data collection among the researcher, supervisor, and data collectors. To get practical experience, the data collectors conducted practical sessions in two nearby health centres and conducted interviews following the research protocol.

The researcher provided one additional day training to the two supervisors on their responsibility as supervisor, daily role of reviewing each questionnaire and how to review, additional emphasis on calculating sampling interval and ensuring quality of data collection.

Before dispatching the data collection team, the following items were given to each of the data collectors: enough copies of printed questionnaires with stationaries (like pencils, erasers, and bag), sampling protocol that shows list of facilities to be visited with the sampling procedure, schedule of data collection, copy of letter of ethical approval from Addis Ababa Health Bureau and contact address (mobile phone number) of researcher, supervisors, and data collectors.

During the data collection, the completed questionnaires were collected from each of the data collectors daily and the researcher and data collectors' supervisors checked the quality, consistency, and completeness of the data every day. Close supervision of the data collections and its process were carried out by the researcher and supervisors throughout the data collection period. The researcher and supervisors conducted actual observation during data collection. When needed and observed, on site feedback was provided to the data collectors based on the identified gap. Specific feedback to each of the data collectors on the quality of their data collection and areas which need specific attention were given every morning before departure for data collection based on the observation of data collected in the previous day.

Data was collected in October 2020 over a period of two weeks. Since the data collection was done during the period of COVID-19 pandemic, all prevention protocols for COVID-19 prevention were observed including use of face masks by both data collectors and research participants, keeping social distances, conducting the interview in ventilated rooms and use of hand sanitizer and frequent hand washing.

3.5.3.7 Quantitative data analysis

The raw data was entered and analysed using the Statistical Package for Social Sciences (SPSS) version 24. The researcher conducted data cleaning for possible missing values, double entry, and other data entry errors before starting any analysis. Negatively worded questions in the questionnaire were recorded before analysis so that higher number of scores then always reflect a positive attitude, perceived norm, PBC or supportive belief towards using IUCD.

P-value less than 0.05 was used for the test of significance. The following procedures were followed for calculating various indexes of RAA included in the researcher's theoretical framework.

3.5.3.7.1 Analysis of intention towards the use of IUCD

The mean of the three intention related questions included in the questionnaire was calculated to get value for intention. This mean value of intention was used as a dependent variable for the regression analysis.

Additionally, to determine the proportion of users of SAC with positive and negative intention towards the use of IUCD, the mean value of intention was recorded as follows.

The calculated mean value was recorded as ‘strongly disagree’ for mean value of 1.0-1.79, ‘disagree’ for mean score of 1.80-2.59, ‘neutral’ if mean value is 2.60-3.39, ‘agree’ when mean value is 3.40-4.19 and ‘strongly agree’ for mean value of 4.2-5.0 (Pimentel 2010: 111, 2019: 188). Those that scored strongly agree and agree on the mean value of intention were recorded as having intention while those that were in range of disagree to strongly disagree categorized as having no intention to use IUCD within the next one year. The same procedure of recording was done for attitude, perceived norm and PBC.

3.5.3.7.2 Determinants of intention -using the direct measures

Using the response of the four questions included in the questionnaire to assess attitude

and the mean (and standard deviation) of the responses, calculations to get the value for attitude were done. Similar procedure of calculating the mean for the relevant questions in the questionnaire was used to get the score for perceived norm and PBC (Francis et al. 2004: 14, 16,22).

Multiple regression analysis was used to identify the relation of intention with attitude, perceived norm and PBC with intention being dependent and the other three as predictor variables. The result identified the key determinants of intention to use IUCD in Addis Ababa within the next one year.

3.5.3.7.3 Analysis using the belief-based constructs of RAA

Each behavioural belief related question included in the questionnaire was multiplied by its respective score of outcome evaluation to generate a new composite variable which indicates the weighted score for each behavioural belief (e.g., The score given by a study participant for the behavioural belief question of 'my use of IUCD brings change to the pattern of my menstrual bleeding… extremely unlikely/extremely likely' was multiplied by the score given by the same participant for the corresponding outcome evaluation question of 'for me, change in menstrual pattern is … extremely bad/extremely good').

The resulting composite scores (i.e., score of behavioural belief x score of outcome evaluation) were summed up for all the seven behavioural beliefs that created an overall score for *weighted behavioural belief.*

According to Ajzen and Fishbein (2010: 10), attitude towards a behaviour is directly proportional to weighted behavioural belief as weighted behavioural belief is a direct determinant of attitude. Mathematically, the relationship between attitude and weighted behavioural belief is shown in equation (1) below (Ajzen 2006: 10)

$$A_B \propto \sum b_i e_i \text{----------} \quad (1)$$

Where:

A_B = Attitude towards the use of IUCD within the next one year

b_i = strength of behavioural belief *i* concerning the use of IUCD

e_i = outcome evaluation behavioural belief *i*

$\sum b_i e_i$= weighted behavioural belief (summation of the product of behavioural belief and outcome evaluation)

The score of each normative belief was multiplied by its corresponding score of motivation to comply with the referent to produce a composite weighted score for each normative belief. Mean of the composite scores for the normative beliefs were calculated to get an overall score for *weighted normative belief*. The mean (average) was used rather than summation for weighted normative belief as some of the number of referents was different among the respondents (e.g., for a respondent having no husband/partner, motivation to comply with her husband's/partner's approval to use IUCD was not applicable whereas this referent's effect was assessed for married women) (Fishbein & Ajzen 2010: 141).

Likewise, the score of each control belief was multiplied by the score of the perceived power of the respective control factor to get a composite score for the weighted control belief of each control belief. Then the resulting composite score was summed across to get the value of *weighted control belief.*

The mathematical formula for weighted normative belief, weighted control belief and their linear relationship with subjective norm and PBC, respectively, are shown below in equation (2) and (3) below (Fishbein & Ajzen 2010: 137, 170; Ajzen 2006: 12,14)

$PN \propto \underline{x}(n_i m_i)$ ---------- (equation # 2)

$PBC \propto \sum c_i p_i$ ---------- (equation #3)

Where:

PN = perceived norm towards the use of IUCD

n_i = score of each normative belief for a referent

m_i= score for motivation to comply with the referent

x = mean (or average)

$\underline{x}(n_i m_i)$ = weighted behavioural belief

PBC = perceived behavioural control

c_i = score of the strength of each control belief

p_i = the score for power of the control factor

$\sum c_i p_i$ = weighted control belief

Equation 1,2 and 3 were tested using simple bivariate correlation between direct and indirect measures of intention that assessed the validity of the indirect measures. Low correlation between indirect and direct measure of the same construct shows likely result of belief-based measures that were poorly constructed or the questions that did not adequately cover the depth of the measured construct (Fishbein & Ajzen 2010: 330; Francis et al. 2004: 30).

3.5.3.7.4 Inferential analysis

Further correlational and multiple regression analysis were conducted to identify determinants of intention to use IUCD. (Montano & Kasprzyk 2015). The specific procedure of stepwise multiple regression analysis recommended by von et.al (2001) for analysing data collected using RAA/TPB framework for designing intervention was followed to identify the specific beliefs responsible for the observed intention towards the use of IUCD in Addis Ababa. With the application of stepwise multiple regression analysis, the research identified a list of critical beliefs that were targeted for development of behavioural change communication strategy as part of phase 3 of this research.

3.5.3.7.5 Sample weighing

Considering the variation in the probability of selection of research participants because of the sampling procedure (i.e., the health facilities sampled using probability proportional to size (PPS) during the first stage of sampling that resulted in unequal probability of selection of clusters), sample weighing was applied to adjust the difference in selection probability (MEASURE Evaluation 2016: 24–25; WHO 2003: 23).

The sampling weights for each selected cluster (i.e., health facilities) was calculated as inverse of the probability of selection of that particular cluster. The number of women that received SAC from the sampled health facility in three months prior to the data collection multiplied by number of sampled clusters (i.e., 25) divided by total number of women that received SAC in all health facilities in the sample frame within the same period provided the probability of selection of each sampled health facility.

To avoid inflation of sample size because of the sample weighing, standardized weight was applied. Standardized weight assigns a weight to each interview that shows the relative

probability of selection in comparison with other samples in the research without changing the overall sample size of the study (MEASURE Evaluation 2016: 25).

The standardized sample weight was used for the descriptive analysis phase of the quantitative analysis. For the correlational and regression analysis, sampling weight was not applied (Levy & Lemeshow 2008: 514; Winship & Radbill 1994: 253).

3.5.3.8 Validity and Reliability

Reliability refers to the consistency of an instrument or test measures (Fain 2017: 245). It shows if a particular technique, applied repeatedly to the same subject, produces similar results each time that it is used (Babbie 2013: 188).

In this research, reliability of the measurement tool was ensured at various stages of the research. Adequate training to the data collection team on the interview approach and purpose of each question in the questionnaire was given. The researcher and supervisors closely supervised the data collectors during data collection. To minimize error during data entry, enough time was given to data entry clerks. After the data was entered by a data entry expert to SPSS, the researcher randomly chose 25 questionnaires and re-entered the data to check if there was error in data entry and found no error in the data entering process.

To assess internal consistency of the questions included to measure intention and its direct determinants, *Cronbach's alpha* test was checked, and the result is shown in section 5.6.2. Internal consistency is used to examine the degree to which questions/items in a questionnaire aiming to measure a construct measure the same concept (Fain 2017: 247).

Validity refers to the level to which a measuring instrument adequately reflects the true meaning of the concept under investigation (Babbie 2013: 191). When an instrument is valid, it indicates the concept it is supposed to measure (LoBiondo-Wood & Haber 2018: 279). There are two types of validities: external and internal validity.

Internal validity refers to the extent to which results of a study show an accurate picture of the real world (Bloom, Baker-Townsend, Trice & B. 2020: 225). It asks if the independent variables actually made the observed difference or changes to the dependent variable (LoBiondo-Wood & Haber 2018: 169). On the other hand, e*xternal validity*, refers to issues with generalizability of the result from the study beyond the studied samples. In other words,

to whom and under what conditions could the result of the study be applicable (Bloom et al. 2020: 226).

In this research, careful efforts to maximize both internal and external validity were applied. Reasoned action approach, the theoretical framework used in this research, has a clear set of steps, procedures and constructs that are tested and validated for predicting human intention and behaviour which contributes to the internal validity. This research strictly followed all the recommendations during development of questionnaire, data collection and analysis. Operational definitions for each of the concepts in the theoretical framework were developed and applied consistently throughout the research.

The research used a structured questionnaire developed using the findings of initial qualitative exploratory research and relevant literature. Review, input and comment from research advisor and statistician were incorporated during designing of the questionnaire and analysis. The flow and content of the questions in the questionnaire were arranged carefully to minimize respondents predicting and expecting responses. Pre-testing of the questionnaire was also done. Advanced inferential statistical tests were also used to rule out possible confounding factors. All these careful and deliberate actions contributed to improving the internal validity of this research.

The sample size being representative of the study population selected randomly using probability sampling and high response rate of the interviewees contributed to the external validity.

3.5.4 Phase 3: Development of communication strategy and validation

Third phase of the research aimed at development of social and behavioural change communication (SBCC) strategy for promoting the use of IUCD in Addis Ababa using the results of phase 2 of this research. To develop the communication strategy, the following three steps were followed; 1) development of a model to promote the use of IUCD in Addis Ababa; 2) development of communication strategy, and 3) evaluation of the developed model and strategy for validation. Each of the three sub-phases are briefly described below. Additional explanation and discussion on these sub-phases are also shown in chapter 6.

3.5.4.1 Development of conceptual framework for BCC strategy

The SBCC model to promote the use of IUCD in Addis Ababa was developed using situation-producing theory as proposed by Dickoff, James, and Wiedenbach (1968: 421). Situation-

producing theory, also called prescriptive theories or practice-oriented theory, prescribes activities needed to achieve certain predefined goals. They are also used to predict the consequence of interventions (McEwen & Wills 2014: 77).

According to Dickoff et al (1968: 421), situation producing theory has three basic components: goal-content, activities prescription, and a survey list. The outcome or goal serves as the reference against which activities are evaluated. The goal should describe the context of the situation that gives the foundation for testing to decide whether the goal has been achieved. The specified actions or activities are interventions that should be taken to achieve the goal. The goal will not be achieved without the activities. The prescribed actions directly influence the goals. The survey list asks six different questions about a prescribed activity namely about context, agent, recipient, dynamics, procedure, and terminus (McEwen & Wills 2014: 77; Dickoff et al. 1968: 422).

The six questions using the survey list are: (Dickoff et al. 1968: 422).

- Who or what performs the activity or intervention? (Agent)
- Who or what is the recipient of the intervention? (Recipient)
- In what context is the activity/intervention performed? (context)
- What are the guiding processes of the intervention? (Procedure)
- What is the energy source or motivation for completing the activity? (Dynamics)
- What is the end point of the activity? (Terminus)

In this research, the survey list of Dickoff et al was used as a reasoning map to develop a model of SBCC to promote the use of IUCD in Addis Ababa. The findings of phase 2 of this research with supplemental evidence from literature which were systematically incorporated and mapped against each question of the survey list.

The purpose of the model was to find main concepts that could be included in the strategy and activities targeted for promoting utilization of IUCD in Addis Ababa. It shows the interaction between the agents (such as family planning provider or urban health extension professionals) and recipients (e.g., Those women that visited health facility for family planning or maternal service) within specific context (e.g., within health facilities or community based) to implement the procedure (of promotion of IUCD). The context guides

the type of procedure to be followed with consideration of the dynamics with the aim of accomplishing specific outcome (terminus). All the six elements and their relationship are clearly defined and discussed in detail in chapter 6.

3.5.4.2 Development of Communication strategy

Strategic planning is about integration, long-term thinking, and a disciplined approach to decision making. A strategy usually involves setting goals and objectives, identifying actions to attain the purpose together with description of the need for human and financial resources for achieving the intended goal (Schober 2017: 1)

Behavioural strategies encourage behavioural change of individuals and society using a range of motivational, peer-group, educational, skills-building, and/or community normative approaches. Behavioural change strategies to improve contraceptive use covers wide range of forms and interventions including counselling, education in clinical settings, community-based interventions, forms of oral or written communications and use of mobile phones and other modern technologies such as the internet. The strategy can be performed in a single or multiple sessions and can target individuals, couples, or groups of people (Lopez, Grey, Tolley & Chen 2016: 6; Coates, Richter & Caceres 2008: 670).

In this research, the model developed using Dick off et al's survey list was applied to develop communication strategy to promote the use of IUCD in Addis Ababa. Communication objectives, key messages, strategic approaches, and list of activities to be carried out to attain the objectives of the communication strategy for each of the intended audience are described in chapter 6.

3.5.4.3 Evaluation of model and communication strategy

The SBCC model for promotion of IUCD in Addis Ababa and its accompanying communication strategy were evaluated following the recommended approach of Chinn and Kramer. According to Chinn and Kramer (Chinn & Kramer 2015: 200), validation needs to be done on areas related with clarity, simplicity, generalisability, accessibility, and importance of the newly developed model. The researcher shared his critical reflection of the model and the communication strategy using the five criteria of Chinn and Kramer. Additionally, professional opinions of four experts of communication and model development provided their feedback on the model and the communication strategy which were used as

validation and input to finalize the model and communication strategy. Detailed discussion on the validation process is included in chapter six.

3.6 ETHICAL CONSIDERATIONS

Polit and Beck (2017: 1017) defined ethics as “a system of moral values that is concerned with the degree to which research procedures adhere to professional, legal, and social obligations to the study participants.” Researchers should ensure protection of the rights of research participants (Polit & Beck 2017: 208).

To protect study participants, three primary ethical principles are recommended to be followed: beneficence, respect for human dignity, and justice.

Beneficence deals with the responsibility of researchers on minimizing harm and maximizing benefits. Respect for human dignity indicates research participants having the right to decide voluntarily to participate in a study without risk of coercion. Respect for human dignity also refers to the right of research participants to make informed decisions about study participation, which requires full disclosure about the research consequence. Principle of justice is concerned with the right of participants for fair treatment and their right to privacy (Polit & Beck 2018: 134–137). In this research, the following procedures were used to ensure the three ethical principles adherence as follows.

3.6.1 Permissions to conduct the study

The research received ethical clearance from UNISA’s Research and Ethics Committee department of Health Studies. Additional ethical clearance certificate obtained from directorate of public health research and emergency management of Addis Ababa Health Bureau for conducting research in the study area. The ethical clearance from UNISA and Addis Ababa Regional Health bureau are attached in annexures A and B.

Soft copy on the number of users of family planning by health facility was collected from the health management information system of Addis Ababa Health Bureau. The data from the health management information system was used only for the purpose of sampling.

Support letter that permits collection of data in health facilities was written to the sampled health facilities from AARHB and sub-city health offices as shown in annexures C and B1. Permission from health facility head and health workers in the family planning unit was sought at the sampled health facilities. The researcher or data collectors’ supervisor

discussed with the head of the facility to get a convenient room for the interview within the facility to ensure privacy of the interviewees.

During data collection, names of the selected/sampled health facilities were recorded on the completed questionnaire for the purpose of monitoring the performance of the data collectors. Specific name of the health facilities was not used for analysis.

3.6.2 Informed consent

Informed consent is issues related with participants having sufficient information regarding the research, understanding the information, and having the power to freely choose that which allows them to consent or decline to participate in the study voluntarily (Polit & Beck 2018: 139).

In this research, the participants were given full information about the research purpose, estimated duration of the interview time and selection procedure. They were reassured that participating in the study had no effect on their use of health service in the facility as well as no harm to them because of being a participant in the study. Information on the participants' right to stop at any time in the course of the interview, if they want to stop or not to answer any part of the question, were part of the consent form. For the qualitative study, participants were also requested for permission to take audio recordings. Those participants that volunteered to be in the study, after ensuring their full understanding, signed a consent form and participated in the research. Amharic version of the consent form was used for explanation as well as signing by the participants. The consent forms for the quantitative and qualitative study are shown in annexures D, E, H, and I.

3.6.3 Confidentiality, privacy, and anonymity

Anonymity is achieved when the researcher is unable to link study participants with their data. It is the most secured means of ensuring confidentiality. To research participants, confidentiality is assured through letting them know that any information they provided is not publicly available in a manner that identifies them (Grove & Gray 2019: 137; Polit & Beck 2017: 223).

To ensure confidentiality, no name, or any personal specific identifier was asked, written on the questionnaire, or transcribed for both qualitative and quantitative phases of the research. Analysis was done as a group of respondents so that individuals cannot be identified by their response. All the interviews and analysis processes were fully anonymous. Numerical coding

was used for identification of the questionnaire. All the information and recordings were not shared with anyone except the research project team.

Additionally, interviews were conducted in a private/separate room within the health facility to ensure privacy. All the study participants were assured of the confidentiality, privacy, and anonymity of the interview. After the data analysis completion and publication of the results, all the data collected for both qualitative and quantitative will be destroyed.

3.7 SUMMARY OF THE CHAPTER

This chapter presented the justifications, processes and steps followed as the research design and method to achieve the purpose of the study. The research is done within the pragmatic research paradigm in three phases using sequential exploratory mixed methods. Specific steps, procedures, tools, and theoretical frameworks used for data collection, analysis, and interpretation in the three phases of the research for developing SBCC strategy to promote the use of IUCD in Addis Ababa are discussed in detail. This chapter has also described how ethical issues of the research were observed.

In the next three chapters, the methods and designs identified in this chapter will be operationalized. Chapter 4 will present the findings of the qualitative study (phase 1 while chapter 5 presents the result and discussion of the quantitative research (phase 2). In chapter 6, the social and behavioural change communication strategy (phase 3) developed using the results from chapter 5 is discussed.

CHAPTER FOUR:
QUALITATIVE RESEARCH (ELICITATION STUDY): FINDINGS AND DISCUSSION

4.1 INTRODUCTION

This chapter presents the findings from the qualitative (elicitation) phase of data collection conducted among users of family planning methods in Addis Ababa. Based on the objective of this phase of data collection, the commonly held beliefs towards the use of IUCD among users of family planning are identified and discussed. It also presents how the findings from the qualitative phase of the research were merged with the next phase (quantitative) of the study.

4.2 PROFILE OF IN-DEPTH INDIVIDUAL INTERVIEW PARTICIPANTS

A total of 29 women participated in the elicitation phase of the study. The age of the participants ranges from 19 to 44 years with mean age of 30 years. Majority of the participants were users of short acting contraceptive methods (5 used oral contraceptive pills and 12 used injectable contraceptives). Out of the 29 participants, 12 were users of long-acting contraceptive methods (6 used IUCD and the other 6 used implants). Table 4.1 below shows profiles of in-depth interview participants by age group and type of contraceptive method used.

TABLE 4 1: PROFILE OF IN-DEPTH INTERVIEW PARTICIPANTS (N=29), ADDIS ABABA, JUN 2018

Age of participants	**Number of participants by type of contraceptive method being used**				**Total n (%)**
	Oral contraceptive pills	**Injectable (Depo-Provera)**	**Implant**	**IUCD**	
18-19	0	1	0	1	**2 (6.9%)**
20-24	2	1	2	0	**5 (17.2%)**
25-29	2	2	2	2	**8 (27.6%)**
30-34	1	3	1	2	**7 (24.1%)**
35-39	0	2	1	0	**3 (10.3%)**
40-44	0	3	0	1	**4 (13.8%)**
45-49	0	0	0	0	**0**
Total n(%)	**5 (17.2%)**	**12 (41.4%)**	**6 (20.7%)**	**6 20.7%)**	**29 (100%)**

4.3 SUMMARY OF THE QUALITATIVE DATA ANALYSIS

As discussed in the previous chapter (section 3.5.1.5), *directed qualitative content analysis* approach was used for analysis of the qualitative data. The belief-based constructs of the Reason Action Approach (i.e., behavioural beliefs, normative beliefs, and control beliefs) were used as themes during the analysis. Within each of the themes, 2-3 categories were identified. In each of the categories, about five to ten codes were identified during the coding process. Throughout the analysis of the qualitative study, the specific beliefs identified from the analysis were considered as codes. The summary of themes, categories and codes identified in this research are shown in table 4.2.

TABLE 4.2: SUMMARY OF THEMES, CATEGORIES AND CODES USED IN THE QUALITATIVE ANALYSIS

Theme	Category	Codes (few examples) *
Behavioural Beliefs	Advantages of IUCD	● Helps to avoid pregnancy for long years ● No need of remembering to take daily or revisit facility for contraceptive
	Perceived Disadvantages of IUCD	● Fear of the procedure of insertion ● Cause pain during sexual intercourse
Normative Beliefs	People or groups that approve or disapprove my use of IUCD	● Husband/ partner ● Close friends and neighbours
	People that I [the respondent] think are using/not using IUCD	● Close friends ● Relative/family members
Control Beliefs	Factors that enable me [the respondent] to use IUCD	● Encouragement and approval by my husband/partner to use IUCD ● Hearing experiences of other users of IUCD
	Factor that inhibit/hinder me to use IUCD	● I am not eligible to take IUCD as I don't have a child yet or had history of STD or my age is young to take IUCD ● I want to have more children
	Control on the decision to use IUCD	● Decision is only up to me

*Note: the lists shown in the code column are few examples and is not exhaustive list of all codes. The full list is shown in the respective section below.

The findings of the qualitative study are presented according to their respective themes and are discussed in the following section. For each of the codes (i.e., the beliefs held by the participants), frequency of occurrence of the belief is presented in tables to identify the modal salient beliefs. During the interview, all the study participants mentioned that they are familiar with IUCD.

As a result, all the 29 research participants were considered as familiar/knowledgeable about IUCD and were used as denominators for the tables.

4.4 BEHAVIOURAL BELIEFS

As discussed in chapter 1 and chapter 3, behavioural beliefs refer to beliefs held by individuals as positive or negative consequences they might experience if they performed a given behaviour. They are assumed to be determinants of attitude towards a given behaviour of interest (Fishbein & Ajzen 2010: 20).

In this research, behavioural beliefs are defined as a set of beliefs that the participants hold about the positive or negative consequences that they might be experiencing if/when they use IUCD for prevention of pregnancy. Therefore, under the theme of behavioural beliefs, two categories were identified which are advantages and perceived disadvantages to the use of IUCD (see table 4.3).

4.4.1 Beliefs identified as advantages of IUCD

Both the users and non-users of IUCD identified various advantages of using IUCD as shown below.

4.4.1.1 Long years of prevention from pregnancy and enabling the women to complete their personal plans

The most frequently mentioned advantage of IUCD was its ability to prevent pregnancy for a long period of time. Some of the participants said that the long years of prevention of pregnancy enabled them to complete bringing up their children and other personal and family plans.

> *"The good thing is that it [IUCD] gives you protection [from pregnancy] for a long period. For 12 years, you can complete all your plans without difficulty"* user of implant aged 23

> *"I heard loop [IUCD] is used for 10 years."* User of pills aged 28

TABLE 4. 3: BEHAVIOURAL BELIEFS HELD BY PARTICIPANTS ABOUT IUCD USE, SUMMARY FROM QUALITATIVE CONTENT ANALYSIS. ADDIS ABABA JUN 2018

Category	Beliefs mentioned by participants as advantage and disadvantages of IUCD	Number of participants	% of all the participants with the belief (n=29)
Advantages of IUCD	Helps to avoid pregnancy for long years	15	51.7%
	No need of remembering to take daily or revisit facility for contraceptive	8	27.6%
	Once inserted, no need of bothering to become pregnant/highly effective	3	10.3%
	IUCD doesn't contain hormones/chemicals	2	6.9%
	Comfortable for use as no scar to skin or not visible to anyone when used	1	3.4%
Perceived Disadvantages of IUCD	Fear of the procedure of insertion (pain and shyness)	14	48.3%
	IUCD brings changes to pattern of menstrual cycle (frequency, excess bleeding, irregularity)	11	37.9%
	Cause pain during sexual intercourse (and mood change)	8	27.6%
	IUCD brings change to physical body such as change of weight or feeling of external material in body	8	27.6%
	Cause pain to uterus or abdomen	7	24.1%
	IUCD use causes infertility	3	10.3%
	IUCD may disappear from its position/migrate to other parts of body/get lost in the body	2	6.9%
	Fear if complications develop taking long to detect (12 years)	1	3.4%
	May become pregnant while using IUCD	1	3.4%

4.4.1.2 Reducing frequent travel to facility or risk of forgetting to take contraceptive on time

The use of IUCD reduces frequent visits to health facilities to get contraceptives where the risk of forgetting to take pills was another frequently mentioned advantage of IUCD. Becoming pregnant because of forgetting to take contraceptives on time was considered a concern for users of pills as shown in the following quotations.

> *"I avoided pregnancy without the need to visit the health facility frequently"* user of IUCD aged 31

> *"Instead of taking an injection every three months, the IUCD has the advantage of long period protection from pregnancy. No thinking of forgetting to take the pills. But I fear the [the insertion procedure] use of IUCD."* User of pills aged 29

> *"I might forget the date of taking it. For example, when I am using an injection, I may forget the date of the next injection. Then I might become pregnant which will be devastating for myself as well as my children. I want my children to grow well and*

happy. That is why I preferred IUCD'' user of injectable aged 23 *[this woman was not using IUCD because her husband did not want her to take IUCD]*

4.4.1.3 High effectiveness of IUCD

Not being bothered about becoming pregnant once inserted (i.e., its effectiveness) was the other advantage identified by the participants.

> *"I was using pills before and forgot to take my pills. Then become pregnant. Today I discussed with my health worker about my experience and told them that I will not become pregnant while I use loop [IUCD] and no need to remember when to return back"* user of IUCD aged 34

> *"I didn't become pregnant in the last four years while using loop [IUCD]"* user of IUCD aged 31

On the other hand, one of the participants mentioned a concern about effectiveness of IUCD as can be seen in the following quotation.

> *"I know a woman that was using a loop [IUCD] but she became pregnant. She realized she was pregnant after 6 months of pregnancy."* User of injectable aged 32

4.4.1.4 No hormone/chemical content

Absence of hormones or chemicals in IUCD was also mentioned as one of the advantages for using IUCD by one of the participants.

> *"When I was using pills, I developed some spots on my face and I heard it was related to the hormones. With loop [IUCD], it will not be an issue because it doesn't contain hormones"* User of IUCD aged 34

4.4.2 Beliefs identified as disadvantages of using of IUCD

Many of the participants had a negative attitude towards the use of IUCD. The analysis showed that the negative beliefs towards the use of IUCD can be grouped into three areas: concern about side-effects, issues related with insertion procedure and misconceptions associated with the use of IUCD.

4.4.2.1 Unwanted side-effects of IUCD

Majority of the women were concerned about the side effects of IUCD including change in menstrual patterns (like excess bleeding, irregularity, and frequency change) and pain during menstruation. For many of the users of short acting contraceptive methods, changes related with menstruation patterns were a major deterrent factor to use IUCD. On the other hand, most current users of IUCD continued to use IUCD even if they experienced the changes related with menstruation as the side-effects were tolerable. Few of the participants identified excess bleeding as the cause for discontinuing the use of IUCD and shift to other methods of contraceptive. All these show concerns related to the use of IUCD as one of the factors for not using IUCD.

> *"… period (menstruation) will become heavy and frequent"* user of injectable, aged 41
>
> *"I know a woman that was using a loop [IUCD] but she became pregnant. She realized she was pregnant after 6 months of pregnancy."* User of injectable aged 32
>
> *"My period is usually more than the amount I experienced before [I use IUCD] but it is tolerable"* user of IUCD aged 26
>
> *"I had used it [IUCD] before and discontinued it because of excess bleeding during my period"* user of injectable aged 35
>
> *"The pain during periods is what I don't like"* user of IUCD aged 31

As discussed in the control belief section below, even if some of the participants feared the side-effects of IUCD initially, they used IUCD after they received proper counselling and reassurance from health workers which shows the tolerable nature of the side-effects of IUCD when the users of family planning get proper counselling.

4.4.2.2 Fear of the insertion procedure of IUCD

The second group of women having a negative belief attitude towards IUCD use were related with the procedure of insertion. About half of the participants mentioned that they were not willing to use IUCD because of fear of pain during insertion or feeling of discomfort as the insertion is through the cervix.

"I fear that the procedure [of insertion] is painful" user of pills aged 29

"…when I hear that it [IUCD] will be inserted into the uterus, I fear it a lot." user of implant aged 31

"It [IUCD] is inserted via the vagina. So, it makes me feel uncomfortable and feel shy at the time of insertion …" User of injectable, aged 25 years

'…. but as long as it [IUCD] is inserted via the uterus, I will not use it" User of injectable aged 32 years

4.4.2.3 Misconceptions and myths about IUCD

Misconceptions and myths about IUCD were very common among the participants. Many participants mentioned pain during sexual intercourse or change in sexual interest when IUCD is in the uterus. They also mentioned that IUCD brings pain to the abdomen or uterus and changes body weight and strength. All these myths and misconceptions were major beliefs held by non-users of IUCD for not using IUCD.

"… [I have] fear of pain during insertion. Then during intercourse, I also fear pain." user of injectable, aged 23

"I will never use it [IUCD]. I know of a woman that used IUCD three years ago. She was complaining a lot about excess fluid (not monthly period) that makes them uncomfortable. I also know of another woman that is currently using and complaining about IUCD. So, of the available contraceptive choices, I don't prefer IUCD. My friends told me about the fluid that comes out of uterus and pain during sexual intercourse" user of injectable aged 29

"I have never used it [IUCD] but I think it causes damage to the body. I think it will cause change of mood/sexual feeling" user of injectable, aged 31

"I have heard that it [IUCD] hurts when you are doing some physical job. It causes illness to the skin. It also causes a lot of bleeding. It also results in weight loss." User of injectable, aged 23

"My sister was using IUCD but removed it because she gained weight and she removed it." User of implant, aged 31

Some mentioned the feeling of external material in the body when IUCD is used. Others mentioned that IUCD migrates from the uterus to other body parts or may disappear from its place. IUCD as the cause of infertility was another reason to be less interested in the use of IUCD for prevention of pregnancy.

"It [IUCD] doesn't make me feel free. I think it will cause some discomfort and external feeling in my body" user of pills aged 31

"I have heard from other people that the tread at the end of the IUCD gets lost/disappears and enters the body. It results in the patient falling pregnant" user of injectable, aged 36

"A friend of mine told me that it [IUCD] disappears from body"

"It [IUCD] cause me to have no children in future" pills user aged 22

Even some women considered the long years of protection as a disadvantage. As can be seen in one of the quotations below, there is a belief that IUCD will be removed only after completing its duration of service which is a misconception about possibility of removal of IUCD at any time the woman wants it to be removed.

"IUCD is for 12 years. But for injectable it is only for three months. If I face a problem, it will be easy to solve it after three months. If it is okay, then you will continue every three months. You can see the change easily. But for the 12 years, if you face problems, it will be after long" user of injectable aged 41

But the users of IUCD had different experiences about the side-effects and misconceptions. Some of the users of IUCD mentioned their previous negative attitude towards IUCD but after they started to use it, they became comfortable with IUCD and didn't experience their initial fear like having pain during insertion. See the following quotations from users of IUCD about their experience.

"I was not comfortable for the loop [IUCD] to be inserted to my uterus. I was stressed that I would feel lot of pain during insertion, but it was not that much painful" user of IUCD aged 34

"Initially when the health worker told me it would be inserted through the cervix; I was not comfortable. I thought it would be painful, but it was not" user of IUCD user aged 44

4.5 NORMATIVE BELIEFS

Normative beliefs are important individuals or groups in the lives of the population of interest that would approve or disapprove of their performing of a given behaviour as well as the beliefs that these referents themselves perform or don't perform the behaviour in question (Fishbein & Ajzen 2010: 20).

In this research, normative belief was defined as important individuals or groups in the lives of the research participants that would approve or disapprove of their use of IUCD as well as beliefs that these referents themselves use or do not use IUCD. Table 4.4 shows the list of important people and groups identified by the research participants that approve or disapprove their use of IUCD and people that the participants think are using or not using IUCD. The list of social influencers includes husband/partner, family members (like sister, aunt, mother, mother-in-law), health workers, close friends, and neighbours. Each of them is further discussed below. Since those that approve/disapprove the use of IUCD as well as the people that the respondent think are using IUCD are similar, the presentation below is merged.

TABLE 4. 4: IMPORTANT INDIVIDUALS OR GROUPS THAT INFLUENCES THE USE OF IUCD AMONG USERS OF FAMILY PLANNING METHODS IN ADDIS ABABA (RESULT FROM CONTENT ANALYSIS), JUN 2018

Category	Important others/referents	Number of participants	% of all the participants who

			mentioned the important other/ referents (n=29)
People or groups that approve or disapprove my [the respondent] use of IUCD within the next one year	Husband/partner	16	55.2%
	Family member (like sister, mother, aunt)	14	48.3%
	Health worker	13	44.8%
	Close friends	12	41.4%
	Neighbours	3	10.3%
	Those people that use IUCD	1	3.4%
People that I [the respondent] think are using/not using IUCD	Close friends	4	13.8%
	Neighbours	3	10.3%
	Relatives/family members	2	6.9%
	No one uses IUCD	5	17.2%
	I don't know anyone that uses IUCD	9	31%

4.5.1 Husband/partner

Husband was the most frequently mentioned important person that influenced the use of IUCD by the participants. But the role of the husband was mixed. Some of the women said that their husbands approved their use of contraceptives including IUCD while for others, they couldn't use IUCD because their husbands refused to approve the use of IUCD that showed the significant role of the husband in the decision-making process to use family planning in general and IUCD in particular.

> *"My husband agrees for me to use the contraceptive method. He will not be against my decision to use loop [IUCD]"* user of IUCD, 34 years

> *"Before I use [any type of contraceptive], I discussed with my husband"* user of injectable aged 35

> *"I am happy to use [IUCD] if it is my interest. But my husband was against me using IUCD. Still, he needs more children. Currently I have two children. He is not willing if I use IUCD. If he allows me, I will use it."* Injectable user, aged 23

> *"My husband recommends the one inserted on the shoulder. I should discuss with my husband [to use IUCD]."* User of injectable, aged 25

> *"I discussed it with my husband, and I will take it [IUCD] only if he allows me to do so"* user of injectable, aged 41

As shown in the control belief section below, the role of the husband in approving or disapproving the use of IUCD by the women was not universal for all women. Over half of the participants mentioned that the decision to use or not to use IUCD was their own and mentioned that their husband/partner had no role in approving their use of IUCD.

4.5.2 Family members

The participants identified mother, mother-in-law, sister, and aunt among family members that have a role in approval or disapproval of the use of IUCD. The mother of the respondent and the mother of their husband disapprove the participants' use of IUCD as they wanted to have more children in the family, but their disapproval was not accepted by some of the users which shows the less influence of mothers and mothers-in-law on use of contraceptive in urban area, Addis Ababa. Other family members like sisters looks to have positive influence towards the use of IUCD. That means, the effect of family members on use of IUCD is mixed as some support and others disapprove its use.

> *"My mother wants me to have more children and she might not agree for me to use loop [IUCD] for long years"* user of IUCD age 34

> *"My mother in-law doesn't like me to use any type of family planning"* user of implant, aged 28

> *"I discussed its [IUCD] use with my husband. I have also discussed it with my sister."* User of IUCD, aged 25

> *'My sister uses loop [IUCD]'* user of implant aged 28

4.5.3 Health workers

Health workers were identified as one of the people that encourage and advise family planning users on IUCD. Some of the participants mentioned that they refused to take the advice of the health workers to take IUCD while others accepted IUCD based on the approval from their health workers.

> *"When I gave birth [in health facility], the health workers advised me to use IUCD, but I refused to use it. I don't like the IUCD. For me the injectable is easy"* user of injectable aged 25

"Only health workers encouraged me to use [IUCD]…. My family member and those that never used the IUCD discouraged me" user of injectable aged 36

"The doctors have advised me to use IUCD repeatedly. But I refused to use IUCD. I don't want to use it at all." User of injectable aged 41

"One of my neighbours mentioned that the loop [IUCD] disappears in the body after insertion …. but the health worker said it doesn't disappear. I accepted the health worker's [advice]." user of IUCD aged 44

4.5.4 Close friends and neighbours

Close friends and neighbours were an important source of social pressure for use or no usage of IUCD. The role of friends and neighbours was consistent with the practice of the research participants. Women that have friends or neighbours that approve or support the use of IUCD were more likely to use IUCD while those having neighbours/friends with negative opinion regarding IUCD to be less likely to use IUCD. The research participants hearing or witnessing the experience from users of IUCD was key factor for accepting the recommendation from close friends and neighbours. This implies the trust that the community towards the information from close friends and neighbours.

"One of my friends was using it [IUCD] and still using it. When I asked her if it caused any problems, she told me that no problem was observed. She told me that it is a good method without any problem. It didn't cause harm … I saw her using it for six years…." User of implant aged 38

"…. my parents and friends at school [disapprove my use of IUCD]" user of injectable, aged 19

"Some of my neighbours use contraceptives. Most are using pills and injectables. There were some women that were using IUCD but removed it because of excess bleeding" user of injectable aged 41

"I know a friend of mine and a relative that use loop [IUCD]" user of injectable aged 35

"I have never seen it being used by my friends or neighbours." users of pills aged 19

4.5.5 Believing that no one uses IUCD

Many of the users of short acting contraceptive methods think that no one is using IUCD. As shown in table 4.3 above, the majority of the participants mentioned that they don't know anyone that uses IUCD living around them. On the other hand, many users of long-acting contraceptive methods knew someone around them that uses IUCD which encourages them to use IUCD. Many of the users of short acting contraceptive users think that no one uses IUCD (implying they shouldn't use a device that no other user uses and encourages them to continue to use their short acting method of contraceptive). The findings also implied that women having seen other users of IUCD are more likely to use IUCD or to have a more positive attitude towards the use of IUCD than those who didn't.

> *"I don't know of anyone that uses IUCD"* user of injectable aged 40
>
> *"I know no one that uses it [IUCD]"* user of pills aged 19
>
> *"No one is using it [IUCD]."* User of pills aged 31
>
> *"None of my peers are using it [IUCD]. I don't know if anyone is using it that I know"* user of pills aged 20
>
> *"My friend at work uses IUCD"* user of IUCD aged 26

4.6 CONTROL BELIEFS

Control belief refers to forms of beliefs about personal and environmental factors that can help or impede their attempts to perform the behaviour under consideration. Control beliefs lead to the perception that one has or does not have the ability to carry out the behaviour (i.e., perceived behavioural control) (Fishbein & Ajzen 2010: 21, 170).

The list of control beliefs identified in this research from the content analysis are shown in table 4.4. These beliefs are grouped into three categories as factors that facilitate the use of IUCD, inhibit or hinder the possible use of IUCD and the degree of the control of the decision by the respondent. Each of these categories are further discussed as follows.

TABLE 4. 5: ENABLING, INHIBITING AND CONTROL FACTORS FOR USE OF IUCD IN ADDIS ABABA, FINDINGS FROM CONTENT ANALYSIS, JUN 2018

Category	Enabling and inhibiting factors for use of IUCD identified by participants	Number of participants	% of all the participants who mentioned the factors (n=29)
Factors that enable me [the respondent] to use IUCD within the next one year	Ability to get advice and discussion from health workers on side effects of IUCD	11	37.9%
	Encouragement and approval by my husband/partner to use IUCD	7	24.1%
	Hearing experiences of other users of IUCD	7	24.1%
	Need more information about IUCD	5	17.2%
	Readily availability of IUCD in health facility	4	13.8%
	Not planning to become pregnant soon will enable me to use IUCD	4	13.8%
	Experiencing side effect from other methods of contraceptives may facilitate to use IUCD	2	6.9%
	Having my own house	2	6.9%
	Improved health status	1	3.4%
	Discussion with friends	1	3.4%
Factor that inhibits/hinders me [the respondent] to use IUCD within the next one year	I am not eligible to take IUCD as I don't have a child yet or had history of STD or my age is young to take IUCD	5	17.2%
	I want to have more children	4	13.8%
	Negative feedback from users of IUCD	3	10.3%
	Lack of support by health workers when developing side-effects	3	10.3%
	Fear of the unwanted characters of IUCD (procedure and bleeding)	3	10.3%
	Service not available on weekends or out of stock during my visit	2	6.9%
	Lack of discussion with partner	1	3.4%
	12 years is very long period for preventing pregnancy	1	3.4%
Control on the decision to use IUCD	The decision is only up to me, and no one inhibits me to use IUCD, if I want to use	20	69%

4.6.1 Enabling and inhibiting factors to use IUCD

This section describes the factors identified as enabling and hindering factors to use IUCD. Some of the beliefs were an enabling factor to use IUCD for some of the women while the same factor was an inhibiting factor for others. For example, the support that the women received from health workers was an enabling factor for some of the users of IUCD while lack of support from health workers was also identified as an inhibiting factor for others. Therefore, the enabling and inhibiting factors to use IUCD are discussed in combination as follows.

4.6.1.1 Support from health workers when developing side-effects and availability of method at the time of visit

The role of health workers in provision of support when developing side effects from use of IUCD is mixed as it facilitates utilization for those women that have experienced positive support from health facility while hinder utilization for those women who perceive that the health workers do not provide needed care and advice when developing side-effects.

> *"When I first took a loop [IUCD], my health worker told me about the potential bleeding, but I didn't realize it would be to this extent. If the health workers emphasize the bleeding, I might have been reassured"* current user of injectable aged 35 (previously used IUCD and discontinued)

> *"The availability of loop [IUCD] in the hospital makes it easy. When I faced a lot of bleeding during this period, I asked the health worker and she told me it is the character of the loop. So, I continued to use it"* user of IUCD aged 26

> *"Advice or solution from health worker on what to do for the bleeding… enables me to overcome barriers of use of IUCD."* User of IUCD aged 31

> *"When you develop complications, no one is providing you with any support. I have witnessed it myself. Last time a woman was complaining of pain in a health facility after using IUCD, but no one was helping her. Then she returned home without care provided to her. At the beginning, the doctors encourage you to use IUCD but when you have a problem, they don't give you attention. So why should I use it?"* user of implant, aged 27

4.6.1.2 Hearing experience from users of IUCD

Hearing positive experiences of other users of IUCD was found to be one of the enabling factors for use of IUCD. Particularly, the short acting contraceptive users repeatedly mentioned the possibility of changing their attitude if they hear positive experiences of users of IUCD as can be seen in the following quotations. Those that heard negative comments from users of IUCD were discouraged from using IUCD.

> *"I have never heard of people using IUCD and talking positively about IUCD."* User of injectable aged 36

"Those that used IUCD will encourage me [to use IUCD]." User of pills aged 29

"I am not interested to use IUCD. May be if I hear experiences of women that used it [IUCD] with no problem in TV, I may change my mind" user of injectable aged 19

"I heard a positive experience of using loop [IUCD] from my neighbour that facilitated my use of loop" user of IUCD aged 44

"My friend might discourage me [from using IUCD] considering her experience." User of injectable aged 29

4.6.1.3 Planning to be pregnant

Some of the women attached the use of IUCD with their plan to be pregnant as if IUCD causes infertility while other women use IUCD until the time they want to be pregnant for spacing birth.

"…. I want to give birth …. So, I don't have intention to use IUCD" user of implant aged 27

"I don't want to be pregnant for the next two years." User of IUCD, aged 25

"I have four children and I don't need any more. So, loop [IUCD] will serve my purpose of no pregnancy for long" user of IUCD, aged 44

"…It [IUCD] cause me to have no children in future" pills user aged 22

4.6.1.4 Experience with the current method of contraceptive being used

Experience with the current family planning method being used was associated both with enabling and inhibiting factors to use IUCD. Those women that develop side-effects from their current method being utilized considered to use IUCD in future whereas those that were comfortable with their current method are mentioned to be unlikely to use IUCD in future.

"I have used an implant for the last 3 years then experienced loss of weight and headache. Then I asked the health workers for removal of the implant …. But I don't have plans to give birth now. I might decide to use another type of family planning in the near future" user of implant aged 31

"When I was using pills, I developed some spots on my face and I heard it was related to the hormone. With loop [IUCD], it will not be issue because it doesn't contain hormones" user of IUCD aged 34

"I am comfortable with my current method and will not change my method" user of implant age 28

4.6.1.5 feeling of being not eligible to take IUCD

Misunderstanding the eligibility criteria to use IUCD was observed to be a barrier to utilizing IUCD. Some of the participants assumed that IUCD cannot be used at a young age or if the woman doesn't have enough children or if she had a history of sexually transmitted disease (STD).

"I heard that it [IUCD] is a good option. But I didn't use it as I don't have children yet" user of pills aged 22

"I also heard it cannot be used by women that have STD. If it is allowed for use by those that had STD, it will help to overcome barriers" user of pills aged 20

4.6.1.6 Normative beliefs as enabling factors

Other factors identified that facilitate and hinder the use of IUCD were approval by husband/partner, encouragement from close friends and advice by health workers which were also discussed under the section of normative beliefs.

4.6.2 Who decides the use of IUCD

As shown in table 4.4, most of the users of family planning were confident in their decision to use or not to use IUCD. They also mentioned that they were the ones to decide which method to choose. They said other people have little or no role in the decision-making process.

"I will decide whether to use it or not to use. My husband has no role in my choice." User of implant, aged 23

"No one. I am the one that will decide on the use" user of pill aged 29

"I will never use it in any circumstance. I don't have the feeling to use IUCD" user of injectable, aged 29

"Other people are not deciding on my life. It is only me that will decide to use or not to use." User of implant aged 27

4.7 DISCUSSION OF THE QUALITATIVE FINDINGS

The qualitative phase of the study enabled the researcher to identify a list of commonly held beliefs about the use of IUCD among women of reproductive age groups in Addis Ababa. As it can be seen from the results above, women's use of IUCD was influenced by their behavioural, normative and control belief related factors. Brief discussion on the beliefs with control literature is shown below. As the modal (most frequent) beliefs from the qualitative analysis are included in the quantitative phase of the research, further discussion on these beliefs will continue in chapter five.

4.7.1 Behavioural beliefs

The research identified both advantages and perceived disadvantages of IUCD as part of the behavioural belief that influenced the utilization of IUCD in Addis Ababa. Long years of protection from pregnancy, contribution to reduction of frequent visits to health facilities for follow up or refilling of contraceptives and high effectiveness were among the beliefs that were mentioned as advantages of using IUCD, particularly among those that use IUCD. Unwanted side-effects of IUCD such as excess bleeding during menses, fear, and shyness of insertion procedure of IUCD, presence of misconceptions and myths related with IUCD such as interference with sexual intercourse and IUCD migrating to other parts of the body were among factors identified as part of behavioural beliefs that negatively influenced the use of IUCD.

These findings are consistent with findings from previous studies conducted in many parts of the country. For example, a study conducted in Adama, a town of about 90 km from Addis Ababa, identified the following beliefs as factors affecting the use of IUCD among women in reproductive age group: IUCD as a cause of infertility, IUCD interfering with sexual intercourse, fear of insertion and removal procedure (Mohammed, Tadese & Agero 2017: 60). Another study conducted in Addis Ababa identified the presence of misconceptions and concerns regarding IUCD including IUCD causing infertility, excess bleeding, and pain during

menstruation, migrating to other body parts and discomfort during sexual intercourse (Teshome et al. 2018: 5). Various studies conducted in different parts of Ethiopia has frequently documented presence of concerns, myths, and misconceptions regarding the use of IUCD including the feeling of loss of privacy, being ashamed and expecting severe pain during insertion of IUCD, fear of infertility, irregularity of menses, discomfort during sexual intercourse, IUCD causing damage to uterus and IUCD migrating to other parts of the body. All of them have negatively influenced the expansion and utilization of IUCD in Ethiopia including Addis Ababa (Gashaye et al. 2020: 10; Animen et al. 2018: 4; Endriyas et al. 2018: 4; Melka, Tekelab & Wirtu 2015: 7).

On the other hand, IUCD is recognized as a contraceptive method that provides protection from pregnancy for duration as long as 10-12 years, high effectiveness, and the need for less frequent visit to health facility, particularly among those women that uses IUCD as their preferred method of contraceptive (Gashaye et al. 2020: 10, 12; Ali, Mekonnen & Tekalegn 2019: 4–5; H, A, EA, G & M 2017: 8; Yemaneh & Birie 2017: 6)

Studies have demonstrated the role of beliefs held as advantages and disadvantages of IUCD towards the utilization of IUCD. In a study conducted among users of family planning in Addis Ababa, those women that have good knowledge scores regarding IUCD were more likely to use IUCD than those who had low knowledge level regarding IUCD. Those with a high score of knowledge acknowledged the long years of protection from pregnancy, IUCD being reversible, not interfering with sexual intercourse and not migrating to other parts of the body (Ali et al. 2019: 4–5). Users of long acting contraceptives including IUCD in Northwest Ethiopia identified being highly effective, experiencing fewer side-effects than SACs, and the need for fewer visits to health facilities as reasons for using LARC (Gashaye et al. 2020: 10, 12). On the contrary, those women that have misconceptions and myths regarding the use of IUCD were less likely to use IUCD (H et al. 2017: 8; Bulto et al. 2014: 8).

All these findings demonstrated the importance of normative belief in relation to utilization of IUCD in the context of Ethiopia including Addis Ababa. Non-users of IUCD held misconceptions and myths related with IUCD while users of IUCD consider it as important, having less or tolerable side-effects and effective method to achieve their personal goal while using IUCD.

4.7.2 Normative beliefs

This research has identified a list of individuals and groups that influence the use of IUCD in Addis Ababa. Husband/partner, family members, health workers, friends and neighbours were part of normative beliefs. The role of husbands, family members, health workers, friends and neighbours as social factors that influence the use of contraceptives in general and LARC including IUCD in particular was found in various studies conducted in many parts of Ethiopia (Gebeyehu et al. 2018: 9–10; Mohammed et al. 2017: 60; Tilahun et al. 2016: 25).

Women who have their husbands' approval or decide jointly with their husband/partner on the use of contraceptives, including IUCD, are more likely to intend or use IUCD, whereas women whose husband opposes their use of IUCD are less likely to intend or use IUCD, demonstrating the importance of husbands' opinions and the need for their involvement in the promotion of IUCD (Animen et al. 2018: 4; Endriyas et al. 2018: 3; Mohammed et al. 2017: 58; Melka et al. 2015: 9).

Health workers, neighbours and friends were identified as a source of influence for utilization of IUCD in various studies conducted in different parts of Ethiopia. The health workers influenced women and couples to use IUCD and other contraceptives as they provide counselling to the clients. Neighbours and friends became a source of social influence towards the use of IUCD as they themselves use or do not use IUCD and are a source of information for IUCD. Approval or disapproval of friends and neighbours if the client starts to use IUCD was another source of social pressure which is consistent with the findings from the current research (Animen et al. 2018: 5; Endriyas et al. 2018: 4; Teshome et al. 2018: 7; H et al. 2017: 8; Tekelab, Melka & Wirtu 2015: 9; Bulto et al. 2014: 6). Health workers, friends, and neighbour’s role as a source of social pressure might be because of being a reliable source of information and closeness to the clients.

There were few normative beliefs that were identified as factors associated with not using IUCD in other researches but not in the current study. For example, in studies conducted in north-western Ethiopia (Bahrdar and Debre Markos towns) and Southern Ethiopia, religion was identified as one of the key factors for not intending to use IUCD but was not in the current study (Animen et al. 2018: 4; Endriyas et al. 2018: 3; Bulto et al. 2014: 6). This might be because of the difference in the study population. While the studies mentioned above

were conducted in community-based research with study participants being both users and non-users of family planning, the study participants in this research were already using some form of contraceptive and may already have considered religion as not interfering with their use of contraceptives including IUCD. Religious and community leaders play a role in the use of family planning in Ethiopia, particularly among non-users, therefore reaching out to them as part of a social and behavioural change communication campaign should be considered (Gebeyehu et al. 2018: 9–10).

4.7.3 Control beliefs

This research identified factors that enable and hinder the utilization of IUCD. Ability to get support from health workers when the user develops side-effects from IUCD use and availability of the method at health facility at the time of visit were among the control beliefs in this research. Those women who expect not to get enough support from the health care providers mentioned as not interested to use IUCD. On the other hand, getting support from health facilities when experiencing side-effects among users of IUCD was a factor that contributed to their continued use of IUCD. Availability of LARC methods at health facility during visit and ability to get support when developing side-effects as enabling factors for use of family planning method including IUCD were found from other studies conducted in Addis Ababa and the rest of the country (Teshome et al. 2018: 7; H et al. 2017: 9; Mohammed et al. 2017: 58). It shows the role of comprehensive and detailed counselling on side-effects for continued use of IUCD as well as confidence in the health system's responsiveness if/when the users develop side-effects from use of IUCD. Provision of comprehensive counselling that includes provision of information on side-effects of IUCD have been shown to increase utilization of IUCD (Melka et al. 2015: 4).

Hearing experiences of other users of IUCD is another factor that the respondents identified as enabling factors. Hearing witnesses from actual users of IUCD may contribute in terms of reassuring the women that IUCD is a safe and effective form of contraceptive. It may also help in reducing the concern and misconceptions of non-users regarding IUCD because of hearing evidence from successful users (Benson, Perrucci, Drey & Steinauer 2012: 202).

Planning to be pregnant or not yet having the needed number of children was mentioned as a factor for not using IUCD. Similar findings were observed from other previous studies (Animen et al. 2018: 4; Endriyas et al. 2018: 3; H et al. 2017: 9; Bulto et al. 2014: 7). This

might be related with misconception that IUCD cause infertility or fear of fertility delay associated with the use of IUCD.

Being comfortable with the current method of contraceptive was another reason for not using IUCD. As women have the right to choose their preferred method of contraceptive, as long as the women are comfortable with their SAC method, they should be encouraged to use their preferred method. In case if they have misconceptions and myths regarding IUCD, the health care provider needs to address those concerns during counselling sessions so that the women will not pass the wrong message to others regarding IUCD and other methods.

The other reason identified from the qualitative study for not using IUCD were related to the feeling of not being eligible to take IUCD because of their age, life circumstance, previous history of STDs or number of children that they have. Similar findings were reported from previous studies. According to WHO/RHR (2018: 158), almost all women in reproductive age including adolescents, nulliparous, multiparous, those planning to space or limit birth, those with HIV or history of STIs can take IUCD. Counselling and promotion of IUCD on a wide range of eligibility of women may contribute to address this concern and should be part of the communication strategy.

In this research, most of the users of the family planning method have demonstrated stronger control on the decision-making process to use or not to use IUCD within the next one year. About three fourths of the research participants mentioned that the decision to use or not to use IUCD is up to themselves and others having little or no effect. This shows their self-confidence and self-efficacy in choosing their preferred method of contraceptive and presence of high perceived behavioural control. This might be because all the research participants were users of the family planning method and have already chosen their preferred method which has contributed to their high level of PBC.

4.8 SUMMARY OF MAJOR BELIEFS AND MERGING WITH QUANTITATIVE STUDY

The objective of this qualitative/elicitation phase of the study was to explore and identify commonly held beliefs regarding the use of IUCD in Addis Ababa. The list of commonly held beliefs by the research participants are shown in table 4.2, 4.3 and 4.4 grouped into their respective themes and categories. As can be seen from the tables, some of the beliefs' role was identified in more than one category or theme. For example, husband/partner was

identified as a person that approves the use of IUCD for some and disapprove for others under normative beliefs. Additionally, in control belief, many of the women mentioned the approval and encouragement of husband/partner as an enabling factor for them to use IUCD. In this scenario, even if the husband has a role in both normative and control belief, the researcher logically decided to put the role of husband/partner in normative belief during development of the questionnaire. Putting the identified beliefs in only one theme helped the number of questions in the questionnaire to be manageable in number as well as minimize risk of the question being boring for the interviewees. Similarly, other beliefs that were identified in more than one theme or category were systematically and logically assigned to one of the themes.

Additionally, as described in chapter 3 section 3.5.1.5.5, the researcher ensured to take all beliefs that were mentioned by at least 10% of the participants of the qualitative study as modal salient beliefs.

The final list of commonly held beliefs among the users of the family planning method in Addis Ababa are summarized below in table 4.5. These beliefs were included as input for the development of a questionnaire which was used for collecting data for the quantitative (second) phase of this research.

Since the research will further continue in the quantitative phase using the same theoretical base of reasoned action approach, detailed discussion on the relationships among the beliefs and the constructs are discussed further in the next chapter (chapter 5).

TABLE 4. 6: LIST OF MAIN BELIEFS IDENTIFIED FROM ELICITATION STUDY FOR INCLUSION IN QUESTIONNAIRE DEVELOPMENT OF SECOND PHASE OF THE RESEARCH.

Theme	Beliefs
Behavioural beliefs	IUCD provides prevention from pregnancy for long years
	IUCD helps to reduce frequent travel to health facility or risk of forgetting to take contraceptive
	IUCD brings change to menstrual pattern (irregularity, excess bleeding, and pain during period)
	I fear the feeling of pain, discomfort, or shyness during the procedure of insertion of IUCD
	IUCD cause pain during sexual intercourse or change in sexual mood
	IUCD brings pain to uterus or abdomen or feeling of external material inside the body

	IUCD use cause infertility
Normative beliefs	Husband/partner
	Family members (like sister, mother, aunts)
	Health workers
	Close friends and neighbours
Control beliefs	Support from health facilities when developing side-effects of IUCD
	Hearing the experiences from other users of IUCD
	Having plan to be pregnant
	I cannot take IUCD because I am young for IUCD, or I don't yet have enough number of children yet

4.9 SUMMARY OF THE CHAPTER

This chapter presented findings and discussion of the qualitative (elicitation) study, which is the first phase of the research. The chapter identified a list of commonly held beliefs regarding the use of IUCD among users of family planning in Addis Ababa. Advantages and perceived disadvantages of IUCD based on the understanding of the users of family planning in Addis Ababa were identified as part of the behavioural belief. In the normative belief, the list of people that influence the use of IUCD were documented including the role of husband, neighbours and friends, family members and health workers. The qualitative research also identified beliefs held by participants that enabled and hindered their use of IUCD as part of control beliefs.

The chapter was concluded by identifying the most frequently held behavioural, normative and control beliefs regarding the use of IUCD. These beliefs were used as input for development of a questionnaire that was used for collecting quantitative data.

Next chapter will present the findings and discussion of the second (quantitative) phase of the research.

CHAPTER 5
QUANTITATIVE RESEARCH FINDINGS AND DISCUSSION

5.1 INTRODUCTION

In this chapter, findings and discussions from the quantitative study are presented that identified determinants of intention and key beliefs that influenced attitude, perceived norm and perceived behaviour controls using both descriptive and inferential statistics. The findings are discussed in line with other literature and implication for development of social and behavioural change communication (SBCC) intervention. The chapter concludes with a summary.

5.2 RESPONSE RATE

A total of 331 interviews with users of short-acting contraceptive (SAC) methods were undertaken using the structured questionnaire. Of the 331 questionnaires, 25 (7.4%) were omitted from this research analysis because they were either research participants to be interviewed (6 questionnaires) or only partially completed (19 interviews). The remaining 306 questionnaires were completed all the way to the end, resulting in a 92.6 percent response rate.

5.3 SOCIO-DEMOGRAPHIC CHARACTERS OF RESPONDENTS

The participants' average age was 29.1 years, with a standard deviation (SD) of 5.8. The majority of the study participants were married (83.9%), under 35 years of age (77.2%), Orthodox Christian believers (68%), had completed at least primary education (87.5%), and were working (hired or self-employed) (53.3%). (See table 5.1).

In addition, 237 (77.5%) of the respondents shared information about their household income. The average monthly family income was 6,162 Ethiopian birr (about 166 USD at the exchange rate at the time of data collection), with a standard deviation of 3,746 (“Exchange Rate Detail – Commercial Bank of Ethiopia” n.d.).

TABLE 5.1: SOCIO-DEMOGRAPHIC CHARACTER OF RESPONDENTS FOR QUANTITATIVE STUDY, ADDIS ABABA, OCT 2020

Variable	Description	Frequency (n)	Percentage (%)
Age group	18-19 years	7	2.4
	20-24 years	58	19.1
	25-29 years	108	35.7
	30-34 years	61	20.0
	35-39 years	54	17.5
	40-44 years	12	4.0
	45-49 years	2	0.6
Marital status	Currently married	257	83.9
	Never married	41	13.5
	Separated, divorced, or widowed	8	0.3
Currently employment status of the respondent	Employed/hired	126	41.0
	Self-employed/trader	38	12.3
	Daily labourer	25	8.2
	Housewife	77	25.1
	Student	23	7.6
	Currently not working/job seeker	14	4.6
Religious affiliation	Orthodox	208	68.0
	Muslim	49	16.1
	Protestant	45	14.8
	Catholic	2	0.8
Highest educational level of the respondent	Never went to school	38	12.5
	Primary (grade 1-8)	83	27.2
	Secondary (grade 9-12)	57	18.1
	Diploma level	66	21.5
	Degree and above	61	20.0
Total		**306**	**100%**

Among currently married women, 180 (70%) of the husbands have a secondary or higher educational level. When asked who made decisions on significant family expenditures, 196 (76.3 percent) of married women stated they were involved in the decision-making process (either individually or jointly with their husband) (see table 5.2).

TABLE 5.2: HOUSEHOLD CHARACTER OF MARRIED RESPONDENTS, ADDIS ABABA, OCT 2020

Variable	Description	Frequency (n)	Percentage (%)

Highest educational level of partner/ husband of the respondents	Never gone to school	17	6.6
	Primary (grade 1-8)	59	23.0
	Secondary (grade 9-12)	47	18.3
	Diploma level	44	17.1
	Degree and above	89	34.6
Who makes decision on major expenditures of household	Jointly (both my husband and I)	169	65.8
	My self alone	27	10.5
	My husband alone	60	23.3
Total		**257**	**100%**

5.4 CURRENT USE OF CONTRACEPTIVE

According to the study's design and objectives, all of the participants were using one of the short-acting contraceptive methods. Furthermore, 206 of the participants (67.3%) used injectable contraception, followed by 86 (28.1%) who used oral contraceptive pills, 8 (2.6%) who used condoms, and 6 (2%) who used emergency contraception (see fig 5.1).

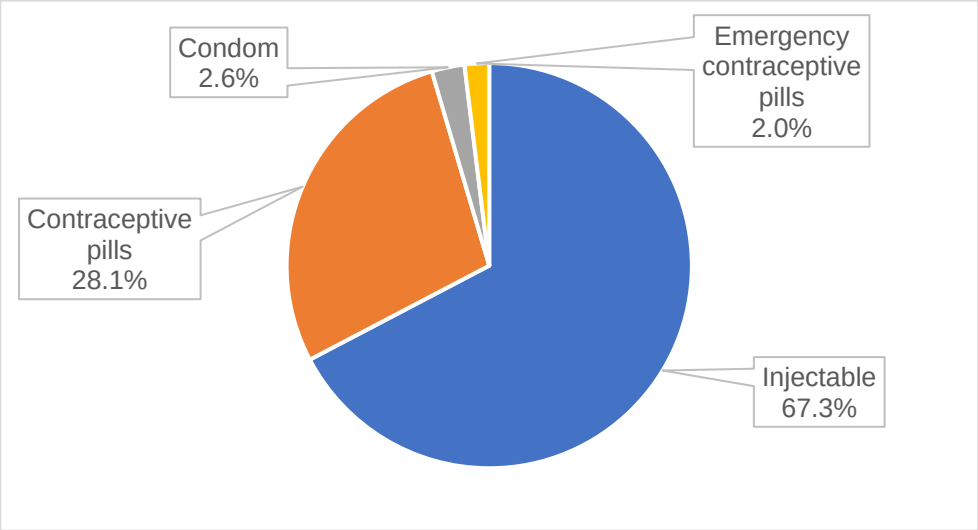

Figure 5. 1: Current method of contraceptive being used by SAC users in Addis Ababa, Oct 2020 (n=306)

5.4.1 Duration of use of current contraceptive method

Approximately one-third of SAC users (35.6%) had been using their method for less than a year, while the other one-third (30.4%) had been using injectables or contraceptive pills for 1-2 years prior to the survey. About one-fourth of SAC users (26.5 %) have been using the method for more than three years (see table 5.3).

TABLE 5.3: DURATION OF USE OF CURRENT METHOD OF CONTRACEPTIVE AMONG SAC USERS IN ADDIS ABABA, OCT 2020

Variable	Category	Current Contraceptive Method Being Used				Total (n=306)
		Injectable (n=206)	Pills (n=86)	Condom (n=8)	Emergency Contraceptive pills (n=6)	
Duration of use of current contraceptive method	Less than 1 year	33.0%	41.9%	12.5%	66.7%	**35.6%**
	1-2 years	33.5%	24.4%	37.5%	0.0%	**30.4%**
	3-5 years	23.3%	19.8%	0.0%	16.7%	**21.6%**
	6-10 years	1.9%	5.8%	0.0%	0.0%	**2.9%**
	Over 10 years	1.9%	2.3%	0.0%	0.0%	**2.0%**
	Missing/don't remember	6.3%	5.8%	50.0%	16.7%	**7.5%**
Total		**100%**	**100%**	**100%**	**100%**	**100%**

5.4.2 Future plan to switch to other contraceptive methods

When asked if they plan to switch to different methods of contraception in the future (without specifying a time frame), about half of SAC users (50.7 percent) said they would prefer to stick with their current method. The 117 women (38.2%) said they planned to switch to another contraceptive method in the future, while 34 (11.1%) said they weren't sure if they would. Only 6% of SAC users stated that they intended to switch to IUCD in the future, compared to 22% who said they planned to use the implant in the future. The likelihood of using a permanent method was quite low. Only 0.3 % of SAC users said they would continue to use the permanent method in the future.5.4.3 Ever use of LARC

Among current users of SAC, 147 (48%) have used IUCD or implant at some point in the past, but the number of implant users was substantially higher than IUCD users. Approximately 39% of current SAC users have ever used an implant, compared to only 12% for IUCD. About half of all SAC users (52 percent) have never used any type of LARC.

5.4.3 Duration of use of LARC

The duration of LARC use among ever users was suboptimal, as seen in fig 5.2. Approximately a third of all LARC users had ever used an implant or IUCD for three to five years. The majority of ever users stopped using the procedure after one to two years (38 percent for implant and 37 percent for IUCD), while nearly 30 percent of LARC users

discontinued using it after less than a year. IUCD has never been utilized by anyone for more than five years among the study participants.

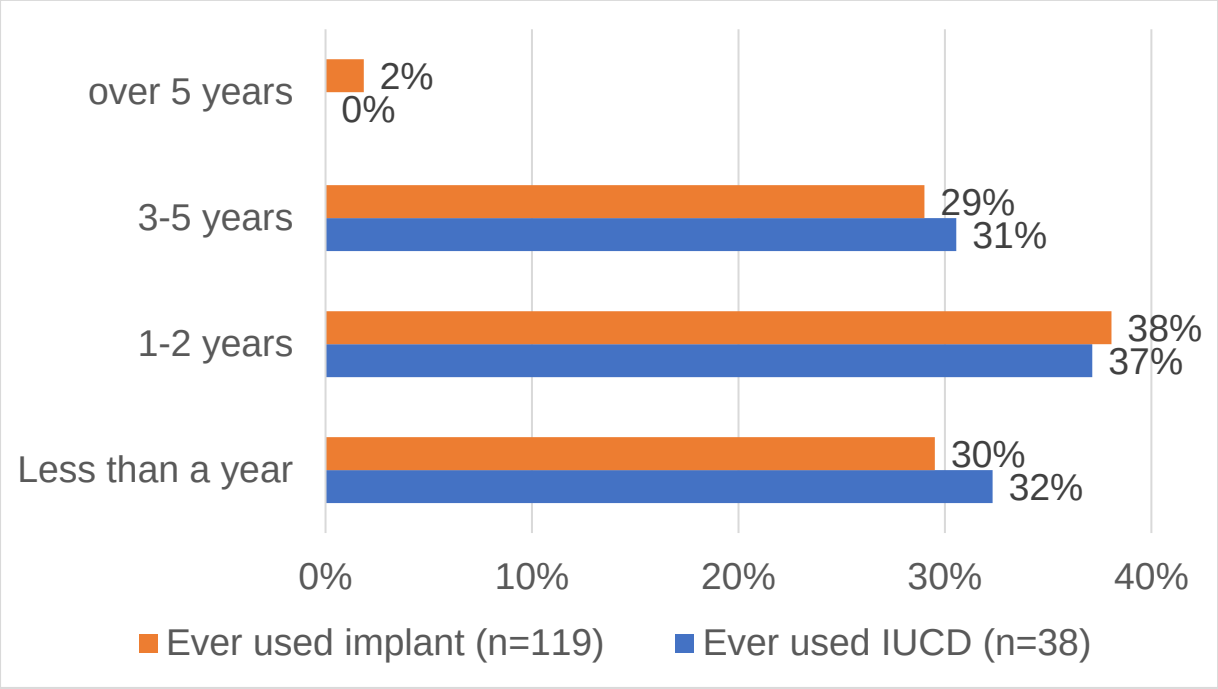

Figure 5.2: Duration of use of LARC before discontinuing among ever users of LARC, Addis Ababa, Oct 2020

5.4.4 Reasons for discontinuation of LARCs

The most prevalent cause for ceasing LARC among IUCD or implant ever users was side effects (40.0%), followed by planning to become pregnant (30.4%), and refusal by husband/partner (30.4%). About 30.3% of implant users indicated that the method was removed after the duration of pregnancy protection was completed, but none of the IUCD ever users claimed the method was removed after the time of pregnancy protection was completed (See fig 5.3).

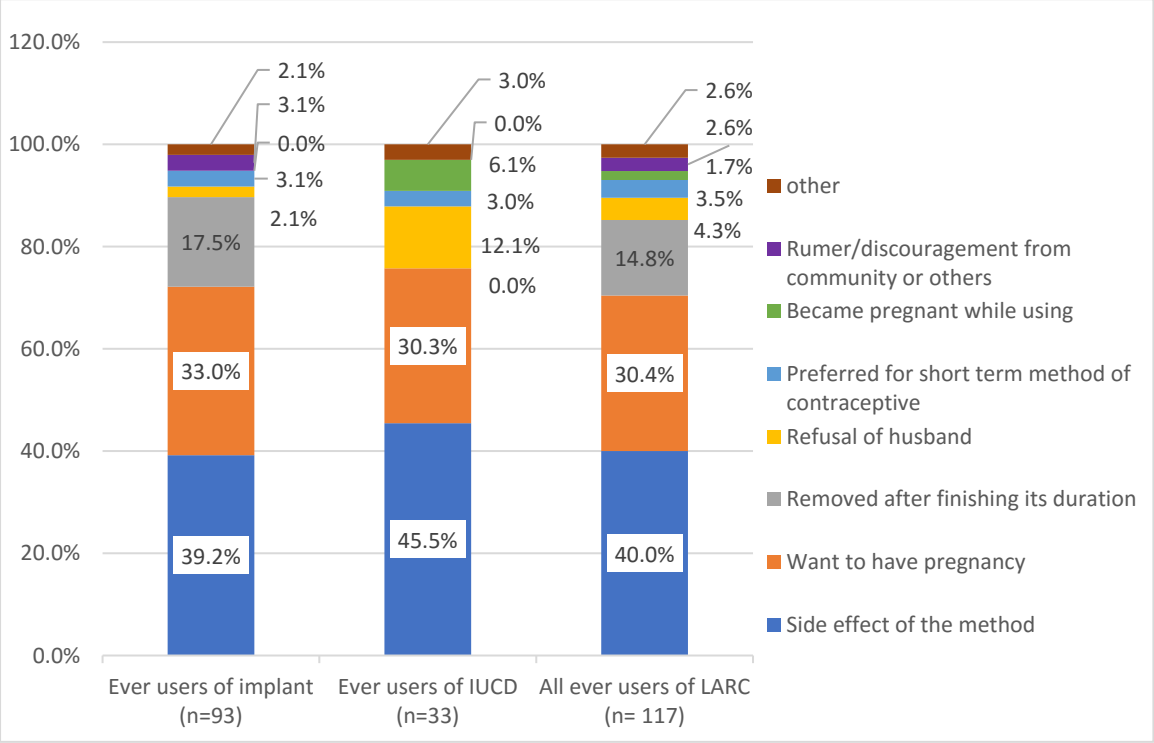

Figure 5.3: Reasons for discontinuation of the use of IUCD or implant among ever users of LARC, Addis Ababa, Oct 2020

5.5 FAMILY SIZE AND FERTILITY PLAN

The respondents' average family size was 3.8 individuals, with a standard deviation of 1.5 and a range of one to nine people per household. There are 1.7 alive children per household on average (SD 1.4), with a range of 0 to 7 children per household. In addition, 68 (22.2 %) of SAC users have never had a child, while 68 (21.5 percent) had three or more children.

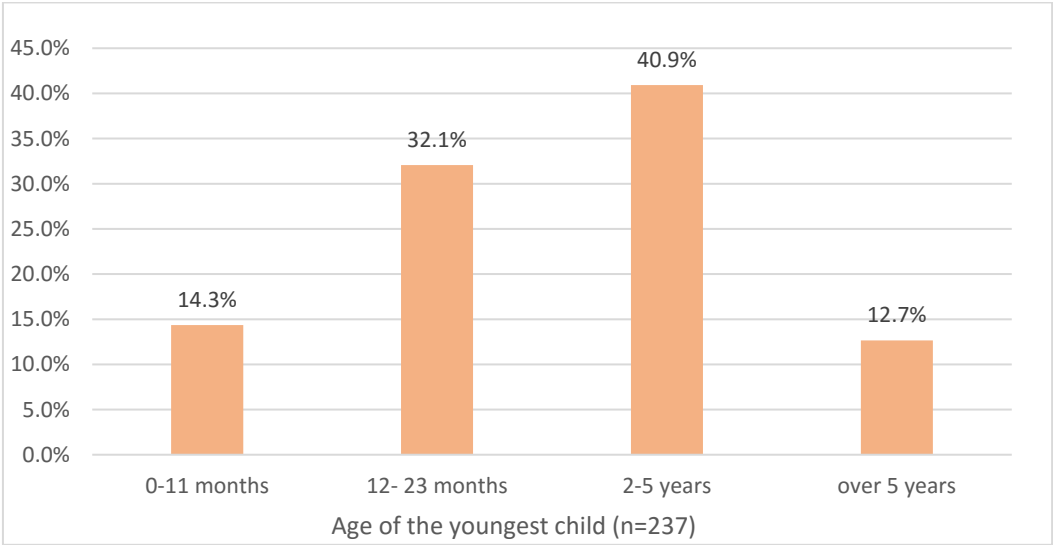

Figure 5.4: Percentage of SAC users by age of their alive youngest child among SAC users having child in Addis Ababa, Oct 2020

Among women that have live children at the time of interview, 110 (46.4%) have children aged less than 24 months of age while the rest 53.5% of the SAC users have children aged 2 or more years (see fig 5.4).

When questioned about their future plans for having children, 229 (74.6%) of the participants said they hoped to have children in the future. Thirty-three SAC users (10.9 percent) indicated they don't plan to have children in the future (i.e., one out of 10 users of SAC were using pills or injectable for the purpose of limiting their birth). The remaining women had not yet made up their minds about whether or not they wanted to have children.

In addition, 76 (33.5%) of women who wanted to have children in the future hoped to get pregnant in the next 3 to 5 years, while 18 (7.8%) wanted to get pregnant after 5 years, and all of these women still use short-acting contraceptive methods. Around half of the users of SAC (53%) planned to become pregnant in the next 24 months (see fig 5.5).

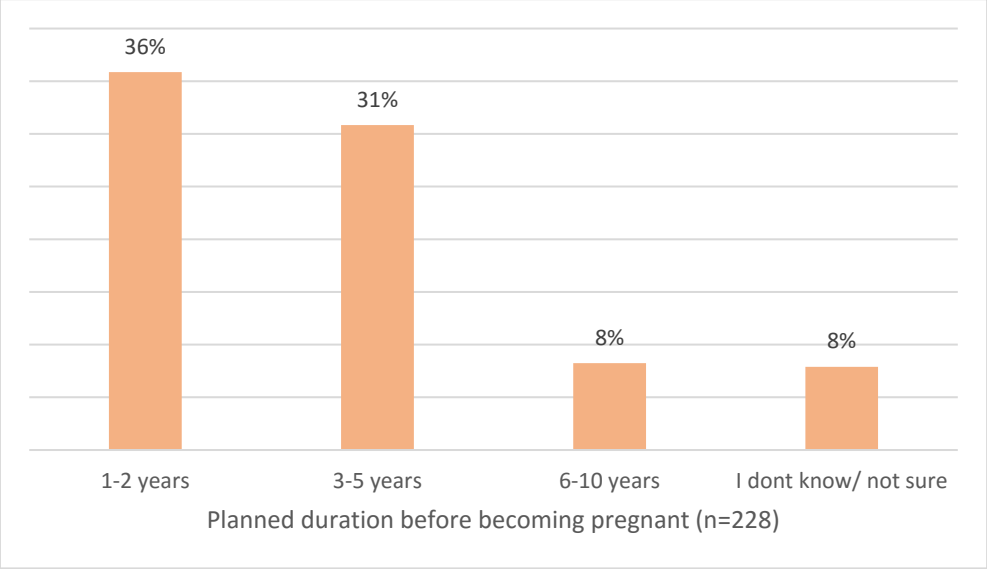

Figure 5.5: Planned duration before becoming preganant among SAC user that want to be pregnant in future, Addis Ababa, Oct 2020

5.6 APPLICATION OF REASONED ACTION APPROACH (RAA)

Each of the main constructs of the reasoned action approach (RAA) was operationalized by asking the respondents three or more questions for each construct, as outlined in section 3.7.6.1 of chapter 3. Multiple regression analysis was used to identify major predictors of intention, in accordance with the analysis technique and the goal of this study. As a result, before proceeding with the study, the data was reviewed to confirm that it met the requirements for regression analysis.

5.6.1 Preliminary data screening: Ensuring the assumptions for multiple regression

The data was checked to ensure that the assumptions for multiple regression analysis were met. Any missing values for intention and its determinant variables were checked, but no missing values were discovered because the missing values had already been excluded as mentioned in section 5.2. Univariate and multivariate tests of normality were used to determine the presence of outliers. Using boxplots, the univariate analysis revealed that attitude, perceived norm, and PBC had no outliers, whereas intention had six outliers. The Mahalanobis distance was performed to see if there were any multivariate outliers. At a p-value of 0.001, two cases were identified as multivariate outliers. Because normality of the variables is one of the pre-conditions for conducting multiple regression analysis (Tabachnick & Fidell 2019: 66–67), the eight univariate and multivariate outliers were removed before further analysis. The removal of eight cases as outliers had no effect on the research's generalizability because the total number of cases left (i.e., 299) was still greater than the minimal sample size estimated in chapter 3. (i.e., the minimum needed sample size for this research was 294). The process for removing the outliers, on the other hand, ensured that the assumptions for multivariate regression analysis were met (Tabachnick & Fidell 2019: 77). There was no evidence of multicollinearity or singularity in the three independent variables (attitude, perceived norm, and PBC) (VIF of 1.467 for attitude, 1.329 for perceived norm and 1.146 for PBC). Similarly, the residuals' assumptions of normality, linearity, and homoscedasticity were tested using a dispersed plot and found to be normally distributed, linear, and homoscedastic. The data ensured that the assumptions for doing multiple regression analysis were met in all of these investigations (Tabachnick & Fidell 2019: 124–125).

5.6.2 Test of reliability

Cronbach's alpha was used to assess the internal reliability of each of the RAA components included in this study. Internal reliability establishes whether the scale's items/questions measure the same construct. According to Francis et al (2004: 9), reliability testing is only appropriate for direct measures of intention determinants and is irrelevant for belief-based measures because respondents can hold both negative and positive beliefs about the same behaviour.

Cronbach's alpha for attitude was 0.83, 0.67 for perceived norm, 0.63 for PBC, and 0.78 for intention, indicating internal consistency for all four categories. When using RAA/TPB, a

Cronbach's alpha value of more than 0.6 is generally deemed acceptable (Francis et al. 2004: 30), and a value of more than 0.75 is considered more suitable (Fishbein & Ajzen 2010: 80).

5.7 INTENTION TO USE IUCD

Intention to utilize IUCD was assessed using three questions, each with five possible ratings ranging from +1 (strongly disagree) to +5 (strongly agree) through +3 (neutral opinion), as indicated in section 3.5.2.4 of chapter 3. The mean score for intention was computed by taking the average of the three questions. Additionally, the calculated mean of intention for each of the respondents was recorded as 'strongly disagree' for mean values of 1.0-1.79, 'disagree' for mean scores of 1.80-2.59, 'neutral' for mean values of 2.60-3.39, 'agree' for mean values of 3.40-4.19, and 'strongly agree' for mean values of 4.2-5.0 to facilitate analysis and interpretation (Pimentel 2010: 111, 2019: 188). The mean value was recorded in the same way for attitude, perceived norm, and PBC. The mean for intention was 2.47, with a standard deviation of 0.84, indicating that most short-acting contraceptive users have not yet established an intention to use IUCD within the next year, as the mean value is less than the scale's midpoint (i.e., less than 3). Only 25 (8.4%) of short-acting contraceptive users (95% CI of 5.2%, 11.5 %) intend to use IUCD within the next year (either strongly agree (1.4%) or agree (7.0 percent), as seen in the graph on fig 5.6. Over half of SAC users (55.5%) had no intention to use IUCD within one year, while the remaining 36.1 % have a neutral intention on the usage of IUCD in the coming year.

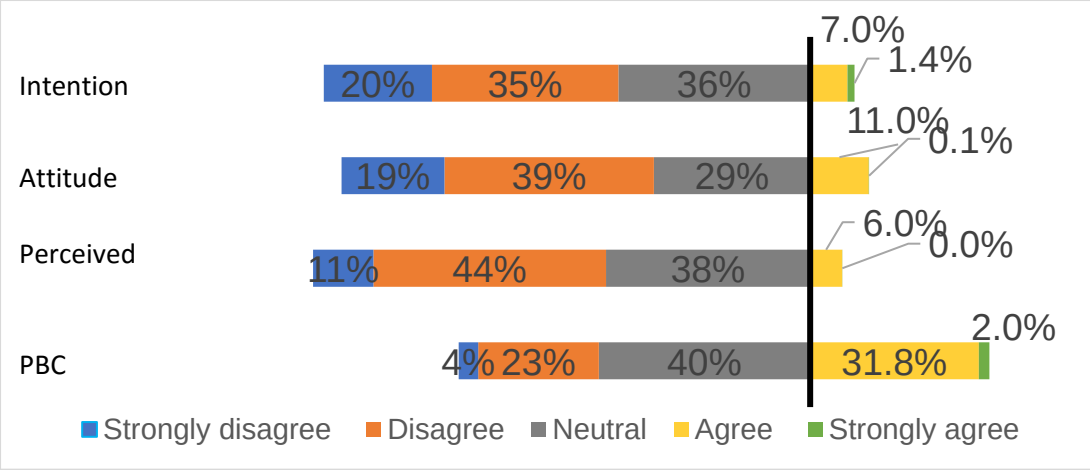

Figure 5.6: Intention, Attitude, Perceived Norm and PBC of Users of SACs towards the Use of IUCD in Addis Ababa, Oct 2020 (n=299)

5.7.1 Effect of socio-demographic factors on intention

The mean score of intention was recorded as *intender* and *non-intenders* to analyse the effect of background factors on intention to utilize IUCD in Addis Ababa. Women who scored 'strongly agree' and ‘agree' were classified as intenders to use IUCD, whereas those who scored 'strongly disagree', 'disagree' and 'neutral' were classified as non-intenders.

Table 5.4 shows the intention to apply IUCD by background factor, along with the chi-square and p-value. As shown in the table, there was no difference between intenders and non-intenders in terms of age, marital status, occupation, educational level, religion, number of children alive, or IUCD use in the past. However, there was a statistically significant difference between those who have intention and those that do not yet have intention to use IUCD by future fertility plan and educational level of husband/partner.

Women who do not want to have any more children in the future were more likely than those who do want to have children in the future or those who have not yet decided on their fertility to be favourable about using IUCD. About 18.8% of women who do not want to have children in the future want to use IUCD within the next year, compared to just 6.8% of women who want to have children in the future or have not yet decided on their reproductive plan (X^2 = 5.411 and p-value of 0.033). Having a husband/partner with a higher education level than high school was linked to a positive intention to use IUCD among SAC users. About 12.3% of women whose husbands have a diploma, degree, or higher level of education planned to use IUCD in the next year, compared to only 4.9 percent of women whose husbands were uneducated or had only a primary or secondary school education (X^2 = 4.398 and p-value of 0.048).

TABLE 5.4: INTENTION TO USE IUCD AMONG SAC USERS IN ADDIS ABABA, BY BACKGROUND FACTORS, OCT 2020

Variable	Description	Not intending to use IUCD n (%)	Intending to use IUCD n (%)	Chi-square (X^2)	P-value
Age of the respondent	18-24 years	55 (96.5%)	2 (3.5%)	2.603[a]	0.286
	25-34 years	155 (91.7%)	14 (8.3%)		
	35-49 years	62 (88.6%)	8 (11.4%)		
Current marital status	Currently married	238 (91.2%)	23 (8.8%)	0.545[a]	0.753
	Currently not married	36 (94.7%)	2 (5.3%)		
Current employment status	Currently working (full or part time)	170 (92.4%)	14 (7.6%)	0.16	0.827
	Currently not working	102 (91.1%)	10 (8.9%)		
Religion of respondent	Christian	231 (92.0%)	20 (8.0)	1.064[a]	0.792
	Muslim	42 (91.3%)	4 (8.7%)		
	Other	1 (100%)	0(0%)		
Educational level of the respondent	Not educated	36 (92.3%)	3 (7.7%)	3.920[a]	0.135
	Primary or secondary	133 (95.0%)	7 (5.0%)		
	Higher education (diploma, degree and above)	105 (88.2%)	14 (11.8%)		
Partner's education level: attended beyond secondary level (diploma, degree and above)	Yes	121 (87.7%)	17 (12.3%)	4.398	0.048*
	No	116 (95.1%)	6 (4.9%)		
Number of children that the woman currently has	0 (no child yet)	52 (98.1%)	1 (1.9%)	3.950	0.143
	1-2 children	157 (89.7%)	18 (10.3%)		
	More than 2 children	54 (93.1%)	4 (6.9%)		
Planning to have child in future	Yes, or undecided	245 (93.2%)	18 (6.8%)	5.411[a]	0.033*
	No	26 (81.3%)	6 (18.8%)		
Ever use of IUCD	Yes	30 (85.7%)	5 (14.3%)	1.963[a]	0.183
	No	239 (92.6%)	19 (7.4%)		
Total		**274 (91.6%)**	**25 (8.4%)**	**NA**	**NA**

[a.] fisher exact test was used as one or more cells have expected value less than 5

* Significant at p value <0.05

5.8 DESCRIPTIVE ANALYSIS OF DIRECT MEASURES OF INTENTION AND THEIR UNDERLYING BELIEFS

This study used a reasoned action approach (RAA) as its theoretical framework, as mentioned in section 2.2.2 of Chapter 2. Attitude, perceived norm, and perceived behavioural control, according to RAA, are direct predictors of intention (PBC). The underlying weighted behavioural, normative, and control beliefs, respectively, determine these three direct measures of intention. The descriptive findings of the direct measures of determinants of intention and the underlying beliefs are presented in this section of the research. Correlation and regression analysis among the RAA constructs are described in the following sections.

Attitude was assessed using four questions on a Likert scale, as described in section 3.5.2.4.1 of chapter 3. The mean of the four questions was used to compute the attitude score. Similarly, perceived norm and PBC were assessed using four questions each, and the scores for perceived norm and PBC were derived using their respective means. The mean score for attitude, perceived norm, and PBC were then recorded, as illustrated in graph 5.6, to provide the values for strongly disagree to strongly agree, as presented in section 3.5.2.5.1 of the chapter 3.

5.8.1 Attitude and weighted behavioural belief

The mean for attitude was 2.48 (with a standard deviation of 0.7) out of a possible range of 1.0 to 5.0 (see table 5.5), indicating the presence of a negative attitude because the mean score was lower than the scale's midpoint.

Only 45 (11.1 %) of SAC users in Addis Ababa had a favourable attitude towards the usage of IUCD during the next one year, as indicated in figure 5.6. The majority of SAC users (58.9%) had a negative attitude towards IUCD use, while nearly one-third (29.4%) have a neutral attitude regarding the IUCD use in the coming year (see fig 5.6). The mean of the weighted behavioural belief, which is determined as the product of behavioural belief multiplied by the evaluation of the belief outcome, was negative 11.9 (with SD of 9.05) with a possible range of negative 70 to +70 (see table 5.5).

The negative weighted behavioural belief score and the mean value of attitude being smaller than the midpoint of the Likert scale suggest that users of short acting contraceptives in Addis Ababa have a unfavourable attitude and a negative behavioural belief about using IUCD within the next one year.

5.8.2 Perceived norm and weighted normative beliefs

The mean of perceived norm was 2.51, with a standard deviation of 0.63. (See table 5.5). About half of SAC users (55.2%) had experienced social pressure not to use IUCD, whereas just 6% have experienced supportive social pressure to use IUCD within the following year. If they want to utilize IUCD during the next year, about 38% of SAC users sense neither negative nor positive societal pressure (fig 5.6). This indicates that the majority of SAC users believe their social support structure will not support their usage of IUCD in the coming year. For those planning to use IUCD during the next year, the weighted normative belief, which predicts perceived norm, had a mean of negative 0.28 (with SD of 1.7), indicating that most SAC users have a negative to neutral belief about their social pressure (see table 5.5).5.8.3 PBC and weighted control belief

The mean PBC score was 3.05 (with a standard deviation of 0.72), indicating that SAC users felt in control of whether or not to use IUCD in the coming year because the mean score is above the scale's mid-point. About one-third of SAC users (33.8%) believe they have control over their decision to use IUCD (i.e., one out of every three SAC users has the capacity and power to determine whether or not to use IUCD), while the remaining 39.8% have a neutral view about their perceived control. Only 26.4 % of SAC users believe that the choice of whether or not to use IUCD is beyond their control (see fig 5.6).

Weighted control belief, which is the underlying beliefs and determinant of PBC, had a mean of 8.64 (out of the possible range of $\pm$40 score) (see table 5.5). These findings indicate that users of SAC have a moderate level of control over their usage of IUCD, indicating that using IUCD in the next year is fairly easy if they wish to.

5.8.3 Correlation among the constructs of RAA

The association between the constructs included in the theoretical framework is shown in Table 5.5. The intention to use IUCD within the following one year was statistically associated with its three direct measures, as predicted by RAA's theoretical assumptions (i.e., attitude, perceived norm and PBC were statistically correlated with intention). Attitude has the strongest association with intention (r=0.68), whereas intention has the weakest link with PBC (r=0.15). Attitude was correlated with weighted behavioural belief (r=0.32), which is computed as the sum of behavioural belief (BB) multiplied by the result evaluation of the belief. At a p-value of 0.01, weighted normative belief (NB) was correlated with perceived

norm (r=0.46), whereas weighted control belief (CB) was correlated with PBC (r=0.17). The intention was statistically associated with all three weighted beliefs (i.e., behavioural, normative, and control weighted beliefs) (see table 5.5). The significant correlation of attitude with weighted BB, perceived norm with weighted NB, and PBC with weighted CB, as well as all six indexes with intention, demonstrates that the beliefs, referents, and control factors identified during the elicitation phase of this study do predict attitude, subjective norms, and PBC. Furthermore, the findings of this study demonstrated that by executing focused interventions (such as SBCC) on the identified behavioural, normative, and control beliefs, it is possible to change attitude, perceived norm, and PBC, and ultimately intention (von Haeften et al. 2001: 153, 157).

Since all the six constructs of RAA are significantly correlated with intention; and the direct measures of intention correlate with their respective underlying weighted beliefs in line with the theoretical framework, all of them were included in subsequent regression analysis.

TABLE 5.5 CORRELATION, MEAN AND STANDARD DEVIATION (SD) OF THE CONSTRUCTS OF RAA TOWARDS INTENTION TO USE OF IUCD WITHIN THE NEXT ONE YEAR IN ADDIS ABABA, OCT 2020

Variable	Intention	Attitude	Perceived norm	PBC	Weighted Behavioural Belief $\sum b_i e_i$	Weighted Normative Belief $\underline{x}(n_i m_i)$	Weighted Control Belief $\sum c_i p_i$
Intention	1						
Attitude	.678**	1					
Perceived norm	.524**	.516**	1				
PBC	.146*	.341**	.140*	1			
Weighted Behavioural Belief $\sum b_i e_i$	.260**	.320**	.242**	0.058	1		
Weighted Normative Belief $\underline{x}(n_i m_i)$	.398**	.371**	.457**	.190**	0.088	1	
Weighted Control Belief $\sum c_i p_i$	.223**	.160**	.148*	.165**	0.105	.306**	1
Mean	2.43	2.48	2.51	3.05	-11.91	-0.28	8.64
SD	0.78	0.70	0.63	0.72	9.05	1.70	7.65
Possible Range of individual scores	+1 to +5	+1 to +5	+1 to +5	+1 to +5	-70 to +70	-10 to +10	-40 to +40
Number of items measuring the construct	3	4	4	4	7	5	4

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

5.9. DETERMINANTS OF INTENTION TO USE IUCD

In this study, the intention to use IUCD in Addis Ababa was examined in two ways: directly and indirectly, as described in section 3.5.2.5 of chapter 3. The direct measure is assessing intention through the proximal determinants of intention (i.e attitude, perceived norm and PBC) while measuring intention indirectly is through assessing the effect of distal determinants (i.e weighted behavioural, normative and control beliefs) on intention. Findings using the two approaches are presented as follows.

5.9.1 Direct determinants of intention

To predict intention, the three direct predictors of intention were entered into a multiple regression analysis. As seen in table 5.6, attitude, perceived norm, and PBC all predicted intention significantly. The model predicted 51% of the variation in IUCD intention ($r^2 = 0.507$, F = 101.268 at df of 3 and p<0.001).

This research demonstrates that attitude, perceived norm, and PBC all play a role in determining whether or not users of short-acting contraceptive methods will use IUCD in the next one year. Attitude has the biggest effect on intention (β=0.587), followed by perceived norm (β=0.233), while PBC has the weakest effect on intention (β= -0.087).

TABLE 5.6: MULTIPLE REGRESSION ANALYSIS OF INTENTION TO USE IUCD WITHIN THE NEXT ONE YEAR IN ADDIS ABABA, OCT 2020

Model [a]		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.349	.178		1.962	.051
	Attitude	.661	.057	.587	11.672	.000
	Perceived Norm	.289	.059	.233	4.876	.000
	Perceived Behavioural Control (PBC)	-.094	.047	-.087	-2.000	.046

a. Dependent Variable: Intention

5.9.2 Indirect/distal determinants of Intention - using belief-based measures

According to the purpose and objectives of this study, it is necessary to determine the precise beliefs that are responsible for the observed intention to use IUCD by examining their impact on attitude, normative belief, and PBC. Correlation of weighted beliefs with intention and stepwise multiple regression analysis were used to identify key behavioural, normative, and control beliefs responsible for intention of users of short acting contraceptives regarding the use of IUCD in Addis Ababa, as recommended by von Haeften et al (2001: 157–158). As described in Chapter 6, the identified beliefs will be used to develop behavioural change communication strategy. The following three steps were followed to identify key beliefs responsible for the observed intention towards the use of IUCD.

5.9.2.1: Step 1: correlation between intention and weighted beliefs

Bi-variate correlational analysis between the specific behavioural belief weighted by outcome evaluation and intention was used to identify important weighted behavioural beliefs responsible for the observed attitude and intention to use IUCD. Three of the weighted behavioural beliefs were statistically correlated with the intention to use IUCD, as shown in table 5.7. ‘Pain or discomfort during sexual intercourse,' ‘the sense of anxiety or pain during the process of insertion of IUCD,' and ‘concern about infertility associated with IUCD use’ were the weighted behavioural beliefs that were statistically correlated with intention. Intention was statistically correlated with weighted normative beliefs of approval from husband (r=0.32) and close friends and neighbours (r=0.26), as shown in table 5.7. Furthermore, the preference to do things like close friends and neighbours (r=0.24) and family members such as sisters (r=0.22) was statistically correlated with the intention to use IUCD in the next year. The role of health workers as a source of social pressure was not correlated with intention to use IUCD.

The weighted control beliefs, like the behavioural and normative beliefs, were correlated with the intention to utilize IUCD. Hearing the experiences of other IUCD users (r=0.35), not having enough children (r=0.21), ability of health facilities to provide support and advice when developing side effects of IUCD (r=0.19), and feeling of being ineligible to receive IUCD (r=-0.225) were all statistically correlated with the intention to use IUCD.

TABLE 5.7: CORRELATION OF INTENTION TO USE IUCD WITH INDIVIDUAL WEIGHTED BEHAVIOURAL, NORMATIVE AND CONTROL BELIEFS

Category of Beliefs	Specific Weighted Beliefs	Correlation (r) of Intention with:		
		Weighted behavioural belief ($b_i x e_i$)	Weighted normative belief (n_i x m_i)	Weighted control belief (c_i x p_i)
Behavioural Beliefs	Prevention of pregnancy for long period of time	0.093		
	Change in menstrual pattern (such as irregularity, painful and excess bleeding)	-0.045		
	Pain on uterus or abdomen or the sense of feeling of foreign material in my body	0.013		
	Pain or discomfort during sexual intercourse	.237**		
	Reducing frequent visit to health facility for refilling contraceptive or risk of forgetting to take contraceptive	0.006		
	The feeling of fear, pain, or discomfort during the procedure of insertion of IUCD	.290**		
	Infertility	.140*		
Normative Beliefs	Husband/partner's approval on my use of IUCD		.319**	
	Approval of my close friends and neighbours on my use of IUCD		.259**	
	Health workers' approval on my use of IUCD		0.103	
	I want to do like my close friends and neighbours do with regards to IUCD		.242**	
	I want to do like my family members (such as aunt and sister) do regarding IUCD		.216**	
Control factors	Hearing experience of other users of IUCD			.352**
	Health facilities providing support and advice when developing unwanted side-effects of IUCD			.189**
	Not having the needed number of children			.209**
	Feeling of being not eligible to take IUCD			.193**

** p<0.001; * p<0.05

5.9.2.2: Step 2: regression analysis of significantly correlated weighted beliefs with intention

Stepwise multiple regression was used as the next step of analysis, using significantly associated weighted beliefs as the independent variable and intention as the dependent variable. Three different models of regression were applied as follows.

a) The significant weighted behavioural beliefs were entered into multiple regression analysis with intention being a dependent variable and the three significantly

correlated weighted behavioural beliefs as independent variables. Two of the beliefs (i.e 'pain or discomfort during sexual intercourse' and 'the feeling of fear, pain or discomfort during the procedure of insertion of IUCD') were found to be significantly associated with intention (R^2= 0.12, F=13.05, df=3, p<0.0001).

b) Similarly, the significantly correlated weighted normative beliefs were entered to regression analysis with intention being dependent variable and the four significantly correlated normative beliefs as independent variable. The regression analysis resulted in all the four weighted normative beliefs to be statistically significant with intention (R^2 = 0.217, F=18.957, df=4 and p<0.0001).

c) All the four statistically correlated weighted control beliefs with intention were entered to regression analysis and all the four were statistically associated with intention (R2 = 0.22, F= 21.217, df=4 and p<0.001) (see table 5.8). 5.9.2.3: Step 3- final regression analysis to predict intention from specific weighted behavioural beliefs

5.9.2.3: Step 3- Predicting intention from specific weighted behavioural beliefs

All of the significant weighted behavioural, normative, and control beliefs from step 2 were entered into multiple regression analysis in the final step of the stepwise regression analysis to predict the independent effect of specific weighted underlying beliefs on intention. As shown in table 5.9, the following critical weighted beliefs independently predicted intention to use IUCD within the next year in Addis Ababa: fear, pain, or discomfort during IUCD insertion procedure, approval from husband, preference of SAC users to do as their close friends and neighbours do regarding IUCD use, hearing/witnessing experiences from IUCD users, not having enough children, and the feeling of not being eligible to use IUCD (R^2=0.342, F=13.689, df=10 and p<0.0001). That means, any intervention (including social and behavioural change communication) should primarily target these six underlying beliefs as they are critical for bringing change on intention of users of short acting contraceptives towards the use of IUCD within the next one year in Addis Ababa

TABLE 5.8: STEP 2 OF REGRESSION ANALYSIS: WEIGHTED BELIEFS AS PREDICTOR OF INTENTION TO USE IUCD IN ADDIS ABABA

Item	R^2	Adjusted R^2	Unstandardized Coefficients [a]		Standardized Coefficients [a] Beta	*t*	Sig
			B	Beta			
Weighted Behavioural Beliefs							
(Constant)	0.12	0.11	2.813	.087		32.289	.000
Pain or discomfort during sexual intercourse			.049	.016	.173	3.007	.003
The feeling of fear, pain, or discomfort during the procedure of insertion of IUCD			.051	.012	.239	4.184	.000
Infertility			.018	.014	.070	1.234	.218
Weighted Normative Beliefs							
(Constant)			2.537	.051		49.285	.000
Husband/partner's approval on my use of IUCD	0.22	0.21	.057	.011	.286	5.086	.000
Approval of my close friends and neighbours on my use of IUCD			.049	.016	.169	3.045	.003
I want to do like my close friends and neighbours do regarding IUCD			.072	.018	.224	4.078	.000
I want to do like my family members (such as aunt and sister) do regarding IUCD			.043	.020	.125	2.186	.030
Weighted control beliefs							
(Constant)			2.407	.048		49.91	.000
Hearing experience of other users of IUCD	0.22	0.21	.077	.013	.334	5.997	.000
Health facilities providing support and advice when developing unwanted side-effects of IUCD			.025	.011	.120	2.145	.003
Not having the needed number of children			.041	.010	.222	4.104	.000
Feeling of being not eligible to take IUCD			.053	.016	.174	3.254	.001

a. Dependent Variable: Intention (mean of intention questions)

***Note**: Regression analysis was run for each of the three weighted beliefs with intention being dependent (i.e., three different models of regression were run with one for weighted control beliefs, one for weighted normative beliefs and one for weighted behavioural beliefs)*

TABLE 5.9: FINAL REGRESSION ANALYSIS STEP: MULTIPLE REGRESSION ANALYSIS OF PREDICTING INTENTION TO USE IUCD FROM SPECIFIC WEIGHTED BELIEFS, ADDIS ABABA, OCT 2020.

Item (weighted beliefs)	R^2	Adjusted R^2	Unstandardized Coefficients [a]		Standardized Coefficients [a] Beta	*t*	Sig
			B	Beta			
(Constant)			2.662	0.082		32.511	0.000
Pain or discomfort during sexual intercourse	0.342	0.317	0.022	0.015	0.078	1.46	0.146
The feeling of fear, pain, or discomfort during the procedure of insertion of IUCD			0.034	0.011	0.156	2.936	0.004
Husband/partner's approval on my use of IUCD			0.025	0.011	0.124	2.177	0.030
Approval of my close friends and neighbours on my use of IUCD			0.029	0.016	0.099	1.84	0.067
I want to do like my close friends and neighbours do with regards to IUCD			0.059	0.017	0.186	3.525	0.000
I want to do like my family members (such as aunt and sister) do regarding IUCD			0.026	0.019	0.074	1.346	0.179
Hearing experience of other users of IUCD			0.061	0.013	0.267	4.794	0.000
Health facilities providing support and advice when developing unwanted side-effects of IUCD			0.011	0.012	0.055	0.983	0.327
Not having the needed number of children			0.028	0.011	0.144	2.566	0.011
Feeling of being not eligible to take IUCD			0.043	0.016	0.142	2.694	0.008

a. Dependent Variable: Intention

5.9.2.4 Identifying the variables within the significant weighted beliefs

The six critical beliefs as indirect determinants of intention to use IUCD within the next one year were identified using the weighted beliefs. For example, the weighted normative belief of 'husband/partner's approval on my use of IUCD' was determinant of intention but the intention might be due to the normative belief itself (i.e 'my husband or partner thinks that I should use IUCD within the next one year'), the motivation to comply (i.e 'I want to do what my husband/partner thinks I should do') or the combined effect of normative belief and the motivation to comply. The same is true for the other five determinant weighted beliefs. Since interventions (such as behavioural change communications) are best targeted by identifying the exact scenario, it is recommended to identify which of the three scenarios to be associated with intention (von Haeften et al. 2001: 159).

TABLE 5.10: CORRELATION OF INTENTION TO USE IUCD WITH SPECIFIC BELIEFS

Weighted Belief	Correlation (r) of intention with			
	Belief	Outcome evaluation	Motivation to comply	Power of control factor
The feeling of fear, pain, or discomfort during the procedure of insertion of IUCD	-0.160**	.245**		
Husband/partner's approval on my use of IUCD	0.208**		0.015	
I want to do like my close friends and neighbours do with regards to IUCD	0.175**		0.122*	
Hearing experience of other users of IUCD	-0.127*			0.356**
Not having the needed number of children	-0.061			0.209**
Feeling of being not eligible to take IUCD	-0.191**			0.186**

** p<0.001; * p<0.05

The correlation of beliefs with intention was done as indicated in table 5.10 to determine which of these three alternative scenarios should be the focus of a behavioural change communication intervention. As shown in the table, four of the six critical weighted beliefs were statistically correlated with both beliefs, outcome evaluation, and perceived power, implying that key messages for a behavioural change communication plan should target both components of the weighted beliefs. The weighted belief of 'not having enough children' was statistically correlated only with the power of the control factor but not with the control belief itself. On the other hand, approval of husband/partner to use IUCD was

correlated only with the belief itself but not motivation to comply with the recommendation of husband showing the need for husband/male engagement in promotion of IUCD in Addis Ababa during the development of SBCC strategy.

5.10 DISCUSSION

The quantitative phase of the research aimed to answer the research question of why current users of short-acting contraceptive methods are not using IUCD and what are the determinants for their intention to use IUCD in Addis Ababa. Discussions based on the findings of this research are shown below.

5.10.1 Potentials for expanding use of LARC in Addis Ababa

This research has demonstrated the presence of potentials for expanding the utilization of LARC among the users of short acting contraceptive methods in Addis Ababa. One out of four SAC users (26.5%) have been using either injectable or pills for more than 3 years which could have been better served with LARC as the women used SAC for a long duration. Additionally, one in three users of SAC have young children aged less than 24 months. It is recommended to have at least two years gap between successive births to minimize the risk of maternal and new-born's negative health outcomes. LARCs including IUCDs are one of the effective contraceptive options to achieve the recommended birth spacing (Cleland et al. 2006: 1813).

One out of ten users of SAC (10.9%) do not want to have any more children and still use either pills or injectable contraceptives for prevention of pregnancy. These women could have benefited more from use of LARC or permanent methods as their objective is limiting birth. Even among those that planned to have children in the future, about 39% are planning to be pregnant after 3 years. Still this group of women that are planning to be pregnant after a long period of time would better be served with LARC than SAC as the LARC will provide the most effective and efficient means of prevention from pregnancy for three or more years while retaining their fertility plan.

Targeted and comprehensive counselling during provision of family planning is an opportunity to address the concerns of potential users of LARC while respecting their

preferred method of choice. Studies have shown the presence of missed opportunities during counselling to expand the utilization of LARCs. In Addis Ababa, about 41% of family planning users were not told by the service provider about other family planning methods than the method they received (PMA Ethiopia 2019: 6). Providing comprehensive counselling to new as well as continuing users of family planning might be one of the strategies to promote LARC use including IUCD.

This research has shown that about 28% of the SAC users have planned to switch to LARC sometime in future but the future preference is mainly for implant than for IUCD (22% for implant versus 6% for IUCD) which shows higher acceptability of implant than IUCD among users of SAC. Preference for implant over IUCD is similar to other findings in Ethiopia (Hinkosa et al. 2017; Mohammed et al. 2017; Shiferaw & Musa 2017; Meskele & Mekonnen 2014) and other African countries (Jacobstein 2018: 27; Ngo et al. 2017).

The rapidly increasing popularity of implant over other long acting and permanent methods of contraceptives was ascribed to its ease of provision as can be inserted in few minutes by trained providers including community health workers, uncomplicated provision as its insertion doesn't need pelvic examination or abdominal surgery, effectiveness, and other similar factors (Jacobstein 2018; Ngo et al. 2017). Provider's bias (such as preferring to recommend for methods taking short time for insertion or provision), misconceptions, lack of space for privacy during pelvic examination and insertion and resistance from women who do not feel comfortable to have an insertion by a man were cited as additional providers side reasons for lower preference of IUCD over the implant (Benova, Cleland, Daniele & Ali 2017: 189).

Even if the preference for implant is much higher than IUCD, evidence has shown possibility of expanding the utilization of IUCD by having strong community demand generation through addressing community level concerns, myths and misconceptions coupled with strong supply side programming including supportive supervision, availing and training of health workers and ensuring continued supply needed for IUCD delivery and reaching the community with appropriate strategy like conducting outreach sessions in hard to reach areas (Cleland et al. 2017; Tilahun et al. 2016).

5.10.2 Intention to use IUCD

This research has shown that most of the users of SAC in Addis Ababa do not yet have developed positive intentions towards the use of IUCD. Only 8.4% of the users of SAC have intention of using IUCD within the next one year. The low level of intention to use IUCD in Addis Ababa is in line with previous studies conducted among users and non-users of contraceptives in Addis Ababa and other parts of the country. In Debre Markos town, north-western Ethiopia, the intention to use IUCD among married women was 11.6% (Bulto et al. 2014: 5). In Wolaita zone, southern Ethiopia, the intention to use IUCD among users of SAC was 5.8% (Meskele & Mekonnen 2014: 5). In Adigrat town, northern Ethiopia, the intention to use IUCD among married women was 11.6% (Gebremariam & Addissie 2014b: 5). As the users of SAC methods in Addis Ababa have low level of intention to use IUCD, it is not expected for them to start using IUCD within the next one year as intention is the key determinant for practicing a behaviour, according to TPB or RAA (Fishbein & Ajzen 2010: 39).

To promote utilization of IUCD among the users of short acting contraceptive methods, any intervention, including SBCC, first needs to bring change in intention. Unless the women develop positive intention towards the use of IUCD, it is unlikely for them to start using IUCD. Therefore, the SBCC strategy to be developed in the next chapter will focus on ways of bringing change on the intention by addressing the determinants and the underlying beliefs (Fishbein & Ajzen 2010: 331–332).

5.10.3 Direct determinants of intention to use IUCD

The determinants of intention to use IUCD among current users of SAC in Addis Ababa are attitude, perceived norm and PBC, which is consistent with the theoretical assumptions of RAA. Attitude is the strongest predictor of intention followed by perceived norm and PBC. Similar findings were revealed in a similar study conducted in Gondor city, north-western Ethiopia, where of all the three predicted intentions to use IUCD among SAC users, attitude was recorded as being the strongest determinant (Berhe & Nigusie 2020: 10).

The three independent predictors (attitude, perceived norm and PBC) were able to explain 51% of variability in intention towards the use of IUCD in Addis Ababa. A study conducted in Wales, UK, among users of family planning using TPB, found the ability of TPB to explain 51.1% of variance in intention towards the use of LARC (Roderique-Davies et al. 2016: 510). According to Fishbein and Ajzen (2010: 283), RAA can account for about 50% to 60% of variance in intentions and for about 30% to 40% of the variance in behaviour. A meta-analysis of 74 studies conducted using RAA found that RAA can predict 58.7% of variation in intention (Rosemary McEachan et al. 2016: 608). Ability of the current model in this research explaining 51% of the variation in intention shows the acceptability and relevancy of designing appropriate intervention based on the findings of this research to bring change towards the use of IUCD in Addis Ababa.

In this research, three out of five users of SAC (58.9%) have a negative attitude towards the use of IUCD. Additional 29.4% of SAC users have an attitude that is neither positive nor negative. Only 11.1% of SAC users in Addis Ababa have a favourable attitude towards the use of IUCD within the next one year. For each unit change in attitude, intention also changes in the same direction by 0.66 units. That means, as most SAC users hold an unfavourable attitude, they also have negative intentions towards the use of IUCD within the next one year.

Previous studies conducted in Ethiopia have shown the effect of attitude on intention and utilization of IUCD and other LARCs. Short acting contraceptive users having negative attitudes towards the use of LARC were less likely to have intention of using LARC in Wolaita zone, southern Ethiopia (Meskele & Mekonnen 2014: 6). In north-western Ethiopia, those family planning users that had a favourable attitude were 13 times more likely to use LARC than those who had a negative attitude (Gashaye et al. 2020: 12–13). Similarly, those women having a negative attitude towards the use of IUCD were less likely to intend IUCD in Gonder city, north-western Ethiopia, (Berhe & Nigusie 2020: 12) and Addis Ababa (Dereje, Engida & Holland 2020: 7).

Negative attitude towards IUCD is one of the reasons for low utilization of IUCD and LARCs while having positive attitude predicts intention and utilization of IUCD and other

LARCS in Ethiopia including Addis Ababa. Misconceptions, myths, and concerns related to IUCD are drivers for the negative attitude towards the use of IUCD in Addis Ababa and the rest of the country (Biza, Abdu & Surender Reddy 2017: 473; H et al. 2017: 10; Meskele & Mekonnen 2014: 6).

According to current study, the majority of SAC users in Addis Ababa believe they will face negative social pressure if they begin to use IUCD (i.e., most of the SAC users in Addis Ababa think that important people around them do not approve the use of IUCD or are not using IUCD). Only 6% of users of SAC have the perception that the use of IUCD is acceptable by their social support structures. For each unit change in perceived norm, intention towards the use of IUCD also changes by 0.29 units in the same direction. Since very few users of SAC (only 6%) have the perception that their social support approves the use of IUCD, the intention of most users of SAC regarding use of IUCD is negative. Perceived norm as predictor of intention to use IUCD and other contraceptives was found in other previous studies (Berhe & Nigusie 2020: 12). Perceived norm has an effect on intention to use IUCD as social environment can exert strong influence on people's intentions and actions (Fishbein & Ajzen 2010: 129)

In this research, about 34% of SAC users believed that the decision to use IUCD within the next one year is within their control and believe they can use it if they want to. Only one out of four SAC users (26%) believe that the decision to use IUCD is beyond their control or is difficult for them to use within the next one year. This shows that at least one-third of the SAC users have the perception of control over their decision to use or not to use IUCD within the next one year. The high level of control on their possible use of IUCD might be because the interviewed participants are already using the contraceptive method of their choice which might have enabled them to realize their perceived control on their decision-making regarding use or no usage of IUCD.

The role of PBC towards the intention to use IUCD among the users of SAC in Addis Ababa is different from attitude and perceived norm. Like attitude and perceived norm, PBC is an independent predictor of intention to use IUCD, but PBC has reverse direction with intention. For each unit increase in PBC, intention reduces by 0.09 units. This might

be due to the high level of perceived capability of SAC users to decide on their preferred choice of contraceptive method. As some of the women (about 34%) have a relatively high level of self-confidence to decide on their contraceptive choice, they are not intending to use IUCD by preference. That might be the reason for the opposite direction of intention and PBC among users of SAC. Similar finding was found in a study conducted in Gondor city, north-western Ethiopia, among users of contraceptives where intention towards the use of LARC increases as PBC reduces (Berhe & Nigusie 2020: 12). Similarly, a study conducted in the UK among users of contraceptives found that as PBC increases, the odds of using LARC decrease (Roderique-Davies et al. 2016).

As presented above, the users of SAC method in Addis Ababa have low intention to use IUCD within the next one year. The observed low level of intention is mainly due to the presence of an unfavourable attitude towards the use of IUCD and negative perceived social norm. PBC is another determinant of intention, but its role is minimal as the regression coefficient was only -0.09 and had weak correlation with intention (r=0.15). According to Fishbein and Ajzen (2010: 192), low regression weight coupled with a low correlation indicates the variable in question playing little or no role in determining the intention.

Therefore, the focus of communication strategy and other interventions aiming to change intention should focus on changing attitude and perceived norm. The SBCC strategy to be developed in chapter 6 will focus on changing attitude and perceived norms to bring change towards intention and ultimately on the use of IUCD in Addis Ababa.

5.10.4 Indirect determinants of intention to use IUCD

One of the advantages of using RAA/TPB as a theoretical framework is its ability to pinpoint few determinants of intention and the critical underlying beliefs associated with the determinants. Then, interventions can be designed by addressing these few and critical determinants of intention with the underlying beliefs to achieve the intended result/behaviour. This research identified six underlying beliefs as indirect predictors of intention towards the use of IUCD in Addis Ababa within the next one year.

Among the behavioural beliefs, which predicts attitude, only concern related with the feeling of fear, pain, or discomfort during procedure of insertion of IUCD was found to be an independent predictor of having low intention to use IUCD. Fear of pain and discomfort related with the procedure of insertion as a factor for unfavourable attitude as well as low intention towards the use of IUCD was reported in other previous studies in Ethiopia and was mainly associated with issue of privacy for pelvic examination. In Mizan Aman town, Southwestern Ethiopia, about 31.5% of women of reproductive age group had perceptions that IUCD causes shame during insertion (Yemaneh & Birie 2017). In Wolaita zone, Southern Ethiopia, about 21% of SAC users felt the insertion of IUCD into the uterus interferes with their privacy (Meskele & Mekonnen 2014). In Bati town, north-eastern Ethiopia, 52.9% of family planning users agreed that IUCD insertion is shameful, and privacy will be affected (Biza et al. 2017: 472). In Addis Ababa, about half (49.9%) of the users of contraceptives believed IUCD cause loss of privacy (Ali et al. 2019).

The women might also be concerned with the procedure of insertion because of the feeling of anxiety or embarrassment to expose genital area to someone who is a stranger to them (such as health workers), anticipating lack of privacy, and the actual feeling of pain during insertion (Yesim & Mustafa 2019: 243; Fevriasanty, Lyneham & Mccauley 2013: 571). Health education and counselling to address the negative perception related to the procedure of insertion are some of the strategies that will help in reducing the anxiety and fear related with insertion of IUCD (Yesim & Mustafa 2019: 244).

To assess the effect of social pressure, this research included both injunctive and descriptive normative beliefs. Perceived norm towards the use of IUCD is influenced by both injunctive and descriptive normative belief components. Husband /partner's approval for use of IUCD was one of the indirect determinants for intention to use IUCD. Additionally, the users of SAC are more likely to do like what their close friends and neighbours do regarding IUCD. The findings indicated that the SBCC as well as any other intervention should address both injunctive and descriptive beliefs side of perceived norm as both sides of the norm influence the intention towards use of IUCD in Addis Ababa. Both sides of normative beliefs influencing intention are consistent with the theoretical assumptions of RAA (Fishbein & Ajzen 2010: 131).

The influence of neighbours and close friends on utilization of contraceptives including IUCD have been documented in various studies. Friends and neighbours act as source of information about contraceptives for some women including adolescents while other women start to use IUCD because it is being used by their friends (Ali et al. 2019: 4; Kebede, Abaya, Merdassa & Bekuma 2019: 10; H et al. 2017: 7). Within the cultural context of Ethiopia, including Addis Ababa, close friends and neighbours are considered as valuable sources of information that might have influence on intention towards the use of IUCD.

The role of husband/partner in utilization of contraceptives including IUCD use has been documented in previous researches across the country. A study conducted in Addis Ababa showed that women that got support from their husband/partner for using IUCD are thirteen times more likely to use IUCD than those whose husbands or partners were against its use (Dereje et al. 2020: 7). In Jimma town, Southwestern Ethiopia, married women whose husbands support utilization of LARCs were 25 times more likely to use LARCs than those whose husbands opposed (Taye, Woldie & Sinaga 2014: 5). Similarly, in Adama town, central Ethiopia, women who had approval from their husbands/partners were 30 times more likely to accept and use LARC than those whose husbands or partners opposed its use (Mohammed et al. 2017: 62).

In promotion and utilization of family planning methods, the role of male or husband participation has been documented in several ways. Men can be involved as clients to family planning services where the men or husbands themselves are counselled and/or educated to use family planning methods. Male engagement as supportive partners is another area where partners/husbands play a crucial role in utilization of contraceptive methods including IUCD. Supportive communication and joint decision making within couples regarding the choice and use of contraceptives can facilitate women's use of family planning methods. Men as agents of change to bring gender equality by advocating against discriminatory laws and policies is the third possible area of male involvement in family planning (Adamou, Iskarpatyoti, Agala & Mejia 2017: 12).

Provision of accurate information on fertility and contraceptive use including addressing IUCD specific concerns and misconception (such as on issues of fertility and use of IUCD, fear of insertion procedure, etc) directly to the men/husbands through SBCC approaches have been demonstrated to enhance utilization of contraceptive through involvement of husbands/males in family planning promotion (USAID 2018: 8; WHO 2002: 2, 33–34)

Among the users of SAC in this research, three specific beliefs were identified as indirect determinants of intention that either enable or hinder the women's intention towards the use of IUCD. Hearing experience from other users of IUCD facilitates the SAC users to intend the use of IUCD while not yet having the needed number of children and the feeling of being not eligible to use IUCD which hinders the intention to use IUCD.

Those women that consider themselves as not yet having enough children had lower intention to use IUCD within the next one year. Other studies conducted in Ethiopia have shown the role of fertility preference and number of children alive as determinants for intention and use of IUCD and other LARCs (Gashaye et al. 2020: 14; Melka et al. 2015: 3). In Axum town, northern Ethiopia, among women that use contraceptives, those with less than four alive children were 96.7% less likely to intend LARC than those who have 5 or more children after controlling for socio-demographic and other variables (Hinkosa et al. 2017: 40). In Nekemit town, Western Ethiopia, women who had more than two children were two times more likely to use long acting or permanent methods than those who had less than or equal to two children (Melka et al. 2015: 3). In north-western Ethiopia, women that planned to limit their birth were 2.4 times more likely to use LARC than those who wanted to have a child soon (Gashaye et al. 2020: 14).

The intention to use IUCD by those that consider themselves as having enough children but not by those who still want to give birth might be because of the concern that IUCD causing infertility or fear of resumption of fertility when ceasing to use IUCD. Various researches conducted in Ethiopia including Addis Ababa have shown presence of the belief that IUCD causes infertility or delayed return of fertility (Woldu, Ermolo, Lemu & Gejo 2020: 4; Ali et al. 2019: 5; Biza et al. 2017: 474; Bulto et al. 2014: 6; Gebremariam & Addissie 2014b: 5). Women who believe they have a sufficient number of children may

be less concerned about their infertility and are willing to use IUCD. Women who desire to have child in the future may be hesitant to use IUCD if they fear it causes infertility. That could be one of the reasons that not yet having needed number of children to be determinant for intention to use IUCD.

In this research, the feeling of being not eligible to take IUCD (i.e., the belief that 'IUCD is not allowed for me') was one of the factors that indirectly determined intention to use IUCD. In the qualitative phase of this research, some of the women considered themselves as not eligible to use IUCD because of previous STIs, being young or not yet having children. The findings show the gap in understanding possibly misconceptions on who is allowed and not allowed to use IUCD. According to WHO, IUCD is safe and suitable for almost all women of reproductive age including adolescents, those who want to space or limit their birth, married, or not married, immediately after abortion, postdelivery, are breastfeeding, those having HIV infection without advanced AIDS diseases, had STIs, etc (WHO/RHR & CCP 2018: 158).

In this research, hearing experiences of other users of IUCD was found as an enabling factor to intend the use of IUCD. Hearing experiences of other users of family planning including IUCD have been shown to motivate non-users to use contraceptives. Hearing the actual experience of users of IUCD can address common misconceptions and concerns. In Zambia, sharing experience by happy clients who used LARC for over six month and satisfied with the method, were found to be a successful model for promotion of IUCD and implant (Malama et al. 2020: e6). Sharing experiences by users of IUCDs had the ability to reassure women about concerns related with IUCD (Benson et al. 2012: 202). A BCC campaign that included experience of adopters of LARC using quotes, videos and testimonies have been shown to increase the intention and utilization of LARCs (Sundstrom et al. 2016). All these findings indicate the influence of sharing the experience of users of IUCD to non-users in promoting the use of IUCD.

Mass media, as a tool for SBCC, is one of the possible areas for users of IUCD to share their experience. According to Ethiopian DHS (2016: 120), 76.9% of women and 68.6% of men aged 15-49 in Addis Ababa saw family planning messages on television while

54.4% of women and 60.8% of men heard similar message from radio, which shows the accessible nature of mass media for communicating contraceptive related messages including IUCD. In a study conducted in Addis Ababa, source of information being mass media or friends was found as a predictor for use of IUCD among users of family planning (Dereje et al. 2020: 7). Exposure to family planning information through media is associated with utilisation of long acting and permanent methods (Wado, Gurmu, Tilahun & Bangha 2019: 12). Radio serial drama is also found to be successful in promoting reproductive health issues including family planning and HIV/AIDS within the context of Ethiopia (Okigbo 2014: 41–43). Considering the value of mass media, the SBCC strategy to be developed for the promotion of IUCD use in Addis Ababa, should incorporate media as one of the tools to deliver pertinent information regarding IUCD both to the women and their husbands/partners.

In this research, the role of health workers as one of the sources of social pressure was checked but was not found to be a predictor of intention to use IUCD. This might be because the research participants were already counselled by health workers on contraceptives including IUCD but preferred to use SAC irrespective of the advice and information received from the family planning provider during counselling. As described above, a significant proportion of the research participants have high levels of PBC and were able to choose their preferred SAC method even if counselling included IUCD. As a result, the SAC users might consider the influence from health workers as less relevant towards the use of IUCD. Another reason might be the quality of counselling provided to SAC users being not comprehensive enough to be considered as a source of social pressure among users of SAC. A study that assessed the trend of quality of counselling in Ethiopia from 2014-2018 found that recipients of long-acting contraceptive methods received better quality of counselling than those that received short acting contraceptive methods (Hrusa et al. 2020: 13).

However, the health workers' approval or encouragement being not associated with intention to use IUCD in the current research doesn't mean that health workers do not have a role in promoting IUCD. Rather, those that were influenced through the advice/counselling of the health workers probably have already started using IUCD and

were not included in this research as they were not the study participants for this research. Various studies conducted in Ethiopia have shown the role of health workers in influencing the use of IUCDs and other LARCs. A study conducted in Addis Ababa found that about 33.6% of IUCD users started to use IUCD because of its recommendation by health workers (Dereje et al. 2020: 6). In Jimma town, Southwestern Ethiopia, married women that discussed LARC with health workers were 13 times more likely to use LARC than those who didn't (Taye et al. 2014: 5). In Nekemit town, Western Ethiopia, those women that discussed LARCs with health workers were 14 times more likely to utilize the method than those who didn't have a discussion with health workers (Melka et al. 2015: 4). In Hossana town, Southern Ethiopia, women that discussed LARC methods with health professionals were 2.6 times more likely to use postpartum LARC than those who didn't (Woldu et al. 2020: 5). In north-western Ethiopia, family planning clients advised by health care workers were 10.7 times more likely to use LARC methods than those who choose by themselves (Gashaye et al. 2020: 12).

That means, the health workers including family planning providers play a crucial role in influencing choice of method and promoting the use of contraceptives including IUCD in the context of Ethiopia and should be considered as one of agents for promoting the use of IUCD during family planning counselling sessions.

Integration of IUCD promotion through counselling during sessions of antenatal, postnatal and abortion or postabortion care by health workers is one of the successful approaches documented for utilization of IUCD during post-natal or postabortion period and should be considered as one of the strategies to promote IUCD (Woldu et al. 2020: 5; Cleland et al. 2017: 522–523; Samuel, Fetters & Desta 2016: S65).

In Addis Ababa, urban health extension professionals (UHEPs), who are nurses by profession, are responsible for providing health education and promotion at community level using various strategies including through house-to-house visit, community mobilization, demonstration and linking/referring the community with the nearby health centre for health services including family planning. Promotion of contraceptives including

IUCD is one of the 16 packages of UHEPs (FMoH 2016c: 10, 20). The UHEPs should be part of the SBCC strategy to promote the use of IUCD in Addis Ababa.

Additionally, family health team (FHT) is established as part of the primary health care system in Addis Ababa. The FHT is team of clinical professionals (such as health officer, and BSC nurse) together with UHEPs conducting outreach health service to the community within the health center's catchment area. The FHT conduct door-to-door visit of households prioritized for visit by UHEPs. The criteria for seleting priority households include housholds having low income and those with high priority such as households having pregnant women, young child less than five years old or those with chronic diseases and elderly/bedridden patients. The FHT can also serve in promotion of family planning including IUCD as part of their community based service during their prioritized household visits (Ludwick, Endriyas, Morgan and et al. 2021:2; FMoH 2016c: 10, 20)

5.10.5 Linking research finding with intervention

In summary, this research has demonstrated that the intention to use IUCD among current users of short acting contraceptive methods in Addis Ababa is low. The determinants for the low intention are the presence of unfavourable attitude towards IUCD, perceived negative social pressure and PBC with attitude being the strongest predictor. Since the intention to use IUCD is very low, the focus of any intervention to promote the use of IUCD needs to focus on changing the intention towards the use of IUCD. Additionally, six underlying beliefs predicted attitude, perceived norm and PBC to bring change on intention and ultimately lead to use of IUCD.

Interventions, including SBCC strategy, that will have greatest effect on changing intention of users of SAC methods towards the use of IUCD are those interventions focusing on changing the feeling of anticipated pain and discomfort associated with the procedure of insertion of IUCD, facilitate in getting husbands/partners approval or support to use IUCD and knowing that other people living around them such as their close friends and neighbours use IUCD. The intervention should also consider integrating mechanisms of sharing practical experience of users of IUCD to non-users regarding their lively experience while using IUCD. The intervention should also include strategies for

addressing beliefs that prevent women from intending to use IUCD, such as promoting the fact that almost all women of reproductive age are eligible to use IUCD and that future plans to become pregnant should not be a major factor in deciding whether or not to use IUCD because it is a reversible contraceptive that does not cause infertility. Evidence has shown the possibility of expanding LARCs including IUCD use by having comprehensive programs that address both demand generation and strengthening the supply side of the family planning program. When demand is generated by interventions such as BCC, the health system should be able to respond by having consistent supply of IUCD and other needed commodities; ensuring health workers are available, motivated, and trained on skills of counselling, insertion, and removal; provision of supportive supervision and monitoring the progress (Benova et al. 2017: 189; Cleland et al. 2017: 9; Ngo et al. 2017: 1742; Blumenthal et al. 2013: 171–172).

In Addis Ababa, according to PMA (2019: 10) assessment, all (100%) of the visited public health facilities were ready to provide IUCD as they had trained health workers to insert and remove IUCD and had IUCD in stock at the time of visit. Considering the high level of readiness of the health facilities in Addis Ababa to provide IUCD, one of the main gaps is on demand generation side of the programming which this research aimed to address by developing comprehensive SBCC strategy to promote the use of IUCD within the health system of Addis Ababa city administration.

Chapter six presents the SBCC strategy developed to promote the use of IUCD in Addis Ababa.

5.11 SUMMARY OF THE CHAPTER

This chapter presented findings from the quantitative phase of the research followed by discussion of the result in reference to other previous studies and its implications for promotion of IUCD through behavioural change communication.

The research showed the presence of potential demand for expansion for LARCs in Addis Ababa, but the preference is much higher for implant than IUCD. Only 8.4% of users of short acting contraceptive methods have intention to use IUCD within the next one year. The determinants for intention were attitude, perceived norm and PBC with attitude being

the strongest predictor. The research also identified six critical beliefs that need to be considered during development of intervention to bring change on intention and utilization of IUCD in Addis Ababa.

Next chapter focuses on the development of SBCC strategy to promote the use of IUCD in Addis Ababa using the findings from this chapter.

CHAPTER 6
DEVELOPMENT AND VALIDATION OF COMMUNICATION STRATEGY TO PROMOTE THE USE OF IUCD IN ADDIS ABABA

6.1 INTRODUCTION

This chapter presents the steps and processes followed for development of social and behavioural change communication strategy for promotion of IUCD use in Addis Ababa. A model for promotion of IUCD through SBCC is developed using Dickoff et al. survey list followed by designing a communication strategy using the model. The final step is validation of the model and its communication strategy to evaluate its clarity, generality, simplicity, accessibility, and importance. Findings and discussions from chapter 4 and 5 were used as input in the development of the BCC strategy.

6.2 DEFINITION OF KEY CONCEPTS AND STEPS OF DEVELOPING COMMUNICATION STRATEGY

This section briefly clarifies the concepts used for the development of a model followed by the approach used for development of the social and behavioural change communication (SBCC) strategy.

6.2.1 Strategy

Within the context of health communication, strategy is the development of an effective communication approach to address health problems and situations with purposive plans aiming to improve the chances for better health for all, in line with defined goals, targets, and standards (Okigbo 2014: 8).

6.2.2 Behavioural change communication

According to the Ethiopian national family planning communication guideline (2021: IV), behavioural change communication is defined as “the approach and process that aims to promote family planning knowledge, attitudes, and practices through identifying, analysing, and segmenting audiences by providing them with relevant family planning information and motivation through well-defined strategies, using an appropriate mix of interpersonal, group and mass media channels including participatory method.”

Behaviour change communication (BCC) is a set of organized communication interventions and processes aiming to influence social and community norms and promote individual behavioural change or positive behaviour maintenance for a better quality of life. Strategic use of BCC applies targeted messages and tailored approaches to promote healthy behaviours and reduced risk taking (UNFPA 2006: 6).

To be successful, BCC uses a range of communication methods and tools designed based on evidence and theory including interpersonal communication between a community health worker and her clients, training, mass media, counselling, information and communication technology, and other similar approaches. BCC is used by health programs to provide tailored messages and a supportive environment that persuades individuals and communities to make positive behaviour change on health issues. It can result in changing knowledge, attitudes, skills, and behaviours (Koenker et al. 2014: 1; Briscoe & Aboud 2012: 1; UNFPA 2006: 9, 34).

6.2.3 Social and behaviour change communication (SBCC)

Social and Behaviour Change Communication (SBCC) promotes and facilitates behavioural change and supports broader social change for the purpose of improving health outcomes. SBCC is a relatively recent modification to BCC to reflect the added emphasis placed on social factors that influence behaviour in addition to the focus of BCC on individuals' behaviour. SBCC uses social and community mobilization and advocacy as part of its communication strategy in addition to the interventions related with BCC. (UWA 2020: 3; Flanagan & Tanner 2016: 39; HC3 2014: 9)

Development of SBCC/BCC follows a systematic process of analysing the situation to identify key barriers and motivators of change, designing and implementation of a comprehensive set of intervention to bring the needed change in behaviour. (UWA 2020: 4; HC3 2014: 9–10).

6.2.4 Communication Strategy

A communication strategy provides guidance for interventions and communication targeted at behavioural change by identifying target audience and creating consistent

messages across materials and activities during communication. It ensures activities and communication materials work together to achieve the goal and objective of the SBCC/BCC interventions (HC3 2014: 5).

6.2.5 Promotion

According to WHO (1986: 1), health promotion is the process of enabling people to increase control over their health and its determinants, and thereby improving their health. Taber's cyclopaedic medical dictionary (2017: 1075–1076) defined health promotion as "any program that fosters improvement in an individual's or a community's health and well-being. It includes formal education for patients, behaviour modelling by influential people or community leaders, and mass media/communications". Health promotion is about promoting a healthy lifestyle for individuals or maintaining and improving health in individuals and communities. It also works to influence socio-economic and environmental policies for collective health gains (Piper 2009: 22).

In this research, promotion of IUCD refers to promoting utilization of IUCD by addressing the unfavourable attitude, negative social norm, and negative intention towards the use of IUCD among women and couples living in Addis Ababa. The promotion will enable women and couples with their surrounding social environment to have full and clear understanding about IUCD, reduce misconceptions and myths and thereby improve their attitude and social norm towards the use of IUCD.

6.2.6 Steps followed to develop communication strategy

Based on the stated goal and objectives of this research in chapter 1, SBCC is proposed which will help in promoting the utilization of IUCD in Addis Ababa. The communication strategy is a means to achieve the planned promotion of IUCD utilization as one of the methods for contraceptives. As SBCC interventions designed with a sound theoretical foundation are more successful in bringing the needed behavioural change and development of SBCC follows certain critical steps, the researcher has followed the following three main steps in the development of communication strategy to promote the use of IUCD in Addis Ababa.

1. Development of SBCC model for promotion of IUCD in Addis Ababa
2. Communication strategy development; and
3. Evaluation of the SBCC model and its communication strategy

The research findings from chapter 4 and 5 were systematically included as input in the development of SBCC model and communication strategy as discussed in subsequent sections.

6.3 DEVELOPMENT OF MODEL TO PROMOTE THE USE OF IUCD IN ADDIS ABABA

As mentioned in chapter 3 section 3.5.4.1, this research used practice-oriented theory (also called prescriptive theory) of Dickoff et al for development of the SBCC model to promote the use of IUCD in Addis Ababa. Prescriptive theory is relevant for this research as it enables the researcher to identify prescriptive activities that are necessary to meet the desired and preferred end result or goal (Dickoff et al. 1968: 96). It also predicts consequences of intervention which is in line with the purpose of this research (McEwen & Wills 2019: 96).

For application of the prescriptive theory, the following three essential components are recommended to be followed; 1) identifying the desired goal to be achieved; 2) prescription of activities to achieve the goal and 3) apply “survey list” for using the prescriptions in future (Meleis 2012: 451–452). All the three are discussed as follow

6.3.1 Goal (and objectives) of the SBCC

As shown in the previous chapter, most of the users of short acting contraceptive methods in Addis Ababa have not yet formed an intention to use IUCD. Unfavourable attitude towards IUCD followed by perceived lack of social approval to use IUCD were key determinants for not yet forming an intention. According to RAA, since the women do not yet develop intention to use IUCD, the target of the behavioural change intervention should focus on developing positive intention. To bring change on intentions, the intervention should address the unfavourable attitude and the negative perceived social norm as they are determinants for the observed intention. Unless the attitude and perceived norm are changed, intention towards use of IUCD will not be materialized and ultimately the utilization of IUCD will not change (Fishbein & Ajzen 2010: 331).

Therefore, the goal is to promote the utilization of IUCD in Addis Ababa through a SBCC strategy that enables women of reproductive age group to bring positive intention, favourable attitude, and supportive social norm towards the use of IUCD.

The objectives of the social and behavioural change communication strategy are:

1. To increase the proportion of women of reproductive age group that have positive intention towards the use of IUCD in Addis Ababa
2. To reduce the proportion of women of reproductive age group with unfavourable attitude towards the use of IUCD in Addis Ababa
3. To increase the proportion of women of reproductive age group that have supportive social norm regarding their use of IUCD in Addis Ababa.

Furthermore, attitude, perceived norm and PBC are determined by the underlying beliefs (Fishbein & Ajzen 2010: 203). As shown in the previous chapter (section 5.10.4), the key underlying beliefs that determines attitude, perceived norm, and intention towards the use of IUCD in Addis Ababa were fear of pain and shyness during the procedure of IUCD insertion, need for approval from husband, preference to do like close friends and neighbours, preference to hear experiences of other users of IUCD and the need for more children which is associated with misconceptions and concers about IUCD might cause infertility.

To change intention, perceived norm, and attitude, which are the objectives of the SBCC strategy as stated above, prescribed communication activities that need to be implemented to bring change on the underlying beliefs. The specific *communication objectives* to bring change on the underlying beliefs are presented in section 6.4.2 of communication strategy specific for each of the intended audience.

6.3.2 Prescription of activities

According to Dickoff et al practice theory, the second component is prescription of activities which are needed to achieve the goal. In the context of this research, the prescription of activity is implementation of a set of activities to bring change on intention, attitude, and perceived norm through addressing the underlying beliefs. The six questions

of the survey list (discussed below) are used as a guide to ensure logical development of a comprehensive SBCC strategy to promote IUCD use in Addis Ababa.

6.3.3 Survey List

Survey list serves as a supplement to present prescribed activity. The survey list asks six different questions about the prescription namely about context, agent, recipient, dynamics, procedure, and terminus. The six questions using the survey list are: (Dickoff et al. 1968: 421–422)

- Who or what performs the activity or intervention? (*Agent*)
- Who or what is the recipient of the intervention? (*Recipient* or *Patiency*)
- In what context is the activity/intervention performed? (*context*)
- What are the guiding processes of the intervention? (*Procedure*)
- What is the energy source or motivation for completing the activity? (*Dynamics*)
- What is the end point of the activity? (*Terminus*)

6.3.3.1 Agent

An agent or agency is a person or thing that performs activity towards a goal and takes active part or conduct the actual task in carrying out the prescribed activity (Dickoff et al. 1968: 425–426).

In this research, agents are those people and systems that are responsible to carry out the promotion of IUCD as one of the options of family planning in Addis Ababa. Based on the discussion made in chapter 5 and consideration of the health system in Addis Ababa city, there are four groups of potential agents for the promotion of IUCD as one of the options of family planning in Addis Ababa (see fig 6.1).

AGENTS

- Family planning providers
- Urban health extension professionals (UHEPs)
- Family Health Teams (FHTs)
- Health system managers of FP and HEP

Figure 6.1: Lists of agents for promotion of IUCD in Addis Ababa

6.3.3.1.1 Family planning providers

The family planning providers are responsible for conducting counselling and provision of family planning methods to potential and actual users of contraceptives within health facilities. The family planning providers work within health facilities in family planning clinics and other maternal health service provision units (such as within antenatal, postnatal, delivery and post abortion care units) within the health facilities. In the context of the health system of Addis Ababa, family planning providers in public health facilities are health professionals including nurses, midwives, and health officers.

6.3.3.1.2 Urban health extension professionals (UHEPs)

UHEPs are responsible for the implementation of health extension programs in urban areas of Ethiopia. Health extension programs (HEP) refer to a community-based health program where a defined package of basic and essential preventive and selected high impact curative health services targeting households and communities are provided as part of the Ethiopian health system. It is designed based on the concept and principles of primary health care to improve the health status of families, with their full participation and use of locally appropriate technologies (FMoH 2016d: iix).

In urban areas, UHEPs conduct community-based health promotion activities at household and community level with 15 different packages of essential health services with family planning promotion and education being one of the packages. Within the health system of Ethiopia, including Addis Ababa, the UHEPs are female nurses that received additional three months training on provision of community-based health service for urban residents. The UHEPs spend most of their time within the community by providing one-to-one or one-to-small group health education and promotion of the 15 packages of health services. The UHEPs are hired by health centres and receive needed technical and managerial support and guidance from health centres (FMoH 2019a: 29).

6.3.3.1.3 Family health teams

Family health teams (FHT) is team based outreach service provided from health center to the community where clinical professionals are member to the FHT in addition to the community health workers. The team members include health officer, nurse and UHEPs.

About 3-5 FHTs are established per health center. On alternating days, FHTs are assigned either to outreach visit to the community or to receive referred clients from the community in a dedicated outpatient rooms. During visit to the community, FHTs prioritize households categorized as low income and those having high priority like having pregnant women, young child less than five years old or those with chronic diseases and elderly/bedridden patients. Usually, UHEPs select prioritized households for visit by FHTs. Provision information and education on contraceptive methods including IUCD are among the activities carried out by the FHT among the households prioritized for visit by FHT (Ludwick et al. 2021:2).

6.3.3.1.4 Health system managers

Health system managers on family planning and health extension program (HEP) at health facilities, woreda/district health office, sub-city health office and Addis Ababa Health Bureau are the fourth agents that will be involved in the promotion of IUCD within the context of Addis Ababa. This agent includes a wide range of personnel that are working within the health system of Addis Ababa including family planning and MCH officers, experts, and directors as well as experts, officers and supervisors working to strengthen UHEPs at health centres, woreda/district health office, sub-city health department and Addis Ababa Health Bureau.

The FP/MCH officers/experts/directors are responsible and involved in planning, coordination, provision of training, supervision and monitoring and evaluation of family planning related activities provided within health facilities and at community level. Similarly, the HEP officers/experts/supervisors/directors are responsible to ensure that UHEPs are provided with the needed technical and managerial support to carry out their day-to-day activities at household and community level including planning, coordination with other sectors and other departments within the health system, compilation of reports from UHEPs, supervision, monitoring progress and building capacity of the UHEPs.

6.3.3.2 Recipient

Recipients**,** also called patiency**,** include all those persons or things who receive action from agents. Patiency or recipient is regarded as an interactor with an agent towards

activity of a desired kind and possesses a range of capacity, limitation, and the latitude in producing the desired outcomes (Dickoff et al. 1968: 427).

In this research, the recipients are those groups that will receive behavioural change communication messages from or through the agents. Based on the findings from chapter 5, there are three different groups of recipients that should be targeted for promotion of IUCD, as one of the options of family planning, in Addis Ababa (see fig 6.2).

RECIPIENTS

- Women and couple visiting health facility for family planning and other maternal services
- Women of reproductive age group in the community
- Men/husbands

Figure 6.2: Lists of recipients for promotion of IUCD in Addis Ababa

6.3.3.2.1 Women and couple that visit health facility

The first group of recipients are women and couples that visit health facilities for family planning or other maternal health services from family planning providers. Those that visit health facilities for family planning service receive comprehensive counselling on all available options of contraceptives from the family planning providers within the health facility. Based on the findings from the qualitative phase of this research, both short-acting and long-acting users of family planning were identified as potential users for IUCD.

Similarly, those women that visited health facilities for maternal health services (such as for antenatal care, postnatal care, delivery, and abortion/post abortion care) can be targeted for promotion of IUCD as one of the options of family planning methods. Family planning providers can integrate promotion of contraceptives including IUCD during counselling sessions of maternal services.

6.3.3.2.2 Women of reproductive age group within the community

Women of reproductive age group in their residential or workplace are the second group of recipients that can get promotion on IUCD from UHEPs and other agents. This group of women may or may not be using a family planning method at the time of promotion.

Those women that are using any family planning method other than IUCD are potential users for IUCD if/when their concerns regarding IUCD is addressed. Those women that are not using any contraceptive (including those who are pregnant or adolescents) can be targeted for use of family planning including IUCD either now or in future.

In this research, close friends and neighbors were identified as one of the determinatns of intention to use IUCD. Hearing experience from other users of IUCD was also identified as determinants for intention. Provision of the right information and key message to neigbours and close friends can be achieved if the SBCC includes women of reporoductive age group in the community. Additionally, those women that are already using the IUCD who can share their experience are living within the community. That is why the women in reproductive age group in the community identified as one of the recipient for IUCD promotion.

6.3.3.2.3 Men/husbands

Men and husbands who will receive health promotion activities in their community or at home from UHEPs and other agents are also identified as the third group of recipients. As presented in chapter 5, approval from husbands was one of the determinants for low intention towards the use of IUCD in Addis Ababa.

6.3.3.2.4 Interaction of recipient with agents

The three groups of recipients are the main targeted audiences for the communication strategy discussed in section 6.4.2 below. During their interaction with the agents, the recipients will be targeted with specific and relevant key messages intended to bring behavioural change towards the use of IUCD.

During interaction with the agents for promotion of IUCD, the recipients have various rights that should be considered as part of the counselling and promotion as discussed below (Huezo & Diaz 1993: 130–132).

- *Right for information***:** All recipients either in the community or in a health facility, have the right to get full information on all available contraceptive methods including IUCD on their benefit, side-effects, where to get the service and other

basic information at convenient places including at community and health facility level.

- *Right to access family planning service*: all men and women have the right to receive family planning services irrespective of their social status, economic situation, religion, ethnicity, or other character that differentiates them from others.
- *Right of choice*: Individuals and couples have the freedom to decide if they want to use contraceptives, when to use, which type of method to choose, for how long and possibility of switching to different methods. Agents should support the recipients to freely decide on their use of contraceptives by providing accurate and unbiased information and counselling on all available options of family planning methods.
- *Right to privacy:* When discussing fertility or family planning related issues, the recipients have the right to have the discussion in an environment that makes them feel comfortable. Similarly, when some procedure of family planning is performed (such as insertion or removal of IUCD), the counselling and discussion as well as procedure should be done in a situation where the privacy of the recipient is maintained.

6.3.3.3 Context

Context specifies all variables that should be considered to bring about the desired goals through an activity produced by an agent and received by a patiency. Context is the situation in which the prescribed activity is performed and includes both physical and non-physical factors of considerations such as location, settings, affiliation, policies, personnel, time, etc (Dickoff et al. 1968: 428).

In this study, the SBCC strategy to promote the use of IUCD in Addis Ababa is done within three inter-related contexts. Family planning providers conduct counselling and family planning promotion to the recipients during counselling sessions within health facilities. The UHEPs conduct health education and promotion on family planning including IUCD within the community and household level.

Health system managers provide coordination and management related support to successful implementation of the SBCC strategy within the health system of Addis Ababa health bureau, Ethiopia. Addis Ababa city has 10 sub-cities[2] and each sub-city has around 10 woredas/districts. As part of the health system, there is woreda health office at woreda level, sub-city health office at sub-city level and health bureau at Addis Ababa city administration level. Technically, health centres receive technical support and supervision directly from woreda/district health office and sub-city health offices and indirectly from Addis Ababa health bureau. The health system managers (such as FP officer, HEP expert, MCH director, etc) provide needed support and technical guidance on family planning and HEP within this health system at each level based on their role and responsibilities.

6.3.3.4 Procedure

Procedure is to view activity from the aspect of principle, rule, routine, or protocol guiding the implementation of prescribed activity. Procedure focuses neither on outcome nor the particularizing features of the activity. Rather, it emphasizes on the path, steps, rubric or more generally the pattern according to which activity is performed. Procedure is the steps to be taken towards accomplishment and may even suggest the proper equipment, arena, or situation for conducting the activity under the procedure's rubric. The function of procedure is to provide sufficient detail to enable activity accomplishment. Procedure is a general rule rather than directive to a specified agent at specified time and place (Dickoff et al. 1968: 430).

PROCEDURE

Implementation of communication strategy to promotes the use of IUCD through:

- Orientation of FP and UHEPs on key messages for promotion of IUCD
- Counselling by family planning providers
- Household and community-based promotion of IUCD
- Promotion of IUCD through media
- Health system managers create enabling environment for promotion of IUCD

[2] The number of sub-cities in Addis Ababa has increased from 10 to 11. But at the time of data collection of this research, the number of sub cities were 10. That is why the research refers to 10 sub-cities rather than 11.

Figure 6.3: Activities to be carried out for promotion of IUCD as part of procedure.

In this research, procedure refers to delivering a communication strategy to promote the use of IUCD as one of the family planning options during interaction between agents and recipients. The key activities to be carried out to implement the communication strategy are shown in figure 6.3. Each of the activities are further discussed

6.3.3.4.1 Orientation of family planning providers and UHEPs on key messages for promotion of IUCD

To effectively promote IUCD, family planning providers and UHEPs should be made aware about the key messages on IUCD developed based on evidence from the study. They should be provided with an orientation on the content and approaches of and the key messages presented in section 6.4.2. The health system managers together with partners supporting the health system could organize the orientation to the family planning providers and UHEPs.

The orientation can be facilitated during supportive supervision of family planning providers and UHEPs or by integrating to any review meeting or trainings related with family planning or any other existing opportunity to orient the family planning providers and UHEPs.

Additional reinforcement is needed to ensure the FP providers and UHEPs are actively implementing the SBCC strategy through supportive supervision and provision of constructive feedback based on the observation during the supervision.

6.3.3.4.2 Counselling by family planning providers

According to the national guideline for family planning in Ethiopia (2020: 58–61), all women and couples that visit health facilities for family planning services should receive comprehensive counselling on contraceptive using a counselling procedure called REDI (Rapport building, Exploration, Decision making and Implementation). With the procedure of REDI, the provider starts with respectfully greeting the woman and ensuring privacy followed by exploration of asking the client on why she visits the facility, assess, and fill

the knowledge gap on all available options of family planning methods, discussion on fertility plan and explore client's circumstances, relationship, and HIV related risk factors. Based on the discussion at the exploration stage, usually, the agent (family planning provider) encourages and helps the recipient to make her own decision regarding her preferred method of choice. Once the recipient decides her contraceptive choice voluntarily, the agent further explains how to use the method, side-effects and making follow up issues as part of the implementation stage of REDI counselling.

For promotion of IUCD to the recipients of family planning, the standard procedure of counselling will not be changed. The family planning providers will follow all the steps needed in REDI counselling. But when they explain about IUCD at the stage of exploration, the providers need to consider the key messages identified in the communication strategy as shown in section 6.4.2. The key messages were developed based on the findings of this research as described in the previous chapter.

Similarly, those women that visit health facilities for maternal health services such as for postnatal or abortion/postabortion care should be counselled and educated on the possibility of use of IUCD as one of the contraceptive options during the maternal health service visits.

Promoting IUCD as presented in the communication strategy should be done for every visit of the family planning user (i.e., it should be done both for new as well as revisiting users of other family planning methods).

6.3.3.4.3 Household and community-based promotion of IUCD

As presented in chapter five of this research, husbands and neighbours or close friends were identified as determinants for perceived norm and intention regarding the use of IUCD. Additionally, those women of reproductive age group that do not visit health facilities are another potential user of IUCD in future. Therefore, in this section, the communication strategy aims to reach the men/husbands, women of reproductive age group and other community members whether using or not using contraceptives including IUCD.

- *Promotion of IUCD by UHEPs:* During discussion with community members about IUCD, as one of the contraceptive methods, the UHEPs need to include the key messages and approach of IUCD promotion as shown in section 6.4.2.3 of the communication strategy. The key messages in the communication strategy are developed based on the findings from chapter 5 of this research.
    - The type of key message to be communicated from UHEPs to the recipients should be tailored and relevant to the intended audience including for women in the reproductive age group, adolescents, men/husbands and other members of the community as shown in section 6.4.2 of the communication strategy.
    - Hearing experiences of other users of IUCD as witness was identified as one of the enabling factors for use of IUCD as discussed in chapter 5 of this research. The UHEPs need to actively search for users of IUCD in the community to share their experience with other women, men, and community members as part of community mobilization on IUCD.
    - Linkage and referral to health facility is another area that the UHEPs should work on. The UHEPs needs to give clear information on where the potential users can get the IUCD and type of support the users can get if they experience any of the side effects. When there are women interested to use IUCD or other FP method, the UHEPs should link the recipient to the nearby health facility for use of IUCD or other family planning methods.
    - Not to forget the key messages related with the promotion of IUCD, the UHEPs needs to refer to an updated job aid to be prepared by the health system managers of Addis Ababa health bureau or its partners.
- *Organize social and community mobilization events:* engagement of key community members including religious leaders, women and youth representatives and schools to address misconceptions in the community and create a supportive environment for utilization of IUCD should be part of the SBCC activities. Meeting and having a dialogue with these members of the community through workshops and community mobilizations should be organized by health

system managers and UHEPs. It also needs involvement of stakeholders such as NGOs and media that have interest in promotion of contraceptives.

6.3.3.4.4 Promotion of IUCD through mass-media

Similar to the household and community-based promotion of IUCD discussed above, the target group for promotion of IUCD through mass-media are men/husbands, women of reproductive age group and other community members whether using or not using contraceptives including IUCD. The following specific activities for promoting IUCD through media are identified as part of the communication strategy. The health system managers, particularly those at AARHB level will have a role in ensuring the media adapts the content of family planning messages based on evidence and practice. The health system managers need to identify and closely collaborate with organizations, projects, and media that have a plan and interest in promotion of family planning methods including IUCD. The key activities that the mass media could take for promotion of IUCD are:

- *Promotion of IUCD as one of the options of contraceptives through radio and television.* This can be done either by updating the content and key messages of ongoing mass media promotions on family planning and/or development of new messages in line with the communication strategy presented in section 6.4.2. The health system managers from AARHB should take the lead.
- Live discussion via radio and television, where listeners and/or viewers call in for questions and comments related to IUCD is another option as part of promotion of IUCD through mass media. Experts of FP from the health system can provide responses to the concerns and questions from the listeners.
- Serial radio and television dramas on reproductive health that are being aired or planned soon by partners or media should be targeted FP system managers for inclusion of key messages on promotion of IUCD.
- *Development and distribution of brochures and other written materials*: to reach those people who are literate with key messages about IUCD, brochures and other written materials should be prepared and distributed, particularly for men. Distribution of the written communication materials can be done within health facilities by family planning providers and at community level by UHEPs.

6.3.3.4.5 Health system managers create enabling environment for promotion of IUCD

As discussed above, these agents (health system managers) are responsible for ensuring the family planning and HEP are planned, coordinated, implemented, supervised, and monitored according to the national guidelines and plans. For the promotion of IUCD in Addis Ababa, this agent will carry out the following activities as part of the procedure. The communication strategy presented in section 6.4.2.3 below focuses on communication to ensure the health system managers deliver the following activities.

- *Explore the needs and gaps of UHEPs and family planning providers for promotion of IUCD:* Since it was beyond the scope of the current reseach, the gaps and needs of UEHPs and family planning providers was not assessed. But in the course of delivering the key messages shown in section 6.4.2.3 below, these agents might need additional support from the health system managers. The needs might be related with the need to provide training or orientation on the key messages, need for updating or developing job aid, or technical support on integration of IUCD promotion with other maternal health services or any other technical areas needed by UHEPs and family planning providers. The health system managers need to closely identify the needs of the agents at facility and community level and provide them with the needed support, timely. One of the opportunity for idenfitying gap and providing needed support is during supportive supervision.
- *Ensure integration of contraceptive promotion with maternal services:* For integration of postpartum or post abortion family planning service including IUCD insertion into maternal health services, the health system managers of FP/MCH (such as woreda FP officer) need to ensure the ANC, postnatal care and abortion/post-abortion service providers are provided with orientation/training on how to integrate counselling during antenatal, postnatal and abortion/post-abortion services and linkage with family planning unit within the health facility.
- *Report review and feedback*: The health system managers need to regularly review reports submitted by family planning providers and UHEPs to ensure if the family planning promotion including IUCD is going on as per the plan and provide feedback to the source on time.

- *Work with media*: to ensure the media (radio, television, and printed media) have interest and program on health-related issues including family planning, the health system managers need to work with them so that the key messages identified in this research are captured or considered during the production and dissemination through media. By working with media, the key messages can be integrated with already ongoing family planning promotions in mass media or to new spots and promotions that might be produced in future.
- *Organize advocacy meetings:* the health system managers need to organize advocacy sessions/meetings with MoH, decision makers at AAHB, partners involved in promotion of family planning and media for possible modification/updating of training manuals of family planning providers and UHEPs, job-aids and possible resource mobilization to organize training, facilitate printing of updated job-aids and updating content of key messages in radio and television promoting IUCD.

6.3.3.5 Dynamics

The fifth aspect of the survey list of activity is dynamics, which refers to the chemical, physical, biological, or psychological power sources that can drive the activity towards the attainment of a goal (Dickoff et al. 1968: 431). According to Meleis (2012: 130), dynamics are motivating factors in performing and sustaining prescribed activities to achieve the desired outcome.

The dynamics involved in the promotion of IUCD using the social and behavioural change communication strategy are shown in fig 6.4 and discussed below.

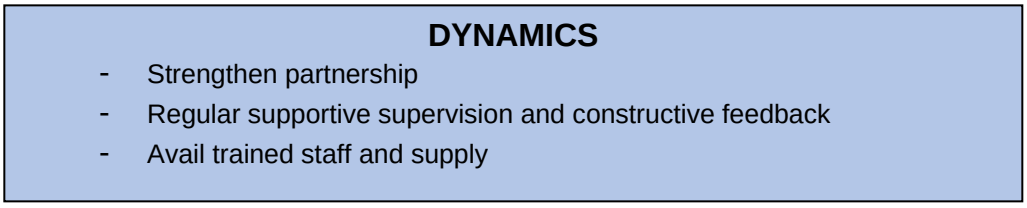

Figure 6.4: Dynamics involved in promotion of IUCD in Addis Ababa

- *Strengthen partnership*: there are a number of governmental and non-governmental organizations and projects supporting the health system and health facilities in Addis Ababa in various areas including on family planning, maternal and child health, strengthening urban health extension program, community mobilization, and other similar health system strengthening activities. The health system managers, particularly those at Addis Ababa Health bureau and sub-city health office level, should strengthen the partnership with all concerned partners for successful implementation of the communication strategy to promote the use of IUCD in Addis Ababa. Having regular review meetings with all partners could be one of the strategies to harmonize plans among partners, review progress jointly and leverage the communication strategy within any existing projects (e.g., revision of family planning counselling training material based on the communication strategy in this research, if a partner has plans to conduct training on counselling).
- *Ensure availability of trained staff and consistent supply:* the health system manager for family planning should ensure availability of consistent supply of commodities needed for insertion and removal of IUCD in each of the health facilities. When demand is created for IUCD utilization, the number of users of IUCD might increase and the health facilities should be able to provide the service as needed by the community. Additionally, there is a need to ensure availability of adequate numbers of health workers trained on insertion and removal of IUCD, particularly for health facilities experiencing high demand for IUCD insertion.
- *Regular supportive supervision and constructive feedback*: to ensure the family planning providers and the UHEPs are delivering the key messages as outlined on the communication strategy for the promoting IUCD utilization, the health system managers should organize regular supportive supervision using a standardized checklist to the family planning providers and UHEPs. The existing supportive supervision checklist needs to be updated to capture, if IUCD is being actively promoted as per the communication strategy. The supportive supervision can also serve as a podium for enhancing the skill of UHEPs and family planning providers

on counselling and IUCD promotion. Constructive feedback to UHEPs and family planning providers will motivate them to promote IUCD as outlined in the communication strategy.

6.3.3.6 Terminus

Terminus is to view activity from the perspective of the end point or accomplishment of the activity. Describing an activity from an aspect of the terminus is a consideration of how best to describe an activity's end point. When an activity is characterized from the perspective of terminus, it gives an economical and usually graspable language for communication. It also makes the activity palatably doable for the agent or more acceptable to the recipient (Dickoff et al. 1968: 429).

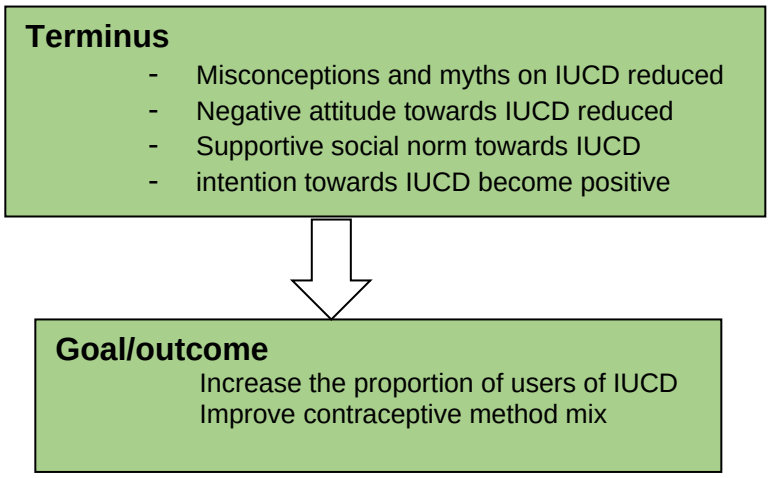

Figure 6.5: End results of promotion of IUCD in Addis Ababa (terminus and outcome)

The terminus of the promotion of IUCD through social and behavioural change communication strategy are shown in figure 6.5 and is presented below.

- Because of successful interaction between the agents and recipients through the procedure and dynamics, the concerns and misconception that the community holds regarding IUCD will be reduced.
- The negative attitude towards IUCD will reduce
- The social norm regarding the use of IUCD including from husbands, friends and neighbours will be supportive to use IUCD.
- With changing attitudes and social norms, the intention towards the use of IUCD will also improve positively.

When people develop favourable intentions towards a given behaviour, they are more likely to use the product or the service (Fishbein & Ajzen 2010: 331). In this research, when the terminus is achieved with successful implementation of the social and behavioural change communication strategy, ultimately, the number and proportion of users of IUCD will increase that will contribute towards improving family planning method mix at the health system level.

6.3.4 Schematic presentation of model for strategy to promote utilization of IUCD in Addis Ababa

Fig 6.6 shows the schematic presentation of the SBCC model developed using the six elements of the survey-list of Dickoff et al to promote the use of IUCD in Addis Ababa. It

graphically summarizes the procedure to be carried out during interaction of the agents with the recipients within the context and dynamics of Addis Ababa health system and its expected ultimate end result (terminus). Models are visual representations of relationships between phenomena. With a model, concepts, and linkages between them are presented graphically using boxes, arrows, or other symbols (Polit & Beck 2018: 192).

As can be seen from the model on fig 6.6, interaction between agents and recipients is directly influenced by both the procedure to be carried out and the dynamics involved. Furthermore, the type of procedure to be conducted (i.e., activities and communications of key messages) depends on the dynamics and the recipients of that particular scenario (e.g., the key message that a family planning provider delivers to a woman that visits a health facility to seek contraceptives is different from the key message that will be communicated by an UHEP to a male community member). Similarly, dynamics of the SBCC strategy is influenced by the condition of interaction between the agents and recipients as well as the type of procedure to be carried out (e.g., if there is poor promotion of IUCD by any of the agents, supportive supervision, which is part of the dynamics, can be planned to boost the performance of the agent).

The interaction of agents and recipients to conduct the procedure within the dynamics of the health system enables to achieve the terminus. When all the four components of the survey list are operationalized together, they will result in bringing the needed result of changing behaviour towards the use of IUCD within the context of Addis Ababa city health bureau, within the health facility and at the community level. The immediate result of this model is bringing change on the underlying beliefs, attitude, perceived norm, and intention towards the use of IUCD in Addis Ababa, as a terminus to the model. According to the RAA, intention is a key determinant for behaviour. Therefore, with successful implementation of the social and behavioural change communication strategy, ultimately, there will be increment to the utilization of IUCD in Addis Ababa. When the proportion of users of IUCD among users' family planning methods increase, the contraceptive method mix will also change as the share of IUCD among users of family planning increases from its current status.

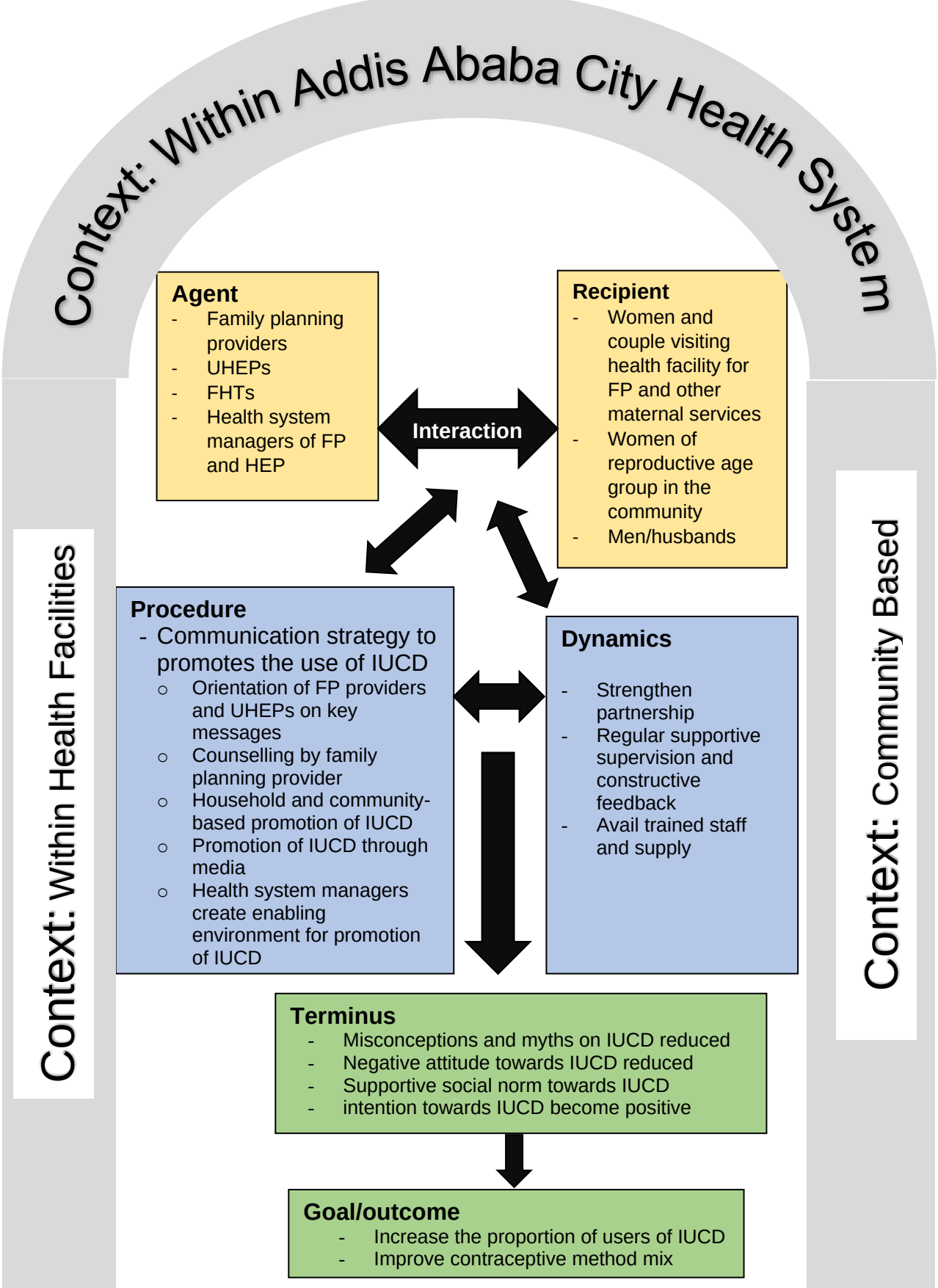

Figure 6.6: SBCC model for promotion of IUCD in Addis Ababa, Ethiopia

6.3.5 Assumptions to the BCC model to promote the use of IUCD in Addis Ababa

Assumptions are beliefs that are accepted as true, based on logic or reason but not proven (Polit & Beck 2018: 538). The assumptions for the SBCC model to promote the use of IUCD in Addis Ababa are as follows:

- MoH and its partners to modify/update the contents of training materials, supportive supervision checklists and job-aids related with IUCD promotion based on evidence, practice and needs
- Media and partners working on promotion of family planning willing to modify the key messages based on evidence
- Resources (financial and technical) for production of communication materials will be secured from government and/or its partners. Any communication material (such as brochures, job-aid, tv spot, etc) to be produced should be pre-tested before full scale production
- The health system and health system managers will take the lead for implementation of the model
- Strong collaboration among various departments (particularly health promotion, urban health extension program and MCH services) will continue through leadership of Addis Ababa Health Bureau and sub-city health offices
- There are multiple actors (including various departments within the MoH, media, NGOs, religious organizations, politicians, etc) that have different roles and interests in promotion of family planning. Communicating standardized, harmonized, and reinforcing messages needs strong leadership and commitment from MoH and Addis Ababa Health Bureau.
- Implementation of SBCC strategy needs ongoing monitoring, evaluation of approach and content of messages and taking timely corrective actions
- Improving method mix and increasing proportion of users of long-acting method is still priority for the MoH

6.4 DEVELOPMENT OF COMMUNICATION STRATEGY

This section of the research presents the communication strategy developed to promote the use of IUCD in Addis Ababa. The communication strategy is designed based on the BCC model presented in section 6.3.4 above. The communication strategy is planned to

be used as procedure during interaction between the agents and recipients within the context and dynamics discussed in the BCC model to achieve the expected behavioural change (terminus).

6.4.1 Components of communication strategy

The key components of designing health communication strategy are situation analysis, setting goal and objectives, segmentation of audience, identifying strategic communication approaches and activities, and planning for monitoring and evaluation. Once the communication strategy is developed, the next step is implementation of the BCC, which includes development of communication materials and monitoring the progress. (HC3 2017: 12; Okigbo 2014: 14; Fertman, Spiller & Mickalide 2010: 212–216).

As implementation of the communication strategy which include development of communication materials and monitoring the progress are beyond the scope of the study, this section of the research focuses on the process of development of the communication strategy to promote the use of IUCD in Addis Ababa.

6.4.1.1 Situation analysis

Situation analysis provides deeper understanding to the barriers of addressing desired social change. The analysis should include learning about the affected population and their perceived needs, understand the social and cultural norms that may influence the barriers, determining communication resources and existing capacity, and identifying potential challenges and enablers for individual and collective change regarding the behaviour of interest. Overall, it provides a clear picture of the health problem or concern, the program's stakeholders and participants, and the program's priorities (HC3 2017: 12; Fertman et al. 2010: 212).

In this research, the situation analysis was done through qualitative and quantitative studies using RAA as its theoretical framework together with supplemental literature as discussed in chapter 4 and 5. The research identified the intention, attitude, perceived norm and PBC regarding the use of IUCD in Addis Ababa. Determinants for having low intention towards the use of IUCD as well as the specific beliefs responsible for the

intention were also identified in this research. The findings are used as input for designing the communication strategy including development of key messages for the communication strategy.

6.4.1.2 Audience Segmentation

Segmentation of the audience involves identifying specific target populations or subsets of the population and tailoring communication interventions to reach them effectively, and appropriately. Usually, the segmentation is done as primary and secondary audiences. Primary audiences are those groups whose behaviour is the one that the communication strategy tries to bring the anticipated change while secondary audiences are those that influence the primary audiences (HC3 2017: 12; McKee, Bertrand & Becker-Benton 2004: 50).

In the BCC model developed above using Dickoff et al's survey list, the agent and recipients were identified as the intended audiences and influential for the promotion of IUCD in Addis Ababa. The recipients are mainly the primary audience while the agents are the secondary audience or those people that influence the primary audiences. The groups identified as target and influencial are shown below. Detailed discussion on communication strategy for each of the audiences is shown in section 6.4.2.

Two groups are identified as *target audiences*:

1. Women and couples that visit health facilities to seek family planning or other maternal health services
2. Women of reproductive age group in the community and household

Five groups are identified as *influencial audiences*:

1. Male partners (husbands) of women of reproductive age group
2. Family planning providers within health facilities
3. Urban Health Extension Professionals (UHEPs)
4. Family Health Teams (FHTs)

5. Health system managers (FP/MCH coordinators and officers and HEP coordinators and officers at woreda health office, sub-city health department and Addis Ababa Regional Health Bureau)

6.4.1.3 Strategic approach

This section of communication strategy addresses the objective of communication, positioning, identification of key messages and determining interventions and activities to reach each of the primary audiences and their influence (HC3 2017: 14; O'Sullivan, Yonkler, Morgan & Merritt 2003: 95).

- *Communication objectives***:** Communication objectives are measurable statements that clearly state what the target audience should know (think), what they should believe (feel), and what they should do (behave) within a timeframe needed to bring the expected change. It articulates what the program staff are hoping to articulate during communication with the audience. (HC3 2017: 14; Fertman et al. 2010: 213)
- *Positioning***:** Positioning identifies the most compelling and unique benefits that a product or service provides to the target audience. Positioning is used to identify the best way to motivate audiences to adopt or change a specific behaviour. Positioning produces a memorable identity for the audience to know why they should practice a given behaviour. It shapes the development of messages and the selection of communication channels. Additionally, it ensures that messages will be consistent and that each communication effort will reinforce other activities for a synergistic effect (HC3 2014: 21; McKee et al. 2004: 36; O'Sullivan et al. 2003: 101).
- *Key Messages***:** Key messages outline the core information that needs to be passed to audiences in all materials and activities to motivate them to accept the desired behaviour. Properly designed messages are specific to the targeted audience, and clearly reflect both specific behavioural predictors and positioning. They also clearly describe the desired behaviour, which must be "doable" to the audience (UWA 2020: 24; HC3 2014: 21; O'Sullivan et al. 2003: 124).
- *Determine activities and interventions:* Activities and interventions enable communication of key messages through different communication approaches and

channels to the intended audiences. Activities should carefully be identified and selected based on the type of messaging, ability to reach the intended audience through an appropriate media/channels, timeline, budget, and available resources (HC3 2014: 22, 2017: 15).

The communication objectives, positioning, key messages, and intervention/activities to be carried out for promotion of IUCD as part of the BCC strategy are presented below for each of the intended audience.

6.4.1.4 Planning for monitoring and evaluation (M&E)

M&E is a critical part of any program activity as it provides data on the program's progress towards achievement of predicted objectives and goals. The M&E plan during development of communication strategy focuses on setting the indicators, which should be developed based on the situation analysis and planned interventions. It should reflect if the key messages and strategies are having effect towards the intended behaviour on the targeted audience (HC3 2014: 24–25).

The M&E plan for the BCC strategy to promote the use of IUCD in Addis Ababa is developed based on the BCC model and the communication is presented towards the end of this section.

6.4.2 Communication strategy to promote the use of IUCD in Addis Ababa

This section presents the communication strategy developed to promote the use of IUCD in Addis Ababa for each of the primary audience and their influence. The objective and goal of the communication strategy are already shown in section 6.3.1 above as part of model development. The communication strategy is developed in line with the findings presented in chapter 4 and 5.

The templates included in the communication strategy below are adapted from Johns Hopkins Centre for Communication Programs (CCP) (HC3 2014: 28–50, 2017: 18–41) and experience of the researcher.

6.4.2.1 Target Audience 1: Women and couples that visit health facilities to seek family planning or other maternal health services

Characters of the audience

- They are already within the health facility seeking family planning or other maternal health services (such as antenatal care, postnatal care, or abortion related services). The family planning provider will counsel the clients on family planning methods.
- Some of them might be first time users of family planning while others are existing users of either short-acting or long-acting contraceptive method.
- Those women that came for maternal health service are not current users of any family planning method but are eligible for future use of contraceptives including IUCD.
- Most of the women have low or no intention, unfavourable attitude, and negative perceived norm towards the use of IUCD.
- The women have concerns, misconceptions and myths regarding IUCD including the feeling of shyness and fear of pain during insertion procedure, held beliefs that IUCD causes infertility and the belief that IUCD is not suitable for them.
- Most of them would like to get approval and support of their partner to use IUCD.
- They would like to follow/do what their close friends and neighbours do regarding the use of IUCD and would like to hear the experiences of other users of IUCD.

Communication objectives

1. To reduce the number of women that have misconceptions regarding IUCD.
2. To increase the number of women that recognize IUCD as a comfortable, reversible procedure, the procedure ensures privacy and is a safe method of family planning for all groups of women, including young women, breastfeeding and those planning to limit or space their birth.
3. To increase the number of women who talk to their partners about fertility desires and contraceptive use including IUCD.

Positioning

IUCD gives you the freedom to complete your family's and personal plan as it is the most effective and immediately reversible contraceptive method that gives you protection from pregnancy for up to 12 years. Wide range of women can use IUCD including adolescents, women who have or do not yet have children and those who are planning to space or limit their birth. IUCD is a method that can be used by breastfeeding mothers. IUCD doesn't contain any hormones.

Key Messages

Family Planning (general)

- You have the right to choose any type of family planning method that fits your interest.
- You can change the method that you are using by another type of contraceptive whenever you want to switch.

Key Messages for women and couples that visited the facility for family planning

- Choosing IUCD gives you the time to accomplish yours and your family's plans.
- During the procedure of insertion and removal of IUCD, your privacy is ensured.
- Your feeling of pain during insertion of IUCD is minimal and tolerable.
- IUCD is quickly reversible and doesn't affect the return of your fertility.
- Talk to your husband/partner about IUCD that the method is safe, effective, reversible, and comfortable.
- There are lot of women like you that are currently using IUCD as their choice of contraceptive method.

Additional key messages for women that visit health facility for antenatal, postnatal, and abortion/post-abortion care

- You can use IUCD immediately after delivery, while breast feeding or after abortion.
- Having a gap of at least two years before becoming pregnant again is advantageous for yourself and your new-born's health. IUCD is an option for you as it can give you protection from pregnancy for periods up to 12 years.

Basic information about IUCD: to support key messages, the following basic information about IUCD should be communicated to all women based on their understanding.

- IUCD is inserted into the uterus by health professionals specifically trained on the insertion and removal procedures.
- IUCD prevents pregnancy for up to 12 years. You can request for its removal at any time if you want to.
- IUCD is a safe, highly effective, and an immediately reversible long-acting method that requires little attention by the users after insertion.
- When using IUCD, the user might experience a change to the menstrual cycle which is completely normal, safe and has no effect on fertility. The changes to menstrual bleeding patterns include prolonged and heavy bleeding, irregular bleeding and more cramps and pain during monthly bleeding. These changes tend to diminish with time. Not all women develop these side effects, and they are not a sign of illness. If bothered, you can discuss with your provider.
- IUCD is available in this health facility, and you can start to use it today *(if she is eligible)*

Strategic approach	**Activities**
Interpersonal communication by family planning providers **Purpose:** ● Reduce misconception about IUCD ● Encourage discussion about contraceptive with her husband/partner ● Reassure the women/couple about possibility of switching method	● Counselling provided by family planning provider to women and couples ● Use teaching aid to facilitate the discussion ● Show the actual IUCD during counselling as demonstration

6.4.2.2 Target Audience 2: Women of reproductive age group in the community and household

Character of the audience:

- They are living in their residential areas either at home or workplace in the community.
- This group covers a wide range of women in reproductive age group including adolescent and youth, breastfeeding, pregnant, those who are planning to be pregnant soon or later and those who have completed their birth plan.
- Some of them are users of contraceptives while others are not using any contraceptive method. Those women of reproductive age who are not using any contraceptive method or those who are using contraceptives other than IUCD are potential users of IUCD either now or in future.
- Most of the women have low or no intention, unfavourable attitude, and negative perceived norm towards the use of IUCD.
- The women have concerns, misconceptions and myths regarding IUCD including the feeling of shyness and fear of pain during insertion procedure, held beliefs that IUCD causing infertility and the belief that IUCD is not suitable for their use
- They would like to get approval and support of their partner/husband to use IUCD.

- Most of them have access to radio and/or television.
- Most of them or their partner can read and write.
- Urban Health extension professionals (UHEPs) together with volunteers visit the houses to provide packages of health promotion including on family planning.

Communication objectives

1. To reduce the number of women that have misconceptions and myths regarding IUCD.
2. To increase the number of women that recognize IUCD as a comfortable, reversible, where the procedure ensures privacy and is a safe method of family planning for all group of women, including adolescents and youth, breastfeeding, HIV positives and those planning to limit or space their birth.
3. To increase the number of women who discuss with partners about fertility desires and contraceptive use including IUCD.
4. To increase the number of women and couples who use IUCD, if/when they prefer to use it.

Positioning

IUCD gives the freedom to complete your family's and personal plan as it is the most effective and immediately reversible contraceptive method that gives you protection from pregnancy for up to 12 years. Wide range of women can use IUCD including adolescents, women who have or not yet have children, and those who are planning to space or limit their birth. It can also be used by women who experienced abortion, those living with HIV and breastfeeding mothers.

Key Messages

Family Planning (general)

- You have the right to choose any type of family planning method that fits your interest.
- You can change the method that you are using by another type of contraceptive whenever you want to switch.

IUCD related key messages

- Choosing IUCD gives you the time to accomplish yours and your family plans.
- IUCD is provided by trained health professionals who ensure your privacy during insertion.
- The feeling of pain during insertion of IUCD is minimal and tolerable.
- IUCD is quickly reversible and doesn't affect the return of fertility.
- Talk to your husband/partner about IUCD that the method is safe, easy, reversible, and comfortable.
- Ask your family planning provider or UHEPs about IUCD. Discuss with your family planning provider about how to manage possible side effects.

Basic information about IUCD to support key messages should also be communicated. This includes:

- IUCD is inserted into the uterus by health professionals specifically trained on the insertion and removal procedures.
- IUCD prevents pregnancy for up to 12 years. You can request for its removal at any time if you want to.
- IUCD is a safe, highly effective, and an immediately reversible long-acting method that requires little attention by the users after insertion.
- When using IUCD, the user might experience a change to the menstrual cycle which is completely normal, safe and has no effect on fertility. The changes to menstrual bleeding patterns include prolonged and heavy bleeding, irregular bleeding and more cramps and pain during monthly bleeding. These changes tend to diminish with time. Not all women develop

these side effects, and they are not a sign of illness. If bothered, you can discuss with your provider. ● You can get IUCD from -------- (name of the nearby facility or place of to get IUCD)	
STRATEGIC APPROACH **Radio/TV** Purpose ● Increase IUCD's awareness and benefits and reducing misconceptions ● Stimulate social dialogue and couple communication regarding contraceptive use including IUCD ● Demonstrate woman seeking information on IUCD from UHEPs or providers ● Demonstrate a user sharing her positive experience while using IUCD	**ACTIVITIES** • Integrate the key messages of IUCD into existing radio/TV spots, and public announcements on family planning. • Develop TV or radio advertisements addressing main concerns and misconceptions on IUCD and benefits of using IUCD. The announcement should include the experience of real couples talking about why they choose IUCD and their experience with IUCD. • Produce or integrate into existing radio and TV call-in shows where experts of FP from Addis Ababa Health Bureau responding to live questions from audiences regarding IUCD • Develop or adapt multi-episode TV/radio drama series including modelling dialogue on couple communication regarding contraceptive use, addressing misconception and witnessing experience of users of IUCD.
Print Media: Purpose**:** • Address common misconceptions and myths regarding IUCD • Increase understanding that almost all women group can use IUCD	• Brochure for women and men including adolescents to take home and read. The brochure should be designed to address misconceptions and concerns that the community holds regarding IUCD. The UHEPs can distribute the brochures during her house-to-house and community level discussion forum. The brochure should include information on where to get IUCD.
Inter-personal communication Purpose - Address misconceptions and concerns regarding IUCD - Encourage male/husband participation in family planning discussion	• The UHEPs deliver key messages on IUCD during her house-to-house family planning promotion • Include male/husband during discussion of UHEPs in the house-to-house promotion

	• Engage and empower clubs and other existing community level structures (eg. Women development army) to promote IUCD with particular focus for adolescents and young women • The UHEP need to tailor the key message regarding IUCD based on the individual concern regarding IUCD and level of understanding
Community mobilization Purpose - To increase social support for IUCD. - Encourage social dialogue around contraceptive in general and IUCD in particular - Create supportive social norm regarding the use of IUCD	• Organize discussion groups for men, women, couples and/or young people on contraceptives including IUCD. The UHEPs can organize the sessions. • Organize community dialogue events on family planning. • Satisfied users of IUCD (and their partners) to be used as key advocates during community discussion and dialogue • Organize community mobilization events including workshops with key community and religious leaders

6.4.2.3 Influential Audience 1: Male partners (husbands) of women of reproductive age group

Character of the audience:

- Men play key decision-making roles in couple communication for FP and fertility related issues
- Approval of partner is one of the determinants for use of IUCD in Addis Ababa
- Usually, men are the head of households and make the decision on use or no use of contraceptives including IUCD
- Some of them have misconceptions and concerns regarding the use of IUCD
- They have access to radio/tv and most of them can read and write

Communication Objectives

1. Increase the proportion of men that discuss with their partners about fertility desires and use of contraceptives
2. Increase proportion of men that recognize IUCD as safe, effective, long acting and a reversible method of contraceptive option
3. Increase proportion of men that support their partner's decision to use IUCD or other methods, if she decides to use them

Positioning

Supportive men discuss fertility plans and contraceptive use with their partners. Responsible men take care of their children and partner's health and future plans by using IUCD or other contraceptive methods. When you and your partner decide to use IUCD, you are opting for a safe and reversible method that will contribute to the health of your wife and children.

Key message

- Openly discuss with your partner about your fertility plan, options of family planning and use of contraceptive methods.
- Act like other men in your community who support their wife's use of contraceptive methods.
- Jointly with your wife, visit health facility to seek more information about contraceptives options including IUCD.
- Discuss with your partner about IUCD. It provides protection from pregnancy for up to 12 years and is safe for your wife.
- IUCD is quickly reversible and doesn't affect the return of your fertility.

Basic information about IUCD needs to be included during promotion of IUCD as one of the options of contraceptives to men which are as follows:

- IUCD is inserted into the uterus by health professionals specifically trained on the insertion and removal procedure.
- Your wife can use IUCD as it can be used by almost all group of women in reproductive age group.
- IUCD prevents pregnancy for up to 12 years. It can be removed at any time if you or your wife want to.
- IUCD is a safe, highly effective and an immediately reversible long-acting method.
- Once IUCD is inserted, there is no need for regular action by the user or frequent visit to health facility.
- When using IUCD, the user might experience a change to the menstrual cycle which is completely normal, safe and has no effect on fertility. The changes to menstrual bleeding patterns include prolonged and heavy bleeding, irregular bleeding and more cramps and pain during monthly bleeding. These changes tend to diminish with time. Not all women develop these side effects, and they are not a sign of illness. If bothered, you can discuss with your family planning provider or UHEPs.
- You can get IUCD from -------- (name of the nearby health facility that provides IUCD)

STRATEGIC APPROACH	**ACTIVITIES**
Radio/TV Purpose ● Increase IUCD's awareness and benefits and reducing misconceptions. ● Initiate couple communication regarding contraceptive use including IUCD ● Shift social norms regarding IUCD. ● Model couples starting the conversation on contraceptive use, pregnancy and joint decision making.	• Integrate key messages for male involvement into existing radio/TV spots and public announcements on family planning. • Develop TV/Radio spots and public Service Announcement on IUCD that promotes the role of men in joint decision making. • Develop or adapt multi-episode TV/radio drama serial and character conversations, especially modelling dialogue on couple communication regarding contraceptive use.
Print Media: Purpose: • Increase knowledge and understanding regarding IUCD.	• Brochure for women and men to take home and read. The brochure should be designed to address misconceptions and concerns the community holds regarding IUCD as well as to trigger discussion at home. The UHEP can distribute the brochures during her house-to-house and community level discussion forum.
Inter-personal communication Purpose	• The UHEP specifically targets men to reach them with key messages. The discussion of

- To initiate discussion regarding IUCD as one of the options of family planning methods. - Address misconceptions and concerns regarding IUCD.	the UHEP can be one-to-one with men or with couples. • The UHEP need to tailor the key message regarding IUCD based on the individual concern regarding IUCD and level of understanding.
Community mobilization Purpose • To increase social support for IUCD. • Encourage social dialogue around contraceptive in general and IUCD in particular.	• Organize discussion groups for men, and/or couples including adolescents and youth on contraceptives including IUCD. The UHEPs can organize the sessions. • Organize community dialogue events on family planning using satisfied users of IUCD (and their partners) as key advocates. • Organize community mobilization events including workshops with key community and religious leaders.

6.4.2.4 Influential Audience 2: Family planning providers within health facilities

Character of the audience: ● Have formal medical training (health officers, nurse, midwife, etc.) to provide FP and other reproductive health services. ● This audience provides counselling on FP directly to women and their partners. ● They are expected to provide comprehensive counselling on all available options of contraceptive methods including IUCD. But researches have shown some of the clients (recipients) do not receive comprehensive counselling including not being informed on side effects of methods, option of changing method, etc. ● They often influence women's contraceptive options and choices. ● They may or may not know the key determinantal beliefs that their clients hold about IUCD. ●
Communication objective 1. Increase the proportion of family planning providers who can comprehensively counsel on all forms of contraceptives including eligibility criteria, side effects, procedure, and privacy issues tailored to the client's level of understanding on IUCD.
Positioning Providing quality service to your clients during counselling makes your clients satisfied and reduces clients returning with problems and thereby reducing your workload. IUCD is one of the options to provide a long-term solution to your clients and contributes to reducing your workload in long term as the clients doesn't need frequent visit for family planning service.
Key Message ● During all sessions of counselling, provide enough time to fully understand the intention, attitude and beliefs of your clients regarding IUCD and other contraceptives. The understanding of her preference and opinion will enable you to provide targeted message. ● For each family planning client, provide comprehensive counselling on all available options of contraceptives including IUCD. ● Ensure to inform the recipient/clients about the privacy issue and pain management during insertion of IUCD.

- In every visit of a family planning user, ensure to include information on the possibility of switching to different methods.
- Encourage your clients to have discussion with her husband/partner about fertility plan and contraceptives options including IUCD.
- Basic information about IUCD needs to be provided to new and continuing clients and to those that visited the facility for maternal services (antenatal, postnatal, and abortion/post-abortion care). The basic information includes:
    - IUCD is inserted to uterus by health professionals specifically trained on the insertion and removal procedure.
    - Almost all group of women in reproductive age groups can use IUCD with very few exception *(this message can be excluded if the women is not eligible to take ICUD based on WHO's medical eligibility criteria* (WHO/RHR & CCP 2018: 135–137)).
    - IUCD prevents pregnancy for up to 12 years. It can be removed at any time if the client/recipients want to.
    - IUCD is a safe, highly effective immediately reversible long-acting method.
    - Once IUCD is inserted, there is no need for regular action by the user or frequent visit to facility.
    - When using IUCD, the client might experience a change to the menstrual cycle which is completely normal, safe, and has no effect on fertility. The changes to menstrual bleeding patterns include prolonged and heavy bleeding, irregular bleeding and more cramps and pain during monthly bleeding. These changes tend to diminish with time. Not all women develop these side effects, and they are not a sign of illness. If bothered, the client/recipient can discuss with the family planning provider.

STRATEGIC APPROACH	**ACTIVITIES**
Re-orientation of family planning providers on key messages to be included about IUCD during counselling sessions of of family planning Purpose: • To be aware and use the key messages to be communicated on IUCD during comprehensive counselling sessions of family planning • Ensure each client receives comprehensive high-quality counselling consistently	• Provide orientation to family planning providers on the content of key messages needed to be addressed during counselling sessions of family planning. The orientation can be provided during supportive supervision from health system managers or integrating it with other family planning related trainings • Identify needs and gaps of family planning providers for delivering key messages developed on this strategy. And support to address the gap or needs. •

6.4.2.5 Influential audience 3: Urban Health Extension Professionals (UHEPs)

Character of the audience:

- They are female diploma level nurses by profession that have received additional three months of training on the roles and responsibilities of providing community level health education and promotion.
- They are staff of the health centre and gets regular salary from government.
- They spend most of their time within the community by providing health education and promoting either a one-to-one or one-to-group approach. Their approach includes house-to-house visit and community mobilization.

- Their schedule is busy as they are responsible for delivering 15 different packages of essential health services including family planning, immunization, maternal health, sanitation, non-communicable diseases, and other similar topics.
- In some of the districts/woredas, the UHEPs are supported by network of volunteers but not in all areas.
- They don't provide FP methods directly to the users but are responsible to refer or link potential users of contraceptives to the nearby health facility.
- They are supervised by health system managers from nearby health centres and/or the district health office.

Communication Objective

1. Increase the proportion of UHEPs who effectively present comprehensive information on IUCD including eligibility criteria, side effects, procedure, privacy issues and based on the level of understanding of the community members.
2. Increase the proportion of UHEPs who can facilitate discussion and dialogue with men and women related with contraceptive methods including IUCD.

Positing

Your ability as UHEP to provide solutions on pregnancy related issues to the community with the latest and comprehensive information about IUCD and other contraceptive methods makes you satisfied and professionally proud.

Key messages for this group may include:

- Provide comprehensive information on all options of contraceptives including IUCD
- During discussions about IUCD, ensure to include topics that the procedure of IUCD insertion is done by trained health workers who ensures privacy of the users and practices with minimal pain to the user.
- During all sessions of promotion, ensure to provide enough time to fully understand the intention, attitude, and beliefs that the women, men, and the community holds regarding IUCD. The understanding of their opinion will enable you to provide targeted information relevant to their situation and level of understanding.
- Ensure to actively engage men/husbands during discussions and dialogues.
- Encourage both male and female members of the community to have discussions with their partner about fertility plans and contraceptives options and use.
- Identify women that use IUCD to share their experiences regarding IUCD to their neighbours and the community members.
- Include basic information about IUCD during promotion of IUCD as one of the options of contraceptives. The key messages include:
    - IUCD is inserted into the uterus by health professionals specifically trained on the insertion and removal procedure.
    - Almost all groups of women in reproductive age groups can use IUCD
    - IUCD prevents pregnancy for up to 12 years. It can be removed at any time if the client/recipients want to.
    - IUCD is a safe, highly effective immediately reversible long-acting method.
    - Once IUCD is inserted, there is no need for regular action by the user or frequent visit to facility.
    - When using IUCD, the client might experience a change to the menstrual cycle which is completely normal, safe, and has no effect on fertility. The changes to menstrual bleeding patterns include prolonged and heavy bleeding, irregular bleeding, and more cramps and pain during monthly bleeding. These changes tend to diminish with time. Not all women develop these side effects, and they are not a sign of illness. If bothered, the client/recipient can discuss with family planning provider or UHEPs.
    - IUCD is available at -------- (name of the nearby health facility that provides IUCD).

STRATEGIC APPROACH	**ACTIVITIES**

Orientation of UHEPs on key messages to be included about IUCD during promotion of family planning at the community and household level Purpose**:** • To be familiar and use the key messages to be communicated on IUCD during promotion of contraceptive at community and household level	• Provide orientation to UHEPs on the key messages to be communicated during promotion of family planning at household and community level. • Health system managers reinforce the promotion of key messages by UHEPs during their supervision of UHEPs.

6.4.2.6 Influential audience 4: Family Health Team (FHTs)

Character of the audience:

- They are team of clinical and public health staff. The member includes health officer, nurse and/or midwifes plus UHEPs
- They are staff of the health centre and gets regular salary from government.
- They visit households prioritiezed for their visit by UHEPs. The prioritized housholds include those having low income and priority groups like having pregnant women, young child less than five years old or those with chronic diseases and elderly/bedridden patients.
- They carry essential materials for provision of health care at household level such as blood pressure apparatus
- They spend their time both by supporting households at community level and within health facility for providing needed clinical follow up care
- They are supervised by health system managers from nearby health centres. Indirectly, they receive supervision from the sub-city health office and Addis Ababa city health bureau.

Communication Objective

3. Increase the proportion of FHT that provide education on family planning including IUCD during household visit
4. Incrase number of women refered for family planning service

Positing

During your visit to households that needs your support, you can include key messages of contraceptives. It will give you the opportunity to contribute in improving the quality of life of the household you are visiting.

Key messages for this group may include:

- Ensure that you have accurate and up-to-date information about IUCD as the community members rely upon your information
- Provide comprehensive information on all options of contraceptives including IUCD
- During discussions about IUCD, ensure to include topics that the procedure of IUCD insertion is done by trained health workers who ensures privacy of the users and practices with minimal pain to the user.
- Ensure to actively engage men/husbands during discussions and dialogues.
- Include basic information about IUCD during promotion of IUCD as one of the options of contraceptives. The key messages include:
    - IUCD is inserted into the uterus by health professionals specifically trained on the insertion and removal procedure.
    - Almost all groups of women in reproductive age groups can use IUCD
    - IUCD prevents pregnancy for up to 12 years. It can be removed at any time if the client/recipients want to.
    - IUCD is a safe, highly effective immediately reversible long-acting method.
    - Once IUCD is inserted, there is no need for regular action by the user or frequent visit to facility.

● When using IUCD, the client might experience a change to the menstrual cycle which is completely normal, safe, and has no effect on fertility. The changes to menstrual bleeding patterns include prolonged and heavy bleeding, irregular bleeding, and more cramps and pain during monthly bleeding. These changes tend to diminish with time. Not all women develop these side effects, and they are not a sign of illness. If bothered, the client/recipient can discuss with family planning provider or UHEPs. ● IUCD is available at -------- (name of the nearby health facility that provides IUCD).	
STRATEGIC APPROACH **Orientation of FHTs on key messages to be included about IUCD during promotion of family planning** Purpose**:** ● To be familiar and use the key messages to be communicated on IUCD during promotion of contraceptive at community and household level	**ACTIVITIES** • Provide orientation to FHTs on the key messages to be communicated during promotion of family planning at household level • Health system managers reinforce the promotion of key messages by FHT.

6.4.2.7 Influential Audience 5: Health system managers (FP/MCH coordinators and officers and HEP coordinators and officers at woreda health office, sub-city health department and Addis Ababa Regional Health Bureau)

Character of the audience:

- They work within AARHB, sub-city health offices, woreda/district health offices and health facilities with responsibility of ensuring national and regional guidelines, programs, plans, and communication interventions are implemented at the facility and community levels.
- May or may not have access to updated information regarding beliefs that determine the utilization of IUCD and other contraceptives.
- Supportive supervision to family planning providers, FHT and UHEPs is one of their responsibilities including updating of the checklist and tools for supportive supervision.
- They may or may not have day-to-day supervisory role with family planning providers or UHEPs
- Ensure supplies needed for family planning programming are in place for health facilities by coordinating with the responsible department within the MoH.
- Are responsible for coordination with media and implementing partners (such as NGOs) working on areas of contraceptives and communication.
- They are responsible to monitor family planning and other health services performance

Communication Objective

1. Increase the number of FP and HEP managers in the health system that support implementation and monitor the promotion of IUCD as one of the method of contraceptives

Position

Be a leader. Health providers look to their managers for overall guidance on health programming, latest information regarding policies and updates on procedures to deliver quality family planning counselling and promotion. As their manager, you also need to motivate them on their promotion and counselling of family planning including IUCD.

Key Messages

Overarching Messages

- As a health manager, you can use the supportive supervision to identify the needs of FP providers and UHEPs for counselling and promotion of IUCD as one of the contraceptive methods
- Health managers are responsible for ensuring the FP providers and UHEPs have the information and skills needed to counsel clients appropriately and promote IUCD together with other family planning methods.
- Create a mechanism of communication with partners (such as NGOs) and media organizations that works on promotion of contraceptives to ensure their approaches and communications capture and update the key messages identified in the communication strategy.
- Health facilities should always have adequate supplies needed for delivering IUCD to recipients. Ensure to coordinate with the responsible unit within the MoH for facilities to get enough supply needed for insertion and removal of IUCD.

STRATEGIC APPROACH	**ACTIVITIES**
Strengthen supportive supervision, reporting and peer learning opportunities Purpose - Establish quality standards to ensure high-quality IUCD promotion for recipients - Monitor progress of IUCD promotion - Share success lessons on promotion of IUCD among agents.	● Coordinate and conduct regular supportive supervision to UHEPs, FHT and FP providers and provide constructive feedback and capacity building, as needed. ● Review reports from agents regarding promotion of IUCD and other contraceptive and provide feedback on time. ● Monitor the performance of family planning including IUCD promotion using the indicators identified in M&E section ● Encourage regular coordination and peer learning to be organized between FP providers (in FP unit and maternity unity) and UHEPs within each facility.
Increase coordination platform Purpose - Ensure available commodities needed for insertion and removal are in place. - Identify bottlenecks for collaboration among agents and dynamics and provide timely solution.	● Organize regular review meetings with participants from UHEPs, family planning providers, health system managers, partners, and media to review progress and identify challenges on time. ● Closely work with mass media for promotion of family planning including IUCD key messages and ensure their messages are consistent with evidence and practices.

6.4.3 Monitoring and evaluation (M&E) plan

The M&E plan for the SBCC is summarized in table 6.1 below. It shows the indicators for monitoring, source of information where the indicator can be traced and the frequency of data collection for the indicator. The indicators are categorized by their level as input, output, and outcome level.

TABLE 6.1: MONITORING AND EVALUATION PLAN FOR SBCC TO PROMOTE THE USE OF IUCD IN ADDIS ABABA

Level	Indicator	Source of information	Frequency of collecting the information/data
Output	Number of radio/tv spots broadcasted	Report	Monthly
Output	Number of health workers (including FP providers and UHEPs) that received orientation on the updated communication strategy/key messages	Training report or participants list	Annually
Output	Number of supportive supervisions conducted	Supervision report	Quarterly
Outcome	Percentage of users of family planning method counselled on side effects of IUCD	• Survey • Exit interview during supportive supervision	• Annual survey • Bi-annual supportive supervision
Outcome	Percentage of women that feels comfortable about the procedure of insertion of IUCD	Survey	• Annual survey
Outcome	Percentage of women of reproductive age group with favourable attitude towards the use of IUCD	Survey	Annually
Outcome	Percentage of women of reproductive age group that have supportive social norm towards the use of IUCD	Survey	Annually
Outcome	Percentage of women of reproductive age group that have positive intention towards the use of IUCD	Survey	Annually
Outcome	Contraceptive prevalence rate	• Ethiopian DHS	Monthly
Impact	Percentage of women in reproductive age group that use modern family planning method	• Survey • Ethiopian DHS	• Annually • Every 5 years
Impact	Percentage of women of reproductive age group that use IUCD	• Survey Ethiopian DHS	• Annually Every 5 years
Impact	Proportion of IUCD users among users of family planning	• Routine report from HMIS • Survey • Ethiopian DHS	• Monthly • Annually • Every 5 years

6.5 EVALUATION OF THE MODEL AND COMMUNICATION STRATEGY

The final step in the development of the model of SBCC for promotion of IUCD use and its accompanying communication strategy is critical reflection to evaluate the framework. According to Chinn and Kramer (2015: 200), critical reflection helps to determine how well a model serves its purpose and is analysed using the five parameters of clarity, accessibility, simplicity, generalization, and importance.

Using the five Chinn and Krammer criteria of evaluations, the SBCC model together with the communication strategy was reviewed by four experts of communication and long-acting contraceptives working in MoH of Ethiopia, academic institutions and NGOs. The researcher shared the abstract of this research to the experts to give background about the whole study with the evaluation criteria. The educational and professional profile of the experts are shown in table 6.2. The following six questions were given as a guide for evaluation of the model and communication strategy.

1. How clear is the SBCC model and its communication strategy for promotion of IUCD use in Addis Ababa? (*Clarity refers* to: if the concepts in the model are clear for communication? Is the terminology applied consistently? Any concept that is not clear or confusing?)
2. How simple is the SBCC model and its communication strategy for promotion of IUCD use in Addis Ababa? (*Simplicity refers to*: is the model complex to understand? Are there a lot of concepts included in the model and strategy?)
3. How general is the SBCC model and its communication strategy for promotion of IUCD use in Addis Ababa? (G*enerality refers to*: applicability of the model for other similar interventions. Is the model applicable to other areas outside of Addis Ababa? Is it applicable for other interventions than IUCD promotion? What should be modified to make the model and strategy applicable to other interventions other than IUCD promotion?)
4. How accessible is the SBCC model and its communication strategy for promotion of IUCD use in Addis Ababa? (*Accessible refers to:* how applicable is the model and strategy in real life for testing? Is the model and strategy able to be implemented in real life situations?)

5. How important is the SBCC model and its communication strategy for promotion of IUCD use in Addis Ababa? (*Importance refers to*: is the model and the strategy important to the Ethiopian health system? Does it improve practice in nursing or public health related with family planning promotion or utilization? Will the promotion of IUCD be important to Addis Ababa health bureau or MoH of Ethiopia?)
6. Is there any other feedback that you would like to share about the model and the communication strategy?

Each of the experts provided their professional comments and inputs for improving the communication model and strategy. The comments were received qualitatively using the above six criteria. Two of the the experts provided written comments. For the other two reviewers, the researcher organized an audio call using zoom to get their feedback. The researcher discussed with and took note on the feedback from the reviewers.

The experts recommended few activities to be added/modified on the communication strategy and the model based on their experiences. Content of key messages were also adjusted based on the professional comments given from the reviewers. Additionally, the need to emphasize on SBCC rather than only on BCC was recommended which the researcher accepted as input in the communication and model development.

All the reviewers mentioned that the SBCC model is workable for promotion of IUCD in Addis Ababa as the content is clear, consistent, practical, and relevant to the context of the city. Feedback by these experts was used to improve the communication strategy and the model. The model and communication strategy presented above was finalized after incorporating the evaluation/feedback of the experts.

Additional critical reflection by the researcher is shown below.

TABLE 6. 2: EDUCATIONAL AND PROFESSIONAL EXPERIENCE OF EXPERTS INVOLVED IN MODEL EVALUATION

SN	Educational background	Area of expertise	Currently working with
1	PHD in public health, MPH, and BSC in nursing	Over 20 years of experience in program and model development, health system strengthening, development of strategy and training manuals	Currently working with NGO. Previously worked with university as lecturer and advisor to university students
2	MPhil in health promotion, MA in communication and journalism	Over 10 years of experience in designing and implementation of SBCC in Ethiopian context	Currently working with NGO as senior expert for SBCC
3	MPH and BSC in public health	Over 12 years of experience in sexual and reproductive health leadership including on designing and implementation of projects focused on promotion and expansion of long-acting contraceptive methods including IUCD	Currently working with NGO on project focused on expansion of long-acting contraceptive methods in Ethiopia
4	MPH and BSC in public health	Over 10 years of experience in development of communication strategies for family planning with particular focus on long-acting contraceptive methods in Ethiopia	Working with ministry of health of Ethiopia as expert on family planning with particular focus on long-acting contraceptive promotion communication

6.5.1 Clarity

Clarity refers to consistency in the meaning of terms used in theory or model as words may have multiple meanings in different settings and disciplines. It also indicates stability of linkage among concepts within the model (Chinn & Kramer 2015: 201–202).

Clarity of the SBCC model developed in this research was ensured as all the key terminologies in the model including those from Dickoff et al's survey list were clearly defined by giving both theoretical and operational definitions. The operational definitions were used consistently throughout the study. Additionally, the relationship among the components of the model (i.e., among the six elements of the survey list) is clearly presented graphically to ensure structural clarity and consistency.

6.5.2 Simplicity

Simplicity refers to the number of elements within each descriptive category- particularly concepts and their relationships – that are kept as few as possible while ensuring the model is sufficiently comprehensive to explain the situation (Chinn & Kramer 2015: 204).

The SBCC model developed to promote the use of IUCD in Addis Ababa reflects simplicity as it used only six elements/concepts based on Dickoff et al survey list. The relationship among the concepts is linear as presented graphically. The simplicity of the model enabled the researcher to develop a comprehensive communication strategy to promote utilization of IUCD in Addis Ababa using all the six components of the model. The simplicity of the model was also witnessed from experts' review and feedback.

6.5.3 Generality

Generality refers to the scope of application of a framework or theory (Chinn & Kramer 2015). The model developed in this research for promotion of IUCD is applicable for promotion of other types of contraceptive methods as well as overall promotion of family planning within the context of Addis Ababa health system or other urban areas in Ethiopia with some modification. The key messages and some of the activities need to be modified as the key messages and activities/intervention varies from one type of contraceptive to another method.

6.5.4 Accessibility

Accessibility refers to the degree to which concepts identified in model or theory can be linked to practice for testability and to what extent the purpose of the model can be realized (Chinn & Kramer 2015: 205–206).

Based on the SBCC model developed for promotion of IUCD in this research, communication strategy with its monitoring and evaluation plan is developed that is ready for implementation. This makes the model accessible as it is possible to test the practicality of the model and if it will achieve the intended purpose of increasing utilization of IUCD in Addis Ababa. The opinion from professional experts also mentioned the model and the communication strategy as practical for application.

6.5.5 Importance

Importance refers to the ability of the model or theory to create understanding that is important to nursing related practices (Chinn & Kramer 2015: 207).

The SBCC model in this research has demonstrated its importance as it will influence the practice of health workers (particularly counsellors of family planning and UHEPs who are mostly nurses or midwives) during their day-to-day interaction with their clients by providing practical tools such as key messages for promoting IUCD. Promotion of family planning including long-acting methods is an expected role of health workers and is in line with the national priority that makes the model to be important for nursing practice. Expanding utilization of LARC, which includes IUCD, is one of the high priorities of the ministry of health.

6.6 SUMMARY OF THE CHAPTER

This chapter presented a social and behavioural change communication strategy developed for promotion of IUCD in Addis Ababa. Using the findings from the quantitative study in chapter 5, a model for SBCC was developed by applying a survey list of Dickoff et al followed by development of communication strategy. The communication strategy clearly sets the communication objective, key messages, strategic intervention, and specific activities that need to be implemented to bring the expected change in attitude, perceived norm, and intention towards the use of IUCD in Addis Ababa. In the last part of the chapter, the model and its acompanying communication strategy were evaluated using Chinn and Kramer's critical reflection criteria of clarity, accessibility, simplicity, generalization, and importance.

The developed social and behavioural change communication strategy is ready for piloting and implementation as indicated in the sections of assumptions.

The next chapter presents conclusions and recommendations based on the learnings from this research.

CHAPTER 7
CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

In this last chapter of the current research, summary of the research findings, conclusion, recommendations, contributions of the study, limitations and concluding remarks are presented as follows.

7.2 SUMMARY OF RESEARCH DESIGN AND METHOD

The overall objective of the research was to develop social and behavioural change communication strategy to promote the utilization of IUCD in Addis Ababa. The research used reasoned action approach (RAA) as its theoretical framework to identify if users of short acting contraceptive method have intention towards the use of IUCD and identify the determinants for the intention.

The research was done in three phases. The first two phases dealt with data collection and analysis to understand intention and its determinants using theory of RAA whereas the third step focused on development and evaluation of SBCC strategy to promote the use of IUCD using Dickoff et al's survey list.

Exploratory sequential mixed method (qual—QUAN) was followed for data collection and analysis. The qualitative data was collected from 29 users of both short-acting and long-acting methods of family planning from health facilities in Addis Ababa using interviews guided as a tool for data collection until saturation. The transcribed data was content analysed to identify modal (most common) beliefs held by the users of family planning. Using the findings from the qualitative content analysis as input, a questionnaire was developed which was used as a data collection tool for the second phase of the research.

The second phase of this research applied correlational quantitative cross-sectional methods for collection of data. The data was collected from a representative sample of users of short acting contraceptive methods in public and private-for-not-profit health facilities in Addis Ababa. Analysis of the quantitative data identified the level of intention towards the use of IUCD in Addis Ababa and its determinants. It also identified the

underlying beliefs responsible for the observed intention, attitude, perceived norm, and perceived behavioural control.

Using the findings from the quantitative phase of the research, SBCC strategy to promote the use of IUCD in Addis Ababa was developed, which was the third phase of the research. A model for promotion of IUCD using SBCC strategy was developed using Dickoff et al's survey list. The SBCC model for promotion of IUCD together with its accompanying communication strategy was evaluated using Chinn and Kramer's critical reflection criteria which assessed the model and communication strategy's clarity, simplicity, accessibility, generality, and importance.

7.3 SUMMARY OF THE RESEARCH FINDING

Findings from the research are summarized briefly in line with the overall flow of the research in chapter 4,5 and 6.

7.3.1 Commonly held beliefs regarding the use of IUCD in Addis Ababa

The first phase of the research (qualitative or elicitation phase) identified a number of behavioural, normative and control beliefs regarding the use of IUCD among women of reproductive age group that visited health facilities for use of contraceptives in Addis Ababa.

Beliefs mentioned as advantages and perceived disadvantages of use of IUCD were part of the behavioural belief. The most common misconceptions, myths and concerns mentioned by the participants includes fear and shyness of procedure of insertion of IUCD, menstrual changes associated with use of ICUD (such as excess bleeding), discomfort during sexual intercourse, IUCD cause infertility or pain to abdomen and might disappear from body (or migrate to other part of the body). Ability of IUCD to prevent pregnancy for long years, no need for frequent visits to health facilities for refiling or injection, high effectiveness and safety were among factors that were identified as advantages to use IUCD.

As part of the normative belief, husbands/partners, family members like mother-in-law, friends, neighbours, and health workers were identified as social influencers for use and no usage of IUCD in Addis Ababa.

Factors that facilitate or hinder the use of IUCD were also identified as part of the control beliefs. Hearing experiences of other users of IUCD, being encouraged by husbands and health workers, readily availability of IUCD in health facility and not planning to be pregnant soon were among factors that facilitated the use of IUCD while feeling of being ineligible to use IUCD, planning to have more children and lack of support from health workers when developing side effect from IUCD were aspects that hinder the possible use of IUCD.

7.3.2 Potentials for use of LARC in Addis Ababa

The quantitative analysis showed injectable contraceptives to be the most widely used type of contraceptive. Among users of short acting family planning methods, 67.3% used injectables followed by pills (28.1%) which is consistent with findings from other parts of the country.

If targeted contraceptive promotion is done, there is a potential to expand the utilization of long-acting contraceptive methods in Addis Ababa. The preference for future use of implant is much higher than IUCD while the plan to use permanent method is very low. Only 6.2% of SAC users plan to use IUCD in future while the proportion was 21.6% for implant.

Additional potential for expansion of LARC including IUCD was witnessed as 39% of the women plan to be pregnant after 3 years, 46.4% of the users of SAC have children less than 24 months of age and 10.9% are using SAC method while they don’t want to have any child at all. With appropriate interventions focusing on addressing concerns and misconceptions regarding LARC, there is high potential for expansion of IUCD and implant use in Addis Ababa among users of short acting contraceptive methods.

7.3.3 Determinants of use of IUCD among users of SAC method in Addis Ababa

Most of the users of SAC methods in Addis Ababa do not yet have intention to use IUCD. Only 8.4% of SAC users intend to use IUCD within the next one year. As they have not formed an intention, they are unlikely to use IUCD within the next one year as intention is the single best determinant of behaviour (Fishbein & Ajzen 2010: 331).

The determinants for the low intention are mainly due to unfavourable attitudes and negative perceived social norms towards the use of IUCD. Perceived behavioural control (PBC) is also identified as an independent predictor of intention but its correlation is very weak. Therefore, any intervention aimed at bringing change on intention and thereby on behaviour, should primarily address the unfavourable attitude and negative social norm regarding IUCD. Attitude, perceived norm, and PBC were able to explain 51% of variability in intention that made the findings of this research to be reasonable to prepare intervention targeted at bringing change on intention and its determinants.

Furthermore, the research was able to identify the specific underlying beliefs that are responsible for the observed high level of unfavourable attitude, negative social norm, PBC and intention among users of SAC methods. Six specific beliefs were able to explain about 34% of variability in intention indirectly through its determinants. The beliefs were, presence of fear and shyness related with procedure of insertion of IUCD, feeling that IUCD is not allowed for them, perception that IUCD causes infertility, need for approval from husband, preference to do like their close friends and neighbours and hearing experiences from other users of IUCD

Any intervention including behavioural change communication should focus on addressing these underlying beliefs to bring change on attitude, perceived norm and PBC which will lead to change in intention and ultimately utilization of IUCD. The SBCC strategy was developed to bring change on these underlying beliefs, as part of the third phase of this research.

7.3.4 Behavioural change communication strategy to promote the use of IUCD in Addis Ababa

Using the findings from the quantitative research, social and behavioural change communication strategy was developed. The strategy aimed at improving utilization of IUCD in Addis Ababa through SBCC that aims to bring change on intention, attitude and perceived norm identified in the first two phases of the research. The development of the strategy followed three steps. First, the SBCC model for promotion of IUCD use in Addis Ababa was developed by following the Dickoff et al's survey list. The survey list facilitated the identification of key components of the model. Using the model, a communication strategy to promote the use of IUCD was developed. In the third and last step, the model and communication strategy was evaluated using Chinn and Kramer's evaluation criteria for clarity, generality, simplicity, accessibility, and importance.

7.4 CONCLUSIONS

The qualitative research showed the presence of widespread myths, misconceptions, and concerns regarding the use of IUCD among non-users of IUCD while those using the method have a positive attitude towards IUCD and a supportive social environment for using IUCD. The qualitative study identified the most commonly held behavioural, normative and control beliefs associated with the use of IUCD which were further investigated in the quantitative phase of the research.

About 28% of the SAC users plan to switch to LARC sometime in future. Among the LARC method, implant is highly preferred for future use than IUCD. The preference to switch to IUCD is very low.

Among the users of short acting contraceptive methods in Addis Ababa, there is high potential to expand the use of long-acting contraceptive methods, if targeted intervention is implemented. Significant proportion of SAC users are using their method for limiting birth, have children aged less than 24 months or are not planning to be pregnant within the next three years. Promotion of long-acting contraceptive methods as an alternative option of family planning method to these groups by addressing their concerns,

misunderstanding and other underlying factors can help in expanding LARC use while ensuring the woman's preferred choice of contraceptive method.

Most users of short acting contraceptive methods in Addis Ababa do not yet have formed an intention towards the use of IUCD. Only 8.4% have intention towards the use of IUCD within the next one year. Since they have not formed a positive intention, they are unlikely to use IUCD unless intervention is implemented to change the intention.

The determinants for intention towards the use of IUCD in Addis Ababa are unfavourable attitude, negative perceived norm, and perceived behavioural control. Attitude is the strongest predictor for the low intention towards the use of IUCD followed by perceived social norm. The role of PBC as a predictor of intention is weak. Interventions to bring change on intention among users of short acting contraceptives should focus on changing the unfavourable attitude and negative social norm.

The specific underlying beliefs that predicted attitude, perceived norm and PBC directly and intention towards the use of IUCD indirectly are presence of fear and shyness related with the procedure of insertion, feeling that the use of IUCD not being allowed for them (or feeling of being not eligible to use it) and feeling that they do not yet complete their fertility plan (thinking that IUCD cause infertility). Additionally, the need for approval of the husband to use IUCD, preference to do (to follow) what their close-friends and neighbours do regarding IUCD and preference to witness the experiences of other users of IUCD are among the underlying beliefs. Intervention that aims to bring change on intention and utilization of IUCD should first bring change on these underlying beliefs.

This research has developed a SBCC model to promote the utilization of IUCD in Addis Ababa that aims to bring positive change on the underlying beliefs which contributes to changing attitude, perceived norm and PBC and thereby to intention. The researcher firmly believes that implementation of the SBCC will contribute to expanding utilization of IUCD in Addis Ababa as the strategy is developed based on evidence driven from sound theories of behaviour (reasoned action approach) and practice (survey list of Dickoff et al).

7.5 RECOMMENDATIONS

The recommendations based on the findings of this research are presented as follows.

7.5.1 Recommendation to implement the SBCC strategy

- For successful implementation of the SBCC strategy, Addis Ababa Regional Health Bureau (AARHB) should take the lead for implementation and M&E. AARHB can work with development partners (such as NGOs) to support in its implementation and M&E.

- AARHB together with its partners need to develop communication materials that contains the key messages for promotion of IUCD

- Any communication materials (such as brochure, mass media spots message, etc) should be pre-tested to the targeted audience before production

- The health system managers of HEP and MCH/FP at all levels (at health facility, woreda health office, sub-city, and Addis Ababa health bureau level) should be oriented on the communication strategy and development of plan for implementation. This can be done through workshops organized by AARHB in collaboration with development partners.

- Provide orientation to family planning providers, FHT and UHEPs on their role in promotion of IUCD, key messages and approaches for communication needs to be organized. AARHB should take the lead to ensure the FP providers, FHT and UHEPs are oriented.

- Currently, there are ongoing mass media messages regarding family planning in general and long-acting contraceptives in particular supported by various partners. AARHB should work with these organizations/partners to modify the content of the key messages based on the scientific evidence from communication strategy identified in the previous chapter.

- There should be ongoing monitoring of rumours and misconceptions regarding IUCD as new concerns and misinformation might appear that affect the promotion activity.

- Family planning providers and UHEPs should receive regular and frequent supportive supervision from the health system.

- There should be continuous and uninterrupted supply needed for insertion and removal of IUCD at each health facility. The health system should be able to provide the increased demand for IUCD created because of implementing the SBCC strategy.

- Before full scale implementation of the communication strategy in the entire region of Addis Ababa, it is recommended to pilot the approach in selected few woredas of Addis Ababa city for a period of 1-2 years and document the lessons. Based on the learning, the approach can be scaled up to other parts of the city.

7.5.2 Recommendations for practice

- When health care providers conduct counselling to family planning recipients, they should always provide comprehensive counselling including the possibility of switching methods to other types of contraceptives, addressing privacy and pain management issues during insertion of IUCD, clarifying IUCD's reversibility and eligibility of almost all women for IUCD. The comprehensive counselling should be done to new as well as follow up users in every contact with family planning providers.

- Integration of counselling on IUCD, as one of the options of family planning, should be promoted to all women that visited maternal health service during antenatal, postnatal and post abortion care. Health system managers of MCH/FP should ensure integration is taking place in all health facilities.

- During promotion or counselling on IUCD, the family planning providers, FHT, UHEPs and media should encourage male/husband participation in fertility and family planning related discussions

- During community mobilization and promotion through media, inclusion of testimony from users of IUCD should be part of the approach to promote IUCD

7.5.3 Recommendations for future research

- The current study designed interventions based on the findings of the data collected but the intervention (i.e., the SBCC strategy) is not tested in real life. Therefore, it is recommended to conduct implementation research to test the usability of the model and communication strategy before full scale implementation.
- The current study aimed at reaching the general population of women of reproductive age group in community and at health facilities. The level of understanding and intention of adolescents and young women may be masked when merged with the general population. It is recommended to conduct a similar study among women in-school and/or university settings to design relevant SBCC intervention to these groups.
- Intention and its determinants regarding the use of IUCD in the current research was done only among users of short acting contraceptives that visited public and private-for-not profit health facilities. It is recommended to do similar research in a community-based setting where both user and non-users of IUCD can be studied to explore and identify additional key determinants for use and non-use of IUCD in Addis Ababa
- Promotion of IUCD and other long-acting contraceptive methods might be influenced by the attitude and perceived norm of the health care providers, health facility and health system related issues. It is recommended to conduct a study to assess health system, supply side and health care providers factors that might be influencing intention as well as utilization of IUCD.

7.6 CONTRIBUTION OF THE STUDY

The present research contributed valuable information to the body of scientific knowledge. The research sequentially and complementarity applied two different theories from two disciplines (i.e., RAA from behavioural science and survey list from nursing theory) to develop one model for promotion of IUCD.

RAA is relatively new as compared to its predecessors (i.e., TRA and TPB). In this research, the RAA was used to understand intention and its determinants towards the use of IUCD and RAA was able to explain about 51% of variability in intention. This research has added evidence and body of knowledge on the ability of RAA in understanding and predicting family planning related behaviour.

The SBCC model contributes to improve nursing and public health practice as it provides the specific activities, key messages, and interventions to be done in health facilities and community level by nurses, midwifery, public health officers and other similar professionals engaged in family planning programming. It also provides the tools, activities, and key message for the targeted audience as part of public health interventions.

The proposed SBCC model and communication strategy will help the Ministry of Health, NGOs, program managers, policy makers and others that are interested in expanding long-acting contraceptive methods and improve family planning method mix to develop effective interventions.

The SBCC model, in order to promote the use of IUCD can be adapted for promotion of other family planning methods or other similar health services by adjusting the information/elements based on situation analysis.

7.7 LIMITATION

It is important to notice that this research has some limitations, and the recommendations should be considered within these limitations.

The study participants were only users of family planning methods that visited public and private-for-not-profit health facilities in Addis Ababa. There might be other determinants for not using IUCD among those that visit private-for-profit health facilities. Since public and private-for-not-profit health facilities are sources for over 95% of users of IUCD in Ethiopia, the findings and recommendations of the study should be applicable to most of the potential users of IUCD in Addis Ababa (CSA & ICF 2016: 114).

Another area is on the number of undying behavioural beliefs included in this research. In the quantitative research, the effect of 7 behavioural, 5 normative and 4 control beliefs were assessed on intention towards the use of IUCD as they were the most frequent salient beliefs identified in the qualitative/elicitation phase of the research. But the qualitative phase of the research had identified other potential underlying beliefs which might have detrimental effects on attitude, perceived norm and/or PBC and thereby on intention. Even if there might be other left out beliefs, still the current research was able to explain about 34% of variation in intention indirectly from the underlying beliefs which is a considerable proportion of the study population for developing interventions such as SBCC strategy.

This research identified both direct and indirect determinants of intention to use IUCD and the SBCC strategy is designed based on these findings. Even if the women develop positive intentions based on the implementation of the designed SBCC strategy, some of them may not actually start to use IUCD based on their intention as behaviour is determined by additional factors including actual control on the behaviour, availability of supplies and other external factors. Since intention is the most essential determinant of behaviour, still interventions designed based on the findings of this research will be able to bring behavioural change to most of the target population.

Another limitation is related to the method of data collection. As the data was collected via face-to-face interviews, the study might be influenced by social-desirability bias with regards to reporting the beliefs, myths, and misconceptions regarding IUCD. To minimize the bias, the data collectors were trained on reassuring the research participants to share their frank information as the data is kept confidential and anonymous.

7.8 CONCLUDING REMARK

Most of the users of short acting contraceptives in Addis Ababa do not have intention to use IUCD within the next one year. Presence of strong unfavourable attitudes followed by negative social norms are the main determinants for the low intention towards the use of IUCD. The research also identified the specific underlying beliefs that indirectly predicts intention.

The SBCC strategy presented in chapter six is designed to bring a favourable attitude, supportive social norm, and positive intention towards IUCD and ultimately increase the utilization of IUCD by addressing the underlying beliefs. The researcher firmly believes that with successful implementation of the SBCC strategy, it is possible to increase the proportion of users of IUCD in Addis Ababa as the strategy is developed based on sound theories and evidence from both quantitative and qualitative studies in Addis Ababa.

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ANNEXURES

Annexure A: Ethical approval from UNISA

UNISA university of south africa

RESEARCH ETHICS COMMITTEE: DEPARTMENT OF HEALTH STUDIES

REC-012714-039 (NHERC)

10 August 2016

HSHDC/530/2016

Mr TA Abebe

Student:

Staff: 5576-806-7

Dear Mr TA Abebe

Decision: Ethics Approval

Name: Mr TA Abebe

Proposal: Development of behavioural change communication strategies to promote the use of Intrauterine Contraceptive Device in Addis Ababa, Ethiopia.

Qualification:

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 for the duration of the research period as indicated in your application.

The application was reviewed in compliance with the Unisa Policy on Research Ethics by the Research Ethics Committee: Department of Health Studies on [add date of meeting].

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 (Name of unit/sub-unit) Ethics Review Committee. 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.*

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) *[Stipulate any reporting requirements if applicable].*

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 L Roets
CHAIRPERSON
roetsl@unisa.ac.za

Prof MM Molaki
ACADEMIC CHAIRPERSON
molekmm@unisa.ac.za

Annexure B: Ethical review and approvals from Addis Ababa city regional health bureau

Annexure B.1: Letter to facilities selected for qualitative phase of the study

የአዲስ አበባ ከተማ አስተዳደር ጤና ቢሮ
City Government of Addis Ababa Health Bureau

ቁጥር [illegible]

ቀን 13/3/2009 ዓ.ም.

To:

- Yeka health center, yekasubcity
- Woreda 7 health center, yekasubcity
- Kotebe health center, Yekasubcity
- Kebena health center, Aradasubcity
- Gandi hospital
- Zewditu hospital

Addis Ababa

Subject: Request to access Health Facilities to conduct approved research

This letter is to support **TEWODROS ALEMAYEHU ABEBE** to conduct research, which is entitled as "Development of behavioral change communication strategies to promote the use of Intrauterine Contraceptive Device in Addis Ababa, Ethiopia". The study proposal was duly reviewed and approved by Addis Ababa Health Bureau IRB, and the investigator is informed with a copy of this letter to report any changes in the study procedures and submit an activity progress report to the Ethical Committee as required.

Therefore we request the mentioned Facilities and staffs to provide support to the investigator.

With Regards

Kassayehew Amare
Ethical Clearance committee (delegated)

Cc To:

- **TEWODROS ALEMAYEHU**
- **Ethical Clearance Committee**

Addis Ababa

Annexure B.2: Letter to sub-cities for quantitative phase of the study

አዲስ አበባ ከተማ አስተዳደር ጤና ቢሮ
City Government of Addis Ababa Health Bureau

Ref.No. ጤ/ጥ/ሥ/8113/227

Date 7/7/12

TO:

- Nefas Silk Lafto Sub-City Health Office
- Gulelle Sub City Health Office
- Addis Ketema Sub-City Health Office
- Bole Sub-City Health Office
- Yeka Sub-City Health Office
- Akaki Kality Sub-City Health Office
- Kolfe Keranio Sub-City Health Office
- Kirkos Sub City Health Office
- Lideta Sub City Health Office
- Arada Sub City Health Office

Subject: Request to access Facilities to conduct approved research

The letter is to support **Tewodros Alemayehu** of "**Development of Behavioral Change Communication Strategies to Promote the use of Intrauterine Contraceptive Device in Addis Ababa, Ethiopa.**" The study proposal was duly reviewed and approved by Addis Ababa Health Bureau IRB, and the principal investigator is informed with a copy of this letter to report any changes in the study procedures and submit an activity progress report to the Ethical Committee as required. Therefore we request the facility and staffs to provide support to the principal investigator.

With Regards

Ethical Clearance Committee

ዶ/ር ዮሐንስ ወ/ኪዳን
የአዲስ አበባ ከተማ አስተዳደር ጤና ቢሮ
የጥናትና ምርምር ቡድን መሪ

Cc

- Tewodros Alemayehu
- To Ethical Clearance Committee
  Addis Ababa

Annexure C: Letter of support written from sub-city health offices to sampled health facilities*

አዲስ አበባ ከተማ አስተዳደር የጉለሌ ክፍለ ከተማ ጤና ጽ/ቤት
CITY GOVERNMENT OF ADDIS ABABA GULELE SUB-CITY HEALTH OFFIC

ቁጥር፡- ጉ/ክ/ክ/ጤ/ጽ/ቤት/[illegible] /13
ቀን፡- 11/02/13

ለ አዲስ ህይወት ጤና ጣቢያ
ለ እንጦጦ ፋና ጤና ጣቢያ
ለ ጥበብ በቀጨኔ ጤና ጣቢያ
አዲስ አበባ

ጉዳዩ፡- ጥናት እንዲያደርጉ ስለመጠየቅ

ከላይ በርዕሱ ለመግለፅ እንደተሞከረው ቱድሮስ አለማየሁ ከአዲስ አበባ ጤና ቢሮ በቁጥር አ/አ/ጤ/8113/227 በቀን 07/02/13 በላክልን ደብዳቤ መሰረት ጥናታቸውን "Development of Behavioral chane communicatin strategies to promote the use of intrauterine contraceptive device in Addis Ababa, Ethiopa" በሚል እርዕስ መስራት ስለፈለጉ በናንተ ተቋም አስፈላጊውን ትብብር እንዲደረግላቸው ስንል በአክብሮት እንጠይቃለን።

ከሠላምታ ጋር

ግልባጭ፡-
- ለጤና ጽ/ቤት
- ለበሽ/መ/ጤ/ማ/የስራ ሂደት

"ጤና መተኪያ የሌለው ሀብት ነው"

* Note: the attached is sample from one of the sub-cities. Other sub-cities have written similar letter to health facilities sampled in the quantitative phase of the study

Annexure D: Consent form for qualitative study – English version

THE CONSENT FORM

STUDY TITLE: Development of behavioural change communication strategies to promote the use of Intrauterine Contraceptive Device in Addis Ababa, Ethiopia

My name is ----------.

Tewodros Alemayehu, a public health professional currently studying a Doctoral degree from the University of South Africa is conducting research on intention to use intrauterine contraceptive device in the fulfilment of the requirements for the degree of Doctor of Literature and Philosophy degree in Health Studies (DLitt et Phil). This study will be conducted in selected health facilities among the ten sub-cities of Addis Ababa City Administration and this facility is among the selected ones.

The purpose of this study is to understand the reasons for not using IUCD in Addis Ababa City Administration. The researcher intends to use the findings from this research to design communication strategy and tools to address the gaps identify for not using IUCD. The interview will take about 30-45 minutes.

The Addis Ababa City Administration Health Bureau has approved that the study can be conducted in health facilities. Heads of this health facility have been notified about this research.

All of the answers you give will be confidential and will not be shared with anyone other than members of research team. Your name or any unique identification will not be requested. Our conversation will be recorded using tape recorder. You don't have to take part in the survey, if you do not want to, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time. Your participation in this study will not have any risk or harm on you.

In case you need any clarification, please let me know. Or you can contact the researcher with the following address.

Tewodros Alemayehu: Tel: 0911335866

e-mail: 55768067@mylife.unisa.ac.za

Do you have any question?

I have read/understand this form and voluntarily consent to participate in this study.

Participant's Signature: _____ Date: _____

I, the interviewer, have explained this to the above participant and have sought her understanding for the informed consent.

Researcher/research assistant's Name: _____

Signature: _____ Date: _____

Annexure E: consent form for qualitative study – Amharic version

<u>በጥናት ለመሳተፍ የፈቃደኝነት መግለጫ ቅፅ</u>

የእኔ ስም ---------- ይባላል፡፡

ቴዎድሮስ አለማየሁ በደቡብ አፍሪካ ዩኒቨርስቲ የዶክትሬት ተማሪ ሲሆን የሉፐን አጠቃቀም በተመለከተ በአዲስ አበባ ውስጥ ጥናት እያካሄደ ይገኛል፡፡ ጥናቱ የሚካሄደው ከአስሩ ክ/ከተማ በተመረጡ በመንግስትና በግል ጤና ድርጅቶች ውስጥ ነው፡፡ ይህ የጤና ድርጅትም ለዚህ ጥናት ከተመረጡት ውስጥ ነው፡፡

የጥናቱ ዓላማ በአዲስ አበባ ውስጥ የሉፐ ተጠቃሚ ሴቶች ቁጥር ለምን ትንሽ እንደሆነ ማወቅና በዚህ ጥናት ውጤት መሰረት ለችግሮቹ መፍትሔ ለመስጠት የባህሪ ለውጥ መልዕክቶችን መሪ እቅድ ለማዘጋጀት ነው፡፡ኢንተርቪው 45 ደቂቃ ያህል ይወስዳል፡፡

ይህንን ጥናት የአዲስ አበባ ጤና ቢሮ ፍቃድ ሰጥቷል፡፡ የዚህ ጤና ድርጅት ኃላፊዎችም ያውቃሉ፡፡

ለምጠይቅዎት ጥያቄ የሚሰጡት ምላሽ ሙሉ በሙሉ ምስጢርነቱ ይጠበቃል፡፡ ከጥናት ቡድኑ ውጪ ማንም እንዲያየው አይደረግም፡፡ የምናደርገው ውይይት በቴፕ ሪከርደር ይቀረፃል፡፡ ስምዎት ወይም ሌላ መለያ አይመዘገብም፡፡ ቃለ መጠይቁ ላይ መሳተፍ ካልፈለጉ አይገደዱም ነገር ግን የሚሰጧቸው ሃሳቦች ጠቃሚ ስለሆኑ በዚህ ጥናት ላይ እንደሚሳተፉ ተስፋ እናደርጋለን፡፡

ቃለ መጥይቁን ሳደርግ መመለስ ያልፈለጉት የትኛውም ጥያቄ ካለ ይነግሩኝና አልፈነው ወደ ቀጣዩ ጥያቄ እንሄዳለን፡፡ ቃለ መጠይቁን አለመቀጠል ከፈለጉ በማንኛውም ሰዓት ማቋረጥ ይችላሉ፡፡ በዚህ ጥናት ውስጥ መሳተፍዎት ምንም አይነት ጉዳት አያስከትልብዎትም፡፡ ስለጥናቱ ተጨማሪ ማስረጃ ከፈለጉ እኔን ወይም የጥናቱን ባለቤት ቴዎድሮስ ዓለማየሁን በሚከተለው አድራሻ መጠየቅ ይችላሉ ::

ስልክ:- 0911 335866 Email: - 55768067@mylife.unisa.ac.za

መጠየቅ የሚፈልጉት ጥያቄ አለ?..... ቃለ መጠይቁን እንድቀጥል ፈቃደኛ ነዎት?

ስለጥናቱ አንብቤ/ነብቶኝ በፈቃደኛነት ለመሳተፍ ተስማቻለሁ፡፡

የተሳታፊዋ ፊርማ _____ ቀን _____

እኔም ኢንተርቪው አድራጊው ለጥናት ተሳታፊዋ ስለጥና አስረድቻት በፍቃደኝነት ጥናቱን ተሳትፋለች፡፡

የኢንተርቪወሩ ስም _____ ፊርማ _____ ቀን _____

Annexure F: Qualitative Interview guide- English version

List of Guiding Questions for Conducting Qualitative Study

Instruction (to the interviewer): Probe in detail until you get a clear answer for each question. Please clarify each question properly to the interviewee. Ask why, how, etc to get a clear answer.

Register: name of the health facility: _____

Ask: age, type of contraceptive being used

Questions:

For few seconds, think about the use of IUCD within the next one year. There are no right or wrong responses; I am merely interested in your personal opinions. Please tell me the thoughts that come immediately to your mind.

Behavioural outcomes

(1) How do you feel about the idea of using of IUCD within next one year?
(2) What do you see as the advantages of you using IUCD within the next one year?
(3) What do you see as the disadvantages of the using of IUCD within the next one year?
(4) What would you like or enjoy about using IUCD in the next one year?
(5) What would you dislike or hate about using IUCD in the next one year?
(6) What else comes to your mind when you think about using IUCD within the next one year?

Normative referents

When it comes to your use of IUCD within the next one year, there might be individuals or groups who would think you should or should not use IUCD.

(1) Please tell me the individuals or groups who would approve or think you should use IUCD for prevention of pregnancy
(2) Please tell me the individuals or groups who would disapprove or think you should not use IUCD within the next one year
(3) Sometimes, when we are not sure what to do, we look to see what others are doing. Please tell me the individuals or groups who, are most likely to take IUCD for prevention of pregnancy
(4) Please tell me the individuals or groups who are least likely to use IUCD for prevention of pregnancy

Control factors

(1) Please list any factors or circumstances that would make it easy or enable you to use IUCD over the next one year
(2) Please list any factors or circumstances that would make it difficult or prevent you from using IUCD
(3) If you want to use IUCD within the next one year, how certain are you that you can
(4) What kind of things would help you overcome any barrier to use IUCD within the next one year

Any other point that you would like to share about IUCD?

Interviewer: appreciate the participant for her time with us

Annexure G: Qualitative Interview guide – Amharic version

የጤና ድርጅቱ ስም:_____

<u>ትዕዛዝ (ለኢንተርቪው አድራጊው)</u>:- *ቃለ መጥይቅ ሲደረግ ያልገባቸውን ጥያቄዎች ደጋግመህ በግልፅ አስረዳ፡፡ እንዴት፣ለምን የሚሉትን ጥያቄዎች ተጠቀም፡፡*

እድሜ, አሁኑ የሚጠቀሙትን የእርግዝና መከላከያ ዘዴ : _____

<u>ስለሉፕ አጠቃቀም መነሻ ጥያቄዎች (Guiding Questions)</u>

ለጥቂት ሰከንዶች ስለሉፕ በሚቀጥለው ዓንድ ዓመት ውስጥ ብጠቀም ብለሽ አስቢ የምትመልሻቸው መልስ ሁሉ ትክክል ነው፡ ፡ መስማት የምፈልገው የምታስቢውን ማወቅ ብቻ ነው፡፡ ስለዚህ እባክሽን ስለሉፕ መጠቀም ስታስቢ የተሰማሽን ንገሪኝ

<u>የባህሪ ውጤቶች</u>

1. ሉፕን በሚቀጥለው አንድ ዓመት ውስጥ ስለመጠቀም ስታስቢ ምን ተሰማሽ ?
2. ሉፕን ብትጠቀሚ ምን ጥቅም የምታገኚ ይመስልሻል ?
3. ሉፕን ብትጠቀሚ ምን ጉዳት የሚያስከትልብሽ ይመስልሻል ?
4. ስለሉፕ መጠቀም ስታስቢ የሉፕ ምኑ ደስ ያሰኝሻል ?
5. ስለሉፕ መጠቀም ስታስቢ የማያስደስትሽ /የምትጠይው ምኑ ነው ?
6. ስለሉፕ መጠቀም ስታስቢ ሌላ ወደ አእምሮሽ ምን መጣ ?

<u>የማህበራዊ (ሌሎች)ተጠቃሚዎች</u>

ለሚቀጥለው አንድ ዓመት ውስጥ ሉፕ ለመጠቀም ብታስቢ አንቺ እንድትጠቀሚ ወይም እንድትጀምሪ የሚያስቡ ሰዎች ሊኖሩ ይችላሉ፡፡

1. ሉፕን ለቤተሰብ ምጣኔነት እንድትጠቀሚ የሚጠብቁ/የሚያበረታቱ እነማን ናቸው ?
2. ሉፕን ለቤተሰብ ምጣኔነት እንድትጠቀሚ የማይስማሙ እነማን ይመስሉሻል ?
3. አንዳንዴ የምንሰራውን እርግጠኛ ሳንሆን ስንቀር ሌሎች በአካባቢያችን የሚሰሩትን እናያለን፡፡ባንቺ ዙሪያ ካሉት ሉፕን ለቤተሰብ ምጣኔነት የሚጠቀሙ እነማን ይመስሉሻል ?
4. ባንቺ ዙሪያ ካሉት ሰዎች ውስጥ ሉፕን ለቤተሰብ ምጣኔ አይጠቀሙም ብለሽ የምታስቢያቸው እነማን ይመስሉሻል ?
5. ሌላ

<u>የብቃት ጥያቄዎች</u>

1. ሉፕን በሚቀጥለው አንድ ዓመት ውስጥ በቀላሉ እንድትጠቀሚ የሚያደርጉሽ ወይም የሚያበረታቱሽ ምን ዓይነት ነገሮ ናቸው ?
2. በሚቀጥለው አንድ ዓመት ጊዜ ውስጥ ሉፕን ለቤተሰብ ምጣኔነት ለመጠቀም አስቸጋሪ የሚያደርግብሽ ምንድን ነው ?
3. ሉፕን በሚቀጥለው አንድ ዓመት ውስጥ ለመጠቀም ብትፈልጊ ለመጠቀምሽ ምን ያህል እርግጠኛ ነሽ ?
4. ምን ዓይነት ነገሮች ቢስተካከሉ ሉፕን የቤተሰብ ምጣኔ አድርገሽ እስከ ዛሬ ዓመት ድረስ ትጠቀሚያለሽ ?

ስለሉፕ መጠቀም ሌላ ወደ አእምሮሽ ምን መጣ ? ሌላ ስለሉፕ የምትነግሪን ነገር ካለ?

ቃለ መጠይቄን እዚህ ላይ ጨርሻለሁ፤ ለተሳትፎዎ ከልብ አመሰግናለሁ::

Annexure H: Consent form and questionnaire for quantitative phase of the study – English version

Family Planning Clients Questionnaire for Development of Behavioural Change Communication Strategies to Promote the Use of Intrauterine Contraceptive Device (IUD) in Addis Ababa, Ethiopia

Section 1: Identification of Health Facility, Data Collectors, and the Questionnaire Status

#	Question	Coding category
101	Name of health facility	_____
102	Sub city	_____
103	Woreda	_____
104	Type of Health Facility	1. Health Center 2. Hospital 3. Clinic 4. Health Post 5. Other (specify) _____
105	Ownership of the facility	1. Government (public) 2. Private 3. NGO 4. Other (specify)_____
106	Name of interviewer	_____
107	Date of interview	_____
108	Time of interview started	_____
109	Time interview ended	_____
110	Result of interview	1. Completed 2. Partially completed 3. Refused 4. Other (specify) _____
111	Name and signature of interviewer	_____
112	Name and signature of supervisor	_____

Section 2: Consent form to participate in the interview

Good morning/afternoon. My name is ----------

Tewodros Alemayehu, a public health professional currently studying a Doctoral degree at the University of South Africa, is conducting research to assess the intention to use intrauterine contraceptive device in the fulfilment of the requirements for the degree of Doctor of Literature and Philosophy degree in Health Studies (DLitt et Phil). This study is being conducted among women that visit sampled health facilities within Addis Ababa City Administration for family planning service and you are one of those selected for interview.

The objective of this study is to understand the reasons for low utilization of IUCD and explore if there is intention to use IUCD in Addis Ababa City. The researcher will use the findings from this research to design behavioral change communication strategy to address the identified gaps for low utilization of IUCD. The interview will take about 30-45 minutes.

The Addis Ababa City Administration Health Bureau has approved that the study can be conducted in health facilities. Heads of this health facility has been notified about this research.

All of the answers you give will be confidential and will not be shared with anyone other than members of the survey team. Your name or any unique identification will not be requested. If you want to, you don't have to take part in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time. Your participation in this study will not have any risk or harm on you.

If you need any clarification, please let me know. You can also contact the researcher with the following address.

Tewodros Alemayehu: Tel: 0911335866; e-mail: 55768067@mylife.unisa.ac.za

Do you have any question? …… Are you willing to participate in the interview?

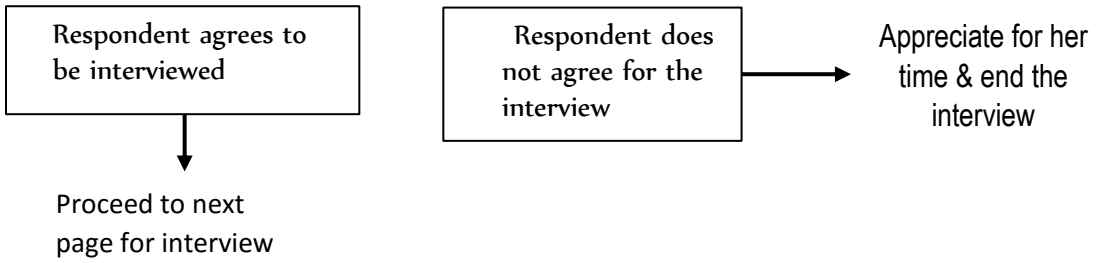
I have read this form (or fully understand the explanation given by the interviewer) and voluntarily consent to participate in this study.

Participant's signature: _____ Date: _____

I, the interviewer, have explained the above consent form to this participant and she has fully understood the consent form before she signs on it.

Name of Interviewer: _____Signature: _____ Date: _____

Decision of the interviewee



Section 3. RESPONDENT'S BACKGROUND

No.	Questions and Filters	Coding Category	Skip
301	What is your age?	_____ (in years)	
302	What is your highest level of education?	1. Not applicable 2. Primary (grade 1-8) 3. Secondary (grade 9-12) 4. Diploma 5. Degree or above	
303	What is your religion?	1. Orthodox 2. Muslim 3. Protestant 4. Catholic 6. Other (specify) _____	
304	Marital status	1. Currently married 2. Never married/single/ 3. Divorced 4. Separated 5. Widowed	If 2-5, skip to 306
305	What is the highest level of educational status of your husband	1. Not applicable 2. Primary (grade 1-8) 3. Secondary (grade 9-12)	

		4. Diploma 5. Degree or above	
306	What is your main occupation	1. Employed (government or private) 2. Housewife 3. Trader or self employed 4. Daily labourer 5. Student 6. Jobless/currently not working 7. Other (specify) _____	
307	What is your household's average monthly income from all sources? ***[Please take your time and try to give us your best estimate. This information is confidential and only used for research purposes]***	---------- (in birr) 99. Don't remember	
308	Who mainly decide on how the income of the household will be used?	1. My husband 2. Myself 3. Both of us 4. Others (specify)-------	
309	What is your current family size? *(those that lives with you and eats from the same household including yourself)*	_____ 99. no response/I don't know	
310	Currently, how many children do you have? *(Enter number of children)*	_____ 99. no response	If **0**, skip to **312**
311	How old is your youngest child?	1. 0-11 months (less than 1 year) 2. 12-23 months (1 up to 2 years) 3. 2- 5 years 4. Over 5 years 99. I don't know	
312	Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children?	1. Want to have another child 2. I don't want any more 3. Undecided yet 4. I cannot get pregnant 5. Other (specify) _____	If **2-5** skip to **401**
313	How long would you like to wait from now before having the next pregnancy?	1. Less than 1 year 2. 1-2 years 3. 3-5 years 4. 6-10 years 5. Over 10 years 99. I don't know	

314	How many more children would you like to have?	1. 1 2. 2 3. 3 4. 4 5. More than 4 children 6. Not sure/I don't know	

Section 4: Contraceptives

401	**Which method of contraceptive are you currently using?**	**1. Injectable (depo)** **2. Pills** **3. Condom** **4. Emergency contraceptive pills** **5. IUCD** **6. Implant** **7. Permanent method** **8. Lactational method** **9. Other (specify)_____**	
402	For how long have you been using the current method of contraceptive?	1. Less than 1 year 2. 1-2 years 3. 3-5 years 4. 6-10 years 5. Over 10 years 6. don't know/ I don't remember	
403	Do you have plan to change the current method to another type of contraceptive	1. No 2. Yes 99. I don't know	If **0** or **99**, Skip to **405**
404	If yes, which method do you want to switch to? *(Multiple answer is possible. Circle all the methods mentioned by the interviewee)*	1. Pills 2. Injectable 3. IUCD 4. Implant 5. Permanent method 6. Condom 7. Lactational method 8. Other Traditional method 9. Other (specify) _____	
405	Have you ever used implant before?	1. No 2. Yes	If **0** or **99**, Skip to **407**

		99. I don't know	
406	If ever used implant, for how long did you use implant	1. Less than 1 year 2. 1-2 years 3. 3-5 years 4. Over 5 years 99. I don't know	
407	Have you ever used IUCD before?	1. No 2. Yes 99. I don't know	If no or don't know, skip to **409**
408	If ever used IUCD, for how long did you use IUCD	5. Less than 1 year 6. 1-2 years 7. 3-5 years 8. 6-10 years 9. Over 10 years 99. I don't know	
409	If ever used implant or IUCD before, why did you stop using it? ***(Write the reason clearly, if it is not included in the possible responses)***	1. Want to have pregnancy 2. Became pregnant while using it 3. Side effect of the method (eg. Excessive bleeding) 4. Refusal of husband 5. Removed after finishing its duration 6. Preferred for short term method of contraceptive 7. Rumer/discouragement from community or others 8. Other (write the reason) _____ _____	

Section 5: Attitude, perceived behavioral control, subjective norm, and intention

Now on wards, I will read different sentences with choices, please tell me the best option that describes your opinion. Some of the questions may appear to be similar but they do address different issues. Since we are interested to know your opinion, all your answers are correct. Please listen to each question carefully and select the option that best describes your opinion.

No.	Questions or concepts	Answer Options/ Category
501	For me, prevention of pregnancy for long period of time is	1. Extremely unimportant 2. Unimportant 3. Neutral/neither 4. Important 5. Extremely important

502	For me, change to menstrual pattern (such as irregularity or excess bleeding) is	1. Extremely bad 2. Bad 3. Neutral/neither good nor bad 4. Good 5. Extremely good
503	For me, having pain on my uterus or abdomen or feeling of external material inside body is	1. Extremely bad 2. Bad 3. Neutral/neither 4. Good 5. Extremely good
504	For me, having pain or discomfort during sexual intercourse is	1. Extremely undesirable 2. Undesirable 3. Neutral/neither 4. Desirable 5. Extremely desirable
505	For me, frequent visit to health facility or forgetting to take contraceptive timely is	1. Extremely boring 2. Boring 3. Neutral/neither 4. Enjoyable 5. Extremely enjoyable
506	My feeling of fear, pain or discomfort during insertion of IUCD is	1. Not concerning at all 2. Not concerning 3. Neutral/neither 4. Concerning 5. Extremely concerning
507	For me, being infertile is	1. Extremely undesirable 2. Undesirable 3. Neutral/neither 4. Desirable 5. Extremely desirable
508	My use of IUCD within the next one year will help me to prevent pregnancy for long period of time.	1. Strongly disagree 2. Disagree 3. Neutral/neither 4. Agree 5. Strongly agree
509	My use of IUCD within the next one year will bring change to the pattern of my menstrual period (such as being irregular or excess bleeding)	1. Extremely unlikely 2. Unlikely 3. Neutral/neither 4. Likely 5. Extremely likely
510	My use of IUCD will not cause pain to my uterus or abdomen.	1. Extremely unlikely 2. Unlikely 3. Neutral/neither 4. Likely 5. Extremely likely
511	My use of IUCD within the next one year will cause pain or discomfort during sexual intercourse.	1. Strongly disagree 2. Disagree 3. Neutral/neither

		4. Agree 5. Strongly agree
512	My use of IUCD within the next one year will reduce my frequent visit to health facility for refilling or forgetting to take contraceptive timely	1. Strongly disagree 2. Disagree 3. Neutral/neither 4. Agree 5. Strongly agree
513	The procedure of insertion of IUCD to my uterus makes me feel fear, pain or discomfort.	1. Strongly disagree 2. Disagree 3. Neutral/neither 4. Agree 5. Strongly agree
514	My use IUCD within the next one year will cause infertility to me.	1. Strongly disagree 2. Disagree 3. Neutral/neither 4. Agree 5. Strongly agree
515	When it comes to the matter of family planning, how much do you want to do what your husband/partner thinks you should do?	1. Not at all 2. Usually no 3. Neutral/I don't know 4. Usually yes 5. Very much 6. NA (currently not married)
516	When it comes to the matter of family planning, how much do you want to do what your close friends and neighbours thinks you should do?	1. Not at all 2. Usually no 3. Neutral 4. Usually yes 5. Very much
517	When it comes to the matter of family planning, how much do you want to do what your health worker thinks you should do?	1. Not at all 2. Usually no 3. Neutral 4. Usually yes 5. Very much
518	My husband or partner does not think that I should use IUCD within the next one year	1. Extremely unlikely 2. Unlikely 3. Neutral/I don't know 4. Likely 5. Extremely likely 6. NA (currently not married)
519	My close friends and neighbours think that I should use IUCD within the next one year	1. Definitely false 2. False 3. Neutral/neither/I don't know 4. True 5. Definitely true
520	The health workers think that I should use IUCD within the next one year	1. Strongly disagree 2. Disagree 3. Neither agree or disagree

		4. Agree 5. Strongly agree
521	My close friends and neighbours use IUCD for preventing pregnancy	1. Extremely unlikely 2. Unlikely 3. Neutral/I don't know 4. Likely 5. Extremely likely
522	My family members (like sister, aunt, etc) do not use IUCD	1. Extremely unlikely 2. Unlikely 3. Neutral/I don't know 4. Likely 5. Extremely likely
523	When it comes to the matter of contraceptives, I am more likely to do like my close friends/neighbours do.	1. Strongly disagree 2. Disagree 3. Neither agree or disagree 4. Agree 5. Strongly agree
524	When it comes to the matter of contraceptive, I am more likely to do like my family members (e.g., sister, aunt, etc) do.	1. Strongly disagree 2. Disagree 3. Neither agree or disagree 4. Agree 5. Strongly agree
525	Hearing experience of other users of IUCD will make me more likely to use IUCD within the next one year.	1. Strongly disagree 2. Disagree 3. Neutral/I don't know 4. Agree 5. Strongly agree
526	Ability to get advice and support from health facilities when I develop unwanted side-effect of IUCD will make me more likely to use IUCD within the next one year	1. Strongly disagree 2. Disagree 3. Neutral/I don't know 4. Agree 5. Strongly agree
527	Not yet having the needed number of children will make it more difficult for me to use IUCD within the next one year	1. Strongly disagree 2. Disagree 3. Neutral/I don't know 4. Agree 5. Strongly agree
528	My feeling of being not eligible to take IUCD will make it difficult for me to take IUCD within the next one year	1. Strongly disagree 2. Disagree 3. Neutral/I don't know 4. Agree 5. Strongly agree
529	Users of IUCD sharing do not their experience with other people.	1. Extremely unlikely 2. Unlikely 3. Neutral 4. Likely 5. Extremely likely
530	Health facilities provide needed advice and support on issues related with side effects of IUCD	1. Extremely unlikely 2. Unlikely 3. Neutral

		4. Likely 5. Extremely likely
531	I don't yet have enough number of children that I wanted to have.	1. Strongly disagree 2. Disagree 3. Neutral I don't know 4. Agree 5. Strongly agree
532	I feel I am not eligible to take IUCD	1. Strongly disagree 2. Disagree 3. Neutral I don't know 4. Agree 5. Strongly agree
533	For me, the use of IUCD within the next one year for prevention of pregnancy is	1. Extremely unenjoyable 2. Unenjoyable 3. Neutral/I don't know 4. Enjoyable 5. Extremely enjoyable
534	For me, the use of IUCD within the next one year for prevention of pregnancy is	1. Extremely bad 2. Bad 3. Neutral/neither 4. Good 5. Extremely good
535	For me, the use of IUCD within the next one year for prevention of pregnancy is	1. Extremely harmful 2. Harmful 3. Neutral/I don't know 4. Beneficial 5. Extremely beneficial
536	For me, the use of IUCD within the next one year for prevention of pregnancy is	1. Extremely unpleasant 2. Unpleasant 3. Neutral/I don't know 4. Pleasant 5. Extremely pleasant
537	Most people who are important to me think that I should use IUCD within the next one year.	1. Definitely false 2. False 3. Neutral/neither/I don't know 4. True 5. Definitely true
538	Most people in my life whose opinions I value would not approve my use of IUCD within the next one year.	1. Completely Improbable 2. improbable 3. Neutral/I don't know 4. probable 5. Very probable
539	How many of the people you respect and admire are using IUCD or will get IUCD in the next one year?	1. Virtually none 2. Some of them use 3. About half of them use 4. Most of them use 5. Almost all of them use
540	Most women like me do not use IUCD.	1. Extremely unlikely 2. Unlikely 3. Neutral/neither

		4. Likely 5. Extremely likely
541	How confident are you that you will be able to use IUCD within the next one year?	1. Definitely unsure 2. Unsure 3. Neutral/neither 4. Sure 5. Very sure
542	If I really wanted to, I could use IUCD within the next one year.	1. Extremely unlikely 2. Unlikely 3. Neutral/neither 4. Likely 5. Extremely likely
543	How much do you feel that using IUCD within the next one year is beyond your control?	1. Not at all in my control 2. mostly beyond my control 3. Neutral/neither 4. Mostly in my control 5. Very much in my control
544	It is up to me whether or not I use IUCD within the next one year	1. Strongly disagree 2. Disagree 3. Neutral/neither 4. Agree 5. Strongly agree
545	I plan to use IUCD within the next one year for prevention of pregnancy.	1. Extremely unlikely 2. Unlikely 3. Neutral/I don't know 4. Likely 5. Extremely likely
546	I am not willing to use IUCD within the next one year.	1. Strongly disagree 2. Disagree 3. Neutral/I don't know 4. Agree 5. Strongly agree
547	I intend to use IUCD within the next one year.	1. Definitely will not do 2. Usually don't do 3. Neutral/ I don't know 4. Usually do 5. Definitely do

I have finished my questions. Thank you for your time.

Annexure I: Consent form and questionnaire for quantitative phase of the study – Amharic version

በማህፀን ውስጥ የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) የመጠቀም ፍላጎትን በተመለከተ በአዲስ አበባ ውስጥ የሚደረግ ጥናት

ክፍል 1 ፡ የጤና ድርጅቱና የቃለ መጠይቅ አድራጊው መለያ

ተ.ቁ	ጥያቄ	አማራጭ ምላሾች
101	የጤና ድርጅቱ ስም	_____
102	ክፍለ ከተማ	_____
103	ወረዳ	_____
104	የጤና ድርጅቱ አይነት	1. ጤና ጣቢያ 2. ሆስፒታል 3. ክሊኒክ 4. ጤና ኬላ 5. ሌላ (ይጠቀስ)_____
105	የድርጅቱ ባለቤት	1. የመንግስት የጤና ተቋም 2. የግል የጤና ተቋም 3. የግብረ ሰናይ ድርጅት ጤና ተቋም 4. ሌላ (ይጠቀስ) _____
106	የቃለ መጠይቅ አድራጊዉ ሥም	_____
107	ቃለ መጠይቅ የተደረገበት ቀን	_____ (ቀን/ወር/ዓ.ም)
108	ቃለ መጠይቁ የተጀመረበት ሰዓት	_____
109	ቃለ መጠይቁ የተጠናቀቀበት ሰዓት	_____
110	የቃለ መጠይቁ ዉጤት	5. ሙሉ በሙሉ ተሞልቷል 6. በከፊል ተሞልቷል 7. ፈቃደኛ አልሆኑም 8. ሌላ (ይጠቀስ) _____
111	ቃለ መጠይቅ ያደረገው ሥም እና ፊርማ	_____
112	የሱፐርቫይዘር ሥም እና ፊርማ	_____

<u>ክፍል 2፡ በጥናት ለመሳተፍ የፈቃደኝነት መግለጫ ቅፅ</u>

እንደምን አደሩ/ዋሉ፡፡ የእኔ ስም ---------- ይባላል፡፡

ቴዎድሮስ አለማየሁ፤ በደቡብ አፍሪካ ዩኒቨርስቲ የዶክትሬት ተማሪ ሲሆን በማህፀን ውስጥ የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) የመጠቀም ፍላጎትን በተመለከተ ጥናት እያካሄደ ይገኛል፡፡ ጥናቱ የሚካሄደው በአዲስ አበባ በሚገኙ በተመረጡ የጤና ድርጅቶች ውስጥ የቤተሰብ እቅድ ተጠቃሚዎችን የሚያካትት ሲሆን እርስዎም ለዚህ ጥናት እንዲሳተፉ ከተመረጡት ሰዎች አንዱ ነዎት፡፡

የጥናቱ ዓላማም በማህፀን ውስጥ የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) የማይጠቀሙበትን ምክንያት ምን እንደሆነ ማወቅና ለወደፊት የመጠቀም ፍላጎት መኖር አለመኖሩን ማጥናት ሲሆን በዚህ ጥናት ውጤት መሰረት የባህሪ ለውጥ መልዕክቶችን መሪ እቅድ ለማዘጋጀት ነው፡፡ ቃለ መጠይቁ 45 ደቂቃ ያህል ይወስዳል፡፡ ይህንን ጥናት የአዲስ አበባ ጤና ቢሮ ፍቃድ ሰጥቷል፤ የዚህ ጤና ድርጅት ኃላፊዎችም ያውቃሉ፡፡

ለምጠይቅዎት ጥያቄ የሚሰጡት ምላሽ ሙሉ በሙሉ ምስጢርነቱ ይጠበቃል፤ ከጥናት ቡድኑ ውጪ ማንም እንዲያየው አይደረግም፡፡ ስምዎት ወይም ሌላ መለያ አይመዘገብም፡፡ ቃለ መጠይቁ ላይ መሳተፍ ካልፈለጉ አይገደዱም ነገር ግን የሚሰጧቸው ሃሳቦች ጠቃሚ ስለሆኑ በዚህ ጥናት ላይ እንደሚሳተፉ ተስፋ እናደርጋለን፡፡

ቃለ መጥይቁን ሳደርግ መመለስ ያልፈለጉት የትኛውም ጥያቄ ካለ ይነግሩኝና አልፈነው ወደ ቀጣዩ ጥያቄ እንሄዳለን፡፡ ቃለ መጠይቁን አለመቀጠል ከፈለጉ በማንኛውም ሰዓት ማቋረጥ ይችላሉ፡፡ በዚህ ጥናት ውስጥ መሳተፍዎት ምንም አይነት ጉዳት አያስከትልብዎትም፡፡ ስለጥናቱ ተጨማሪ ማስረጃ ከፈለጉ እኔን ወይም የጥናቱን ባለቤት ቴዎድሮስ ዓለማየሁን በሚከተለው አድራሻ መጠየቅ ይችላሉ ::

ስልክ:- 0911 335866 Email: - 55768067@mylife.unisa.ac.za

መጠየቅ የሚፈልጉት ጥያቄ አለ?..... ቃለ መጠይቁን እንድቀጥል ፈቃደኛ ነዎት?

ስለጥናቱ ከላይ የተፃፈውን በቃለ መጠይቅ አድራጊው በሚገባ ተበራርቶልኝ (አንብቤ) በፈቃደኝነት ለመሳተፍ ተስማቻለሁ፡ ፡

የተሳታፊዋ ፊርማ _____ **ቀን** _____

እኔም ቃለ መጠይቅ አድራጊው ለጥናት ተሳታፊዋ ስለጥናቱ አስረድቼ ፍቃደኝነቷውን አረጋግጬያለሁ፡፡

ቃለ መጥይቅ አድራጊው ስም _____ ፊርማ _____ ቀን _____

የጥናት ተሳታፊዋ ውሳኔ

ተሳታፊዋ ለቃለ-መጠይቁ ተስማምተዋል

ለቃለ-መጠይቁ አልተስማሙም → አመስግነህ ቃለ መጠየቁን አቁም

ክፍል 3. የግል መረጃ

ተ.ቁ	ጥያቄ	አማራጭ ምላሾች	የሚዘለል
301	እድሜዎት ስንት ነው?	_____ (በአመት)	
302	የትምህርት ደረጃዎት ስንት ነው?	7. ያልተማረ 8. የመጀመሪያ ደረጃ (1-8 ክፍል) 9. ሁለተኛ ደረጃ (9-12 ክፍል) 10. ዲፕሎማ 11. ዲግሪ ወይም ከዚያ በላይ	
303	ሀይማኖትዎ ምንድን ነው?	1. አርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌላ (ይጥቀሱ) _____	
304	በአሁኑ ጊዜ የትዳር ሁኔታዎት ምንድን ነው?	1. ባለትዳር 2. አግብቼ አላውቅም/ያላገባ 3. አግብቶ የፈታ/ Divorced 4. ተለያይተናል/ Separated 5. ባለቤቴ አርፏል	መልሱ 2-5 ከሆነ ወደ **306** ይለፉ
305	የባለቤትዎት የትምህርት ደረጃ ስንት ነው?	1. ያልተማረ 2. የመጀመሪያ ደረጃ (1-8 ክፍል) 3. ሁለተኛ ደረጃ (9-12 ክፍል)- 4. ዲፕሎማ 5. ዲግሪ ወይም ከዚያ በላይ	
306	የሥራ ዘርፍዎ ምንድን ነው?	8. ተቀጣሪ (የመንግስት ወይም የግል ድርጅት ሠራተኛ) 9. የቤት እመቤት 10. ነጋዴ ወይም ሌላ በግል ሥራ ተዳዳሪ 11. የጉልበት/የቀን ሰራተኛ 12. ተማሪ 13. ስራ የለኝም/ ስራ ፈላጊ 14. ሌላ (ይግለፁ) _____	
307	የእርስዎን፣ የባለቤትዎንና ሌሎች የተለያዩ የገቢ ምንጮቸዎን ጨምሮ የወር ገቢዎት ምን ያህል ይሆናል **[ትንሽ ጊዜ ወስደው ትክክለኛ ነው ብለው የሚያምኑበትን ግምት ቢገልፁልን ሚስጢሩ የተጠበቀ ነው]**	_____ ብር 99. አላስታውስም	
308	በቤተሰብዎ ውስጥ የሚገኘውን የወር ገቢ በዋነኝነት አጠቃቀሙን በተመለከተ የሚወስነው ማነው?	1. ባለቤቴ 2. እኔ 3. ሁለታችንም 4. ሌላ (ይግለፁ) _____	
309	የቤተሰባችሁ ብዛት ስንት ነዉ?	_____	

	(እርስዎን ጨምሮ በቤታችሁ የሚኖሩ እና ምግብ በጋራ የሚመገቡ)	**(በቁጥር ይቀመጥ)**	
310	በአሁኑ ጊዜ በሕይወት ያሉ ስንት ልጆች አሉዎት?	_____ 99. አላስታውስም/አላውቅም	**0** ከሆነ ወደ **312** ይለፉ
311	የመጨረሻው/ዋ ትንሹ ልጅዎ እድሜው/ዋ ስንት ነው?	1. 0-11 ወር (ከአንድ አመት በታች) 2. 12-23 ወር (1 -2 አመት) 3. 2-5 አመት 4. ከ5 አመት በላይ 99. አላስታውስም/አላውቅም	
312	ወደፊት ተጨማሪ ልጆች እንዲኖርዎትስ ይፈልጋሉ?	6. የመውለድ እቅድ አለኝ 7. የመውለድ እቅድ የለኝም 8. እርግጠኛ አይደለሁም 9. ማርገዝ አልችልም 10. ሌላ (ይጥቀሱ) _____	መልሱ **2- 5** ከሆነ ወደ **401** ይለፉ
313	የመውለድ ፍላጎት ካለዎት ከምን ያህል ጊዜ በኋላ እርጉዝ ለመሆን አስበዋል?	6. ከ 1 ዓመት በታች 7. 1-2 ዓመት 8. 3-5 ዓመት 9. 6-10 ዓመት 10. ከ10 ዓመት በላይ 11. አላውቅም	
314	ከዚህ በኋላ ስንት ልጅ የመውለድ ፍላጎት አለዎት?	1. 1 2. 2 3. 3 4. 4 5. ከ 4 ልጅ በላይ 6. አላውቅም/አልወሰንኩም	

ክፍል 4፡ የቤተሰብ ዕቅድ አገልግሎት

401	አሁኑ /ዛሬ/ የተጠቀሙት የትኛውን አይነት የእርግዝና መከላከያ ዘዴ ነው**?**	**10.** *በመርፌ* የሚሰጥ የወሊድ መቆጣጠሪያ **11.** የወሊድ መቆጣጠሪያ እንክብል **12.** ኮንዶም **13.** ድንገተኛ የወሊድ መቆጣጠሪያ **14.** በማህፀን ውስጥ የሚቀመጥ እርግዝና መከላከያ **(**ሉፕ**)** **15.** በክንድ ስር የሚቀበር የወሊድ መቆጣጠሪያ **16.** ማስቋጠር /ቋሚ የወሊድ መቆጣጠሪያ ዘዴ/ **17.** ጡት በማጥባት ወሊድን መቆጣጠሪያ ዘዴ **18.** ሌላ **(**ይጥቀሱ**)**_____	
402		7. ከ 1 ዓመት በታች	

	አሁኑ የሚጠቀሙትን የእርግዝና መከላከያ ዘዴ ሲጠቀሙ ምን ያህል ጊዜ ሆኖዎታል?	8. 1-2 ዓመት 9. 3-5 ዓመት 10. 6-10 ዓመት 11. ከ10 ዓመት በላይ 99 አላውቅም/አላሰታውስም	
403	አሁኑ የሚጠቀሙትን የእርግዝና መከላከያ ዘዴ በሌላ አይነት የመቀየር ፍላጎት አለዎት?	3. መቀየር አልፈልግም 4. አዎ መቀየር እፈልጋለሁ 99 እርግጠኛ አየደለሁም	መልሱ **0** ወይም **99** ከሆነ ወደ **405** እለፉ
404	የመቀየር ፍላጎት ካለዎት፤ የትኛውን አይነት የየእርግዝና መከላከያ ዘዴ መጠቀም ይፈልጋሉ? ***(ከአንድ በላይ ምላሽ መሰጠት ሰለሚቻል፡ የተመለሰውን ምላሽ በሙሉ አክብብ)***	10. የወሊድ መቆጣጠሪያ እንክብል 11. በመርፌ የሚሰጥ የወሊድ መቆጣጠሪያ 12. በማህፀን ውስጥ የሚቀመጥ እርግዝና መከላከያ (ሉፕ) 13. በክንድ ስር የሚቀበር የወሊድ መቆጣጠሪያ 14. ማስቋጠር/ቋሚ የወሊድ መቆጣጠሪያ ዘዴ 15. ኮንዶም 16. ጡት በማጥባት ወሊድን መቆጣጠሪያ ዘዴ 17. ሌሎች ባህላዊ የወሊድ መቆጣጠሪያ ዘዴ 18. ሌላ (ይጥቀሱ) _____	
405	ከዚህ በፊት በክንድ ስር የሚቀበረውን የወሊድ መቆጣጠሪያ ተጠቅመው ያውቃሉ?	1. አልተጠቀምኩም 2. አዎ 99. እርግጠኛ አየደለሁም	መልሱ **0** ወይም **99** ከሆነ ወደ **407** ይለፉ
406	በክንድ ስር የሚቀበረውን የወሊድ መቆጣጠሪያ ለምን ያህል ጊዜ ነበር የተጠቀሙት?	1. ከ 1 ዓመት በታች 2. 1-2 ዓመት 3. 3-5 ዓመት 4. ከ5 ዓመት በላይ 99. መልስ አልተሰጠም/ አላስታውስም	

407	ከዚህ በፊት በማህፀን ውስጥ የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) ተጠቅመው ያውቃሉ?	1. አልተጠቀምኩም 2. አዎ 99. እርግጠኛ አየደለሁም	መልሱ **0** ወይም **99** ከሆነ ወደ **409** ይለፉ
408	በማህፀን ውስጥ የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕን) የተጠቀሙት ለምን ያህል ጊዜ ነበር?	1. ከ 1 ዓመት በታች 2. 1-2 ዓመት 3. 3-5 ዓመት 4. 6-10 ዓመት 5. ከ10 ዓመት በላይ 99. መልስ አልተሰጠም/ አላስታውስም	
409	<u>በማህፀን ውስጥ የሚቀመጠውን</u> ወይም <u>በክንድ ስር የሚቀበረውን</u> የእርግዝና መከላከያ ዘዴ መጠቀም ያቋረጡበት ምክንያት ምን ነበር? ***(ከተሰጠው አማራጭ ወጪ ከሆነ ምላሹን ጻፍ)***	9. ለማርገዝ ስለፈልኩኝ 10. መከላከያውን እየተጠቀምኩ አረገዝኩ 11. በጎንዮሽ ጉዳቶች ምክንያት ስላልተስማማኝ 12. የባለበቴ አለመስማማት 13. የአገልግሎት ጊዜውን ስለጨረሰ 14. ለአጭር ጊዜ የሚያገለግል የወሊድ መቆጣጠሪያ ስለፈለኩኝ 15. መጥፎ ነገር ሲወራ ሰምቼ አስወጣሁት 16. ሌላ (ይጻፍ) _____ _____	

ክፍል 5፡ Attitude, perceived behavioral control and subjective norm

አሁን በማህፀን ውስጥ ስለሚቀመጠው የእርግዝና መከላከያ ዘዴ (ሉፕ) የተለያዩ ዓረፍተ ነገሮችንና አማራጭ ምላሾችን አነባለሁ፤ ከተሰጡት ምላሾች ውስጥ የእርሶን አመለካካት የተሻለ የሚገልፀውን አማራጭ ይንገሩኝ፡፡ የተወሰኑት ጥያቄዎች ተመሳሳይ ቢመስሉም የተለያዩ ጉዳዮችን ስለሚመለከቱ እባክዎን እያንዳንዱን ጥያቄ በጥሞና ያዳምጡና አስተያየትዎን በተሻለ የሚገልፀውን አማራጭ ይምረጡ፤ ለማወቅ የምፈልገው የእርሶን ልምድና አመለካከት ብቻ ስለሆነ ፣ ሁሉም የሚሰጧቸው መልሶችዎ በሙሉ ትክክል ናቸው።

ተ.ቁ	ጥያቄ	አማራጭ ምላሾች				
501	እርግዝናን ረዘም ላለ ጊዜ መከላከል መቻሌ፣ ለእኔ	1. ፈፅሞ አስፈላጊ አይደለም	2. አስፈላጊ አይደለም	3. እርግጠኛ አይደለሁም	4. አስፈላጊ ነው	5. በጣም አስፈላጊ ነው

502	የወር አበባዬ ወቅቱን ጠብቆ አለመምጣቱ ወይም ከለመድኩት መጠን በላይ ደም መፍሰሱ፣ ለእኔ	6. በጣም ጎጂ ነው	7.ጎጂ ነው	8.ጎጂም ጠቃሚም አይደለም	4. ጠቃሚ ነው	5. በጣም ጠቃሚ ነው
503	በማህፀኔ ወይም በሆዴ ላይ የህመም ስሜት መኖሩ ወይም በሰወነቴ ውስጥ የባእድ ስሜት መሰማቱ፣ ለእኔ	6.በጣም ጎጂ ነው	7.ጎጂ ነው	8.ጎጂም ጠቃሚም አይደለም	4. ጠቃሚ ነው	9.በጣም ጠቃሚ ነው
504	ለእኔ፤ በግበረ-ስጋ ግንኙነት ጊዜ የህመም ስሜት መሰማት	6. ፈፅሞ አልፈልገውም	7.አልፈልገውም	8. እርግጠኛ አይደለሁም	9.እፈልገዋለሁ	10. በጣም እፈልገዋለሁ
505	የእርግዝና መከላከያ ኪኒን ወይም መርፌ ለመውሰድ በየጊዜው ወደ ጤና ተቋም መመላለሱ ወይም በሰአቱ መውሰዴን መርሳቱ፤ ለእኔ	1. በጣም የሚያሰልች ነው	2. አሰልቺ ነው	3. ምንም አይደለም	3. አስደሳች ነው	5. በጣም አስደሳች ነው
506	ለእኔ፤ በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) ሲደረግልኝ የሚሰማኝ የፍርሃት ፣ የህመም እና ምቾት የማጣት ስሜት	6.ፈፅሞ አያሳስበኝም	7.አያሳስበኝም	8.ምንም አይደለም	9.አሳሳቢ ነው	10. በጣም አሳሳቢ ነው
507	ካሁን በኋላ ልጅ **ለመውለድ አለመቻሌን**	6.በፍፁም አልፈልገውም	7.አልፈልገውም	8. ብወልድም ባልወልድም ችግር የለውም	9.መውለድ አለመቻሌን እፈልገዋለሁ	10. መውለድ አለመቻሌን በጣም እፈልገዋለሁ
508	በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ)ን መጠቀሜ እርግዝናን ለረጅም ጊዜ እንድከላከል ይጠቅመኛል	1.በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4.እስማማለሁ	5.በጣም እስማማለሁ
509	በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ)ን መጠቀሜ፤ የወር አበባዬን ይዛባዋል ወይም ከለመድኩት መጠን በላይ እንዲፈሰኝ ያደርጋል፡፡	1. በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4.እስማማለሁ	5. በጣም እስማማለሁ
510	በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ)ን መጠቀሜ፤ በማህፀኔ ወይም በሆዴ ላይ ህመም አያመጣብኝም፡፡	1. በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4.እስማማለሁ	5. በጣም እስማማለሁ
511	በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ)ን መጠቀሜ በግበረ-ስጋ ግንኙነት ጊዜ ህመም ያስከትላልብኛል ወይም ምቾት ይነሳኛል	1. በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4.እስማማለሁ	5. በጣም እስማማለሁ
512	በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) መጠቀሜ የወሊድ መቆጣጠሪያ ለመውሰድ በየጊዜው ወደ ጤና ተቋም እመላለስ የነበረውን ጉብኝት ይቀንስልኛል፤ የመውሰጃ ሰአቱን የመርሳት ችግርንም ያስቀርልኛል፡፡	6.በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4. እስማማለሁ	5. በጣም እስማማለሁ
513	በማህፀን የሚቀመጠው የእርግዝና መከላከያ ዘዴ (ሉፕ) ወደ ማህፀኔ ውስጥ በሚገባበት ጊዜ የፍርሃት፣ የህመም እና ምቾት የማጣት ስሜት ይሰማኛል፡፡	6.በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4. እስማማለሁ	5. በጣም እስማማለሁ

514	በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) ብጠቀም ለወደፊት ልጅ መውለድ **ያለመቻል** ችግር ያስከትልብኛል፡፡	6.በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4. እስማማለሁ	5. በጣም እስማማለሁ	
515	የእርግዝና መከላከያ አጠቃቀምን በተመለከተ፣ የትዳር አጋርዎት ማድረግ አለብዎት ብሎ ከሚያስቡት ምን ያህሉን ለመፈፀም ይፈልጋሉ?	7.ምንም መፈፀም አልፈልግም	2. መፈፀም አልፈልግም	3. እርግጠኛ አይደለሁም	4. በአመዛኙ እፈፅማለሁ	5. ሙሉ በሙሉ እፈፅማለሁ	6.የትዳር አጋር የለኝም
516	የእርግዝና መከላከያ አጠቃቀምን በተመለከተ፣ የቅርብ ጓደኞችዎት ና ጎረቤቶችዎ እርስዎ ማድረግ አለብዎት ብለው ከሚያስቡት ምን ያህሉን ለመተግር ይፈልጋሉ?	6.ምንም መፈፀም አልፈልግም	2. በአመዛኙ መፈፀም አልፈልግም	3. እርግጠኛ አይደለሁም	4. በአመዛኙ እፈፅማለሁ	5. ሙሉ በሙሉ እፈፅማለሁ	
517	የእርግዝና መከላከያ አጠቃቀምን በተመለከተ፣ የጤና ባለሙያዎች እርሰዎ ማድረግ አለብዎት ብለው ከሚያስቡት ምን ያህሉን ለመፈፀም ይፈልጋሉ?	ምንም መፈፀም አልፈልግም	2. በአመዛኙ መፈፀም አልፈልግም	3. እርግጠኛ አይደለሁም	4. በአመዛኙ እፈፅማለሁ	5. ሙሉ በሙሉ እፈፅማለሁ	
518	ባለቤቴ፤ በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) በሚቀጥለው አንድ ዓመት ጊዜ ውስጥ **እንድጠቀም አይፈልግም**::	7.ፈፅሞ ሐሰት ነው	2. ሐሰት ነው	3. እርግጠኛ አይደለሁም	4. እውነት ነው	5. ሙሉ በሙሉ እውነት ነው	6.የትዳር አጋር የለኝም
519	የቅርብ ጓደኞቼና ጎረቤቶቼ በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ)ን በሚቀጥለው አንድ ዓመት ጊዜ ውስጥ መጠቀም እንዳለብኝ ያስባሉ፡፡	6.ፈፅሞ ሐሰት ነው	2. ሐሰት ነው	3. እርግጠኛ አይደለሁም	4. እውነት ነው	5. ሙሉ በሙሉ እውነት ነው	
520	የጤና ባለሙያዎች በማህፀን የሚቀመጠውን የእርግዝና መከላከያ (ሉፕ) በቀጣዩ አንድ አመት ጊዜ ውስጥ መጠቀም እንዳለብኝ ያስባሉ፡፡	1. ፈጽሞ ሊሆን አይችልም	2. ሊሆን አይችልም	3. ሊሆንም ላይሆንም ይችላል	4. ሊሆን ይችላል	5. በጣም ሊሆን ይችላል	
521	የቅርብ ጓደኞቼ ና ጎረቤቶቼ በማህፀን ውስጥ የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) ይጠቀማሉ።	1. ፈጽሞ ሊሆን አይችልም	2. ሊሆን አይችልም	3. ሊሆንም ላይሆንም ይችላል	4. ሊሆን ይችላል	5. ሙሉ በሙሉ ሊሆን ይችላል	
522	የቅርብ ዘመዶቼ (እንደ እህቴ ፣ አክስቴና የመሳሰሉት) በማህፀን ውስጥ የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) **አይጠቀሙም፡፡**	1. በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4. እስማማለሁ	5. በጣም እስማማለሁ	
523	እርግዝና መከላከያ አጠቃቀምን በተመለከተ ፣ የቅርብ ጓደኞቼና ጎረቤቶቼ እንደሚያደርጉትን ማድረግ እፈልጋለሁ	1. ፈፅሞ ሐሰት ነው	2. ሐሰት ነው	3. እርግጠኛ አይደለሁም	4. እውነት ነው	5. ሙሉ በሙሉ እውነት ነው	
524	የእርግዝና መከላከያ አጠቃቀምን በተመለከተ፣ የቅርብ ዘመዶቼ (እህቴ ፣ አክስቴና የመሳሰሉት) የሚያደርጉትን ማድረግ እፈልጋለሁ	1. ፈፅሞ ሐሰት ነው	2. ሐሰት ነው	3. እርግጠኛ አይደለሁም	4. እውነት ነው	5. ሙሉ በሙሉ እውነት ነው	
525	በማህፀን ውስጥ የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) የተጠቀሙ ሰዎችን ተሞክሮ መስማቴ እኔም ሉፕን በሚቀጥለው አንድ አመት ጊዜ ውስጥ በቀላሉ እንድጠቀም ያስችለኛል::	1. በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4. እስማማለሁ	5. በጣም እስማማለሁ	

526	በማህፀን ውስጥ ከሚቀመጠው የእርግዝና መከላከያ ዘዴ (ሉፕ) ጋር በተያያዘ ለሚደርሰው የጎንዮሽ ጉዳት የጤና ድርጅቶች አስፈላጊውን ድጋፍ እና ክትትል ማድረጋቸው ሉፕን ለመጠቀም ቀላል ያደርግኛል ።	1. በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4. እስማማለሁ	5. ሙሉ በሙሉ እስማማለሁ
527	እንዲኖሩኝ የምፈለገውን ያህል ልጅ ስለሌለኝ፤ በማህፀን ውስጥ የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ)ን በሚቀጥለው አንድ አመት ጊዜ ውስጥ ለመጠቀም አስቸጋሪ ያደርገብኛል።	1. በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4. እስማማለሁ	5. ሙሉ በሙሉ እስማማለሁ
528	በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) መጠቀም ለእኔ የተፈቀደ አይደለም ብዬ ማመኔ : (ሉፕ)ን በሚቀጥለው አንድ አመት ጊዜ ውስጥ ለመጠቀም አስቸጋሪ ያደርገብኛል።	1. በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4. እስማማለሁ	5. ሙሉ በሙሉ እስማማለሁ
529	በማህፀን ውስጥ የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ)ን የሚጠቀሙ ሰዎች፤ ተሞክሮአቸውን ለሌሎች **አያካፍሉም**።	1. በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4. እስማማለሁ	5. ሙሉ በሙሉ እስማማለሁ
530	በማህፀን ውስጥ ከሚቀመጠው የእርግዝና መከላከያ ዘዴ (ሉፕ) ጋር በተያያዘ ሊደርስ የሚችል የጎንዮሽ ጉዳትን የጤና ድርጅቶች አስፈላጊውን ድጋፍ እና ክትትል ያደርጋሉ።	1. በፍፁም አይደርጉም	2. አያደርጉም	3. እርግጠኛ አይደለሁም	4. እውነት ነው፤ ያደርጋሉ	5. ሙሉ በሙሉ እውነት ነው፤ ያደርጋሉ
531	እንዲኖሩኝ የምፈለገውን ያህል ልጆች ገና አልወለድኩም።	1. በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4. እስማማለሁ	5. ሙሉ በሙሉ እስማማለሁ
532	በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) መጠቀም ለእኔ የተፈቀደ አይመስለኝም ።	1. በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4. እስማማለሁ	5. ሙሉ በሙሉ እስማማለሁ
533	ለእኔ፣ በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) በሚቀጥለው አንድ ዓመት ጊዜ ውስጥ መጠቀም	1. በጣም ያስጨንቀኛል	2. ያስጨንቀኛል	3. እንደዝናናም እንድጨነቀም አያደርገኝም	4. እንድዝናና ያደርገኛል	5. በጣም ዘና እንድል ያደርገኛል
534	ለእኔ፣ በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) በሚቀጥለው አንድ ዓመት ጊዜ ውስጥ መጠቀም	1. በጣም መጥፎ ነው	2. መጥፎ ነው	3. ጥሩም መጥፎም አይደለም	4. ጥሩ ነው	5. በጣም ጥሩ ነው
535	በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) በሚቀጥለው አንድ ዓመት ጊዜ ውስጥ መጠቀም፣ ለእኔ	1. በጣም ጎጂ ነው	2. ጎጂ ነው	3. ጎጂም ጠቃሚም አይደለም	4. ጠቃሚ ነው	5. በጣም ጠቃሚ ነው
536	ለእኔ፣ በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) በሚቀጥለው አንድ ዓመት ጊዜ ውስጥ መጠቀም	1. ፈፅሞ አያስደስትኝም	2. አያስደስትኝም	3. እርግጠኛ አይደለሁም/ አላውቅም	4. ያስደስተኛል	5. በጣም ያስደስተኛል

537	አብዛኛዎቹ በእኔ ዙሪያ ያሉና ለእኔ አስፈላጊ የሆኑ ሰዎች በቀጣዩ አንድ ዓመት ውስጥ **በማህፀን የሚቀመጠውን** የእርግዝና መከላከያ ዘዴ (ሉፕ) መጠቀም እንዳለብኝ ያስባሉ	1. ፈፅሞ ሐሰት ነው	2. ሐሰት ነው	3. እርግጠኛ አይደለሁም	4. እውነት ነው	5. ሙሉ በሙሉ እውነት ነው
538	በእኔ ዙሪያ ያሉና በአስተሳሰባቸው የምስማማባቸው አብዛኛዎቹ ሰዎች፣ **በማህፀን ውስጥ የሚቀመጠውን** የእርግዝና መከላከያ ዘዴ (ሉፕ) በቀጣዩ አንድ ዓመት ጊዜ ውስጥ ልጠቀም ብዬ ብል በኔ ሀሳብ **አይስማሙም።**	1. ፈፅሞ ሊሆን አይችልም	2. ሊሆን አይችልም	3. እርግጠኛ አየደለሁም	4. ሊሆን ይችላል	5. በጣም ሊሆን ይችላል
539	እርሰዎ ከሚያከብሯቸውና ከሚያደንቋቸው ሰዎች ውስጥ፤ ምን ያህሉ **በማህፀን የሚቀመጠውን** የእርግዝና መከላከያ ዘዴ (ሉፕ) እየተጠቀሙ ያሉ ወይም በሚቀጥለው አንድ ዓመት ውስጥ የሚጠቀሙ ይመስልዎታል?	1. ማንም አይጠቀምም	2. ጥቂቶቹ ብቻ ይጠቀማሉ	3. ግማሽ ያህሉ ይጠቀማሉ	4. አብዛኞቹ ይጠቀማሉ	5. ሁሉም ይጠቀማሉ
540	እንደ እኔ ያሉ አብዛኛዎቹ ሴቶች **በማህፀን** ውስጥ የሚቀመጠውን የእርግዝና መከላከያ (ሉፕ) **አይጠቀሙም።**	1. ፈፅሞ ሊሆን አይችልም	2. ሊሆን አይችልም	3. እርግጠኛ አየደለሁም	4. ሊሆን ይችላል	5. በጣም ሊሆን ይችላል
541	በሚቀጥለው አንድ ዓመት ጊዜ ውስጥ **በማህፀን** የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) ስለመጠቀም ወይም አለመጠቀምዎት <u>ምን ያህል በራስዎት ይተማመናሉ</u>?	1. ፈፅሞ እርግጠኛ አይደለሁም	2. እርግጠኛ አይደለሁም	3. መጠቀም አለመጠቀሜን እርግጠኛ አይደለሁም	4. እርግጠኛ ነኝ	5. ሙሉ በሙሉ እርግጠኛ ነኝ
542	ከልቤ መጠቀም ከፈለኩ፤ **በማህፀን** የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) በሚቀጥሉት አንድ ዓመት ጊዜ ውስጥ መጠቀም እችላለሁ።	1. በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4. እስማማለሁ	5. በጣም እስማማለሁ
543	በቀጣዩ አንድ ዓመት ጊዜ ውስጥ **በማህፀን** የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ)ን መጠቀም፤ ምን ያህል ከኔ ቁጥጥር ውጪ ነው ብለው ያምናሉ?	1. ሙሉ በሙሉ ከኔ ቁጥጥር ውጪ ነው	2. ከኔ ቁጥጥር ውጪ ነው	3. እርግጠኛ አይደለሁም	4. በኔ ቁጥጥር ውስጥ ነው	5. ሙሉ በሙሉ በኔ ቁጥጥር ውስጥ ነው
544	በሚቀጥሉት አንድ ዓመት ውስጥ **በማህፀን** የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ)ን የመጠቀም ወይም አለመጠቀም ውሳኔ የእኔ ብቻ ነው።	1. በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4. እስማማለሁ	5. በጣም እስማማለሁ
545	በሚቀጥለው አንድ ዓመት ጊዜ ውስጥ **በማህፀን** የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፕ) ለመጠቀም እቅድ አለኝ።	1. ፈፅሞ ሊሆን አይችልም	2. ሊሆን አይችልም	3. እርግጠኛ አየደለሁም	4. ሊሆን ይችላል	5. በጣም ሊሆን ይችላል
546	በሚቀጥለው አንድ ዓመት ጊዜ ውስጥ **በማህፀን** የሚቀመጠውን የእርግዝና	1. በፍፁም አልስማማም	2. አልስማማም	3. እርግጠኛ አይደለሁም	4. እስማማለሁ	5. ሙሉ በሙሉ እስማማለሁ

	መከላከያ ዘዴ (ሉፐ) ለመጠቀም ዝግጁ አይደለሁም።					
547	በሚቀጥለው አንድ ዓመት ጊዜ ውስጥ በማህፀን የሚቀመጠውን የእርግዝና መከላከያ ዘዴ (ሉፐ) ለመጠቀም እፈልጋለሁ።	1. በፍፁም አላደርገውም	2. የማደርገው አይመስለኝም	3. እርግጠኛ አይደለሁም/ አላውቅም	4. አደርገዋለሁ	5. በእርግጠኝነት አደርገዋለሁ

ቃለ መጠይቄን እዚህ ላይ ጨርሻለሁ፤ ለተሳትፎዎ ከልብ አመሰግናለሁ።

ANNEXURE J: LETTER FROM LANGUAGE EDITOR

ROSEMARY'S PROOFREADING
& EDITING SERVICES

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Rosemarys.pes@gmail.com
1 Richards drive
Midrand, 1684

24 OCTOBER 2021

To Whom It May Concern:

RE: LANGUAGE EDITING

This letter serves as confirmation that language and technical editing was conducted by Rosemary's Proofreading and Editing Services. Further details of the study and the researcher have been provided below.

TITLE OF THE STUDY: DEVELOPMENT OF BEHAVIOURAL CHANGE COMMUNICATION STRATEGIES TO PROMOTE THE USE OF INTRAUTERINE CONTRACEPTIVE DEVICE IN ADDIS ABABA, ETHIOPIA.

Researcher: TEWODROS ALEMAYEHU ABEBE

Student number: 55768067

Kind Regards

R MALULEKE (CODER & LANGUAGE EDITOR)