STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA

by

ZINAW MESAFINT DESSIE

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SUPERVISOR: PROF T.G LUMADI

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DECLARATION

Name: Zinaw Mesafint

Student number: 10108629

Degree: PhD in Public Health

I declare that **STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

Signature: 

Date: November 2023

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DEDICATION

I wanted to take a moment to express my heartfelt dedication to the women and young girls who tragically lost their lives due to unsafe abortion practices. Through this work, I hope to shed light on the profound impact of unsafe abortions on individuals, families, and societies and to contribute to the ongoing efforts to ensure safe and accessible reproductive healthcare for all.

My thesis, entitled **"STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA,"** has been a labour of love, research, and dedication. Throughout this journey, I have been reminded time and again of the women and girls whose stories often go untold, their voices unheard. They are the driving force behind my commitment to this subject, and it is for them that I dedicate this thesis.

ABSTRACT

This study aimed to develop strategies to improve contraceptive use among women and young girls attending postnatal care at selected hospitals and clinics in Addis Ababa, Ethiopia. An explanatory sequential mixed research design was employed, and data were collected using a pre-tested questionnaire for women and young girls attending postnatal care during the study period. In addition, interviews were conducted with women, young girls, and health professionals.

In the quantitative part of the research, 375 women and 125 young girls (a total of 400) participated in the study. In contrast, 30 participants (women, young girls, and health professionals) participated in the qualitative interviews. The quantitative data were analysed using SPSS version 28 computer software, and the qualitative data were categorised, coded, and analysed using ATLAS.ti version 9 computer software. The University of South Africa College of Human Sciences Research Ethics Committee and Addis Ababa Public Health and Emergency Management Directorate issued Ethical Clearance Certificates to conduct the study. Written informed consent was obtained from respondents before data collection.

The study's findings revealed that barriers to the use of contraceptives (lack of knowledge and awareness, religious issues, fear of hormonal side effects of contraceptives, shortage of contraceptives) include male partner support and involvement in contraceptive use, including discussions with wives, the use of contraceptives by male partners, empowering women through education and employment, and health professionals' recommendations for improvement on health system factors. Other cited barriers include training health professionals on family planning, conducting advocacy on contraceptive use in the community, primary schools, and universities; provision of contraceptives to all health facilities, including private health sectors; integration of family planning services with other services; working in collaboration with the Ministry of Education of Ethiopia; and other related sectors. The researcher developed strategies to enhance contraceptive utilisation uptake based on the research findings. Recommendations were aimed at improving contraceptive utilisation approaches at all healthcare facility levels.

Key words: Clinics, contraceptive use, hospitals, modern contraceptives, postnatal care, strategies, unintended pregnancy, unwanted pregnancy, women, young girls

kuLwezi

OKUCASHUNIWE

Lolu cwaningo luhlose ukuqhamuka namasu okuphucula indlela yokusetshenziswa kwezinhlelo zokuvimbela inzalo kwabesifazane namantombazane amancane ahambela izindawo zokunakekelwa ngemuva kokubeletha ezibhedlela nasemitholampilo ekhethiwe e-Addis Ababa, e-Ethiopia. Ngesikhathi kwenziwa lolu cwaningo kusetshenziswe uhlobo locwaningo oluxubile oluchazayo, kwathi idatha yona yaqoqwa kusetshenziswa uhlu lwemibuzo ehloliwe kwabesifazane namantombazane amancane ahambela izindawo zokunakekelwa ngemuva kokubeletha. Ngaphezu kwalokho, izinhlolovo zenziwe nabesifazane, amantombazane amancane kanye nabasebenzi bezempilo.

Engxenyeni yocwaningo lwamanani, ababambiqhaza kube abesifazane abangama-375 namantombazane amancane angama-125 (abakha isamba sama-400). Kwathi engxenyeni yenhlolovo lwamaqophelo khona, ababambiqhaza babangama-30 (abesifazane, amantombazane amancane kanye nabasebenzi bezempilo). Idatha yamanani yahlaziywa kusetshenziswa i-SPSS version 28, kwase kuthi eyamaqophelo yona yahlukaniswa, yafakwa amakhodi yahlaziywa kusetshenziswa i-ATLAS.ti version 9. IKomidi Lezokucwaninga Imiyalelo Yokuziphatha eKolishi Lesayensi Yezabantu eNyuvesi yaseNingizimu Afrika kanye noPhiko Lwezokuphatha Izimo Eziphuthumayo Nempilo Yomphakathi bakhiphe isitifiketi sokuvumela ukwenziwa kocwaningo. Kuqale kwatholakala imvume ebhaliwe yababambiqhaza ngaphambi kokuqoqwa kwedatha.

Imiphumela yocwaningo iveza ukuthi izithiyo ekusetshenzisweni kwezinhlelo zokuvimbela inzalo (ukuntuleka kolwazi nokuqwashisa, izindaba zenkolo, ukwesaba imiphumela emibi ngalokhu, ukwentuleka kwezinto zokuvimbela inzalo) kuhlanganisa nokwesekwa ngabalingani besilisa kanye nokuzibandakanya ekusebenziseni izinhlelo zokuvimbela inzalo, kuhlanganise ukuxoxisana namakhosikazi, ukusetshenziswa kwezinhlelo zabesilisa zokuvimbela inzalo, ukufaka imfundo kwabesifazane nokuqashwa kwabo kanjalo nezincomo zabasebenzi bezempilo ekuphuculeni izinhlelo zezempilo. Ezinye izithiyo ezibaluliwe zihlanganisa ukuqeqesha abasebenzi bezempilo mayelana nokuhlela umndeni, ukugqugquzela ukusetshenziswa

kwezinhlelo zokuvimbela inzalo emphakathini, ezikoleni zamabanga aphansi nasemanyuvesi, ukuhlinzeka ngezinhlelo zokuvimbela inzalo kuzo zonke izikhungo zezempilo, okuhlanganisa izikhungo zezempilo ezizimele, ukuhlanganisa izinsiza zokuhlela umndeni nezinye izinsiza nokusebenza ngokubambisana noMnyango Wezemfundo e-Ethiopai nezinye izinhlaka ezifanele. Umcwaningi uqhamuke namasu okuphucula indlela yokusetshenziswa kwezinhlelo zokuvimbela inzalo ngokususela emiphumeleni yocwaningo. Izincomo bezenzelwe ukwenza ngcono izinhlelo zokuvimbela inzalo kuwo wonke amazinga ezikhungo zokunakekelwa kwempilo.

Amagama amqoka: Imitholampilo, ukusetshenziswa kwezinhlelo zokuvimbela inzalo, izibhedlela, izinhlelo zesimanje zokuvimbela inzalo, ukunakekelwa kwangemuva kokubeletha, amasu, ukukhulelwa okungahlosiwe, ukukhulelwa okungafuneki, abesifazane, amantombazane amancane.

ISISHWANKATHELO

Olu phando lujonge ukuphuhlisa amacebo okuphucula ukusetyenziswa kwezithintelilumitho kwabasetyhini nakumantombazana aselula ahamba unakekelo lwasemva kokubeleka kwizibhedlele neeklinikhi ezikhethiweyo eAddis Ababa, e-Ethiopia. Kusetyenziswe uqulunqo lophando oluxubileyo i*explanatory sequential*, zaze iinkcukacha zophando (idatha) zaqokelelwe ngokusebenzisa amaxwebhu emibuzo avavanyiweyo ebejoliswe kwabasetyhini nakumantombazana ababehamba unakekelo lwasemva kokubeleka ngexesha lokuqhutywa kophando. Ukongeza, udliwanondlebe lwenziwa kwabasetyhini, amantombazana aselula nakoonompilo.

Kwingxenye yophando olulungele amanani nobalo (*quantitative research*) ngabasetyhini abangama375 namantombazana ali125 (bebonke bangama400) abathe bathatha inxaxheba kolu phando. Abathathinxaxheba abangama30 (abasetyhini, amantombazana noonompilo) bathathe inxaxheba kudliwanondlebe oluchazayo. Iinkcukucha zophando oluqukayo lwamanani nobalo luhlalutywe ngokusebenzia iSPSS version 28, zaze iinkcukacha zophando olunika iziphumo ngokuchaza zahlelwa, zakhowudwa zaze zahlalutywa ngokusebenzisa iATLAS.ti version 9. IKholeji yeKomiti yeMigaqo yoPhando lweeNzululwazi zoluNtu yaseUnisa neCandelo loLawulo lweMpilo yoluNtu noLawulo oluNgxamisekileyo laseAddis Ababa ziye zakhupha isiqinisekiso semvume yokwenza uphando (*ethical clearance certificate)* ukuze uphando luqhube. Izivumelwano ezibhaliweyo ezisekelwe kulwazi zifumaneke kwabo bathe baphendula phambi kokuqokelelwa kwenkcukacha zophando (*data collection*).

Iziphumo zophando zibonakalisa ukuba imiqobo ekusetyenzisweni kwezithintelilumitho (ukungabi nalwazi nakuqonda, imiba yezenkolo, uloyiko lwemiphumela lwezithintelilumitho kumadlala, ukunqongophala kwezithintelilumitho) iquka inkxaso yabalingane abangamadoda nokudlala indima ekusetyenzisweni kwezithintelilumitho kubandakanya iingxoxo namakhosikazi, ukusetyenziswa kwezithintelilumitho ngabalingane abangamadoda, ukuxhobisa abasetyhini ngemfundo, ingqesho kunye neengcebiso zoonompilo malunga nemiba yenkqubo yezempilo. Eminye imiqobo echatshazelweyo iquka uqeqesho loonompilo kwezocwangciso, ubutshantliziyo okanye ukunikezwa kwenkxaso ngokusetyenziswa

kwezithintelilumitho kuluntu, kwizikolo zamabanga aphantsi neeyunivesithi, ukunikezela ngezithentelilumitho kuwo onke amaziko empilo, kuquka necandelo lezempilo labucala, ukuhlanganiswa kweenkonzo zocwangciso kunye nezinye iinkonzo kwanokusebenza ngentsebenziswano neSebe leMfundo laseEthiopia namanye amacandelo asondeleyo. Umphandi wenze amacebo okuqinisa inqanaba losetyenziso lwezithintelilumitho ngokusekelwe kwiziphumo zophando. Iziphakamiso bezijolise ekuphuculeni iindlela zokusetyenziswa kwezithintelilumitho kuwo onke amabakala eendawo zokunonophela impilo.

Isigama esingundoqo: Iiklinikhi, usetyenziso lwezithintelilumitho, izibhedlele, izithintelilumitho zeli xesha, unakekelo loomama emva kokubeleka, amacebo, ukukhulelwa okungacwangciswanga, ukukhulelwa okungafunwayo, abasetyhini, amantombazana aselula

LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
AOR	Adjusted Odds Ratio
ATLAS.Ti	Archive for Technology, Lifeworld and Everyday Language
AWWA	Aba Wolde Tensae Gizaw Welfare Association
BHC	Bulbula Health Centre
BTL	Bilateral Tubal ligation
CI	Confidence Interval
DHS	Demographic Health Survey
EDHS	Ethiopia Demographic and Health Survey
FGAE	Family Guidance Association of Ethiopia
FMOH	Federal Ministry of Health
FP	Family Planning
GH	Gandhi Hospital
HIV	Human Immunodeficiency Virus
HBM	Health Belief Model
HP	Health Professional
IUCD	Intrauterine Contraceptive Device
MCH	Maternal and Child Health
OR	Odds Ratio
REDI	Rapport Building, Exploring, Decision Making
SDGs	Sustainable Development Goals
SPSS	Statistical Package for the Social Sciences
SS	Sample Size
SSA	sub-Saharan African countries

STATA	Statistics and Data
UN	United Nations
UNISA	University of South Africa
UNFPA	United Nations Fund for Population Activities
WHO	World Health Organisation
WY	Women and Young Girls

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CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Modern contraceptives help reduce unintended pregnancy, which occurred earlier than desired (mistimed) or a pregnancuy that occurred when no children or no more children were desired at the time of conception which is called unawanted (Aztlan-James, McLemore & Taylor 2017:2). Access to modern contraceptives gives more freedom of choice and independence to women and gender equity that ensure women's sexual and reproductive health rights (Gebre & Edosa 2020:2). Unintended pregnancy is becoming a global public health concern that poses economic, social, psychological, and other adverse effects on the health of both the mother and babies (Omani-Samani, Amani-Rarani, Sepidarkish, Khedmati-Morasae, Maroufizadeh & Almasi-Hashiani 2018:1).

Globally, approximately 230 million pregnancies occur each year, of which 40% are unintended, and as a result, 50% end in abortion (Ranatunga & Jayaratne 2020:2). According to Ranatunga and Jayaratne (2020:2), the incidence of unintended pregnancy in low and middle-income countries varies and can reach as high as 62%. Among the severe outcomes related to the non-use of modern contraceptives is unintended pregnancy, resulting in abortion and decreased likelihood of breast-feeding initiation and continuation (Mohamed, Hamed, Fouad, Yousef & Ahmed 2019:2). Research in India revealed an association between lower maternal healthcare utilisation and unintended pregnancy (Dehingia, Dixit, Atmavilas, Chandurkar, Singh, Silverman & Raj 2020:1).

Unwanted pregnancies in developing countries mainly occur due to a lack of access to contraceptive methods, poor literacy, and lack of knowledge (Habib, Raynes-Greenow, Nausheen, Soofi, Sajid, Bhutta & Black 2017:2). Studies indicate that women who do not use modern contraceptive methods and experience unwanted pregnancy may develop other health problems, including hypertension, diabetes, hepatitis, hypothyroidism, and cardiac disorders (Wasswa, Kabagenyi & Atuhaire 2020:2). Unwanted pregnancy is caused by different factors across disciplines

including improper use of modern contraceptive methods, coverage and efficacy of family planning, sexual abuse including perceptions of contraception and fertility (Yaya & Gohse 2018:2). Unintended pregnancies in early adolescent ages linked to risk of Human immunodeficiency virus (HIV) infection and other negative impacts of early childbearing include low socioeconomic development and empowerment (Ajayi & Ezegbe 2020:2). Studies conducted in Ghana indicate that 300,000 infants were born unintended, and thousands were aborted due to different underlying factors, including poor access to family planning, poverty, stigmatisation of unmarried mothers, competing demands on women's time, and a cultural preference for sons (Nyarko 2019:1).

In 2016, 45% of all pregnancies were among young adolescents (age 10–18) in Africa, of which 21% resulted in induced abortion in sub-Saharan Africa (Mumah, Mulupi, Wado, Boniface, Ushie, Nai, Caroline, Kabiru & Izugbara 2020:2). Research conducted in 32 sub-Saharan African countries shows that overall contraceptive utilisation is only 18.87% (Ahinkorah, Hagan, Seidu, Sambah, Adoboi, Schack & Budu 2020:8). Several studies have been conducted regarding unintended pregnancy in developing countries focusing on its causes, effects on maternal and child health, including unsafe abortion, low birth weight, and higher risk of infant mortality (Bukenya, Wanyenze, Barrett, Hall, Makumbi & Guwatudde 2019:2).

Sub-Saharan African women are victims of unsafe abortion, which primarily results from unintended pregnancy (Mulat, Fekadu, Abera, Bekele & Bedaso 2017:6). According to Mualt et al (2019:1), approximately 500,000 Ethiopian women end up in induced abortion to manage unintended pregnancy indicating a high prevalence of unintended pregnancy in the country that contributes to poor maternal health. Other research conducted in Ethiopia suggests that the prevalence of unintended pregnancy in developing countries is the highest, with more than one-third of the pregnancies being unintended, resulting in induced unsafe abortion and incurring unexpected expenses and abortion-related maternal illnesses (Alene, Yismaw, Berelie, Kassie, Yeshambel & Assemie 2020:2).

Studies have shown that modern contraceptives among women and young girls in Ethiopia have increased over the last 15 years, from 6% in 2000 to 35% in 2016 (Federal Democratic Republic of Ethiopia DHS 2016:103); however, this percentage

must increase. Unsafe abortions continue to be a public health concern in Ethiopia. Preventing unintended pregnancy using modern contraceptives has several advantages in cost reduction due to abortion and its complications and other costs related to maternal and child mortalities (Teshale & Tesema 2020:2).

1.2 BACKGROUND INFORMATION ABOUT THE RESEARCH PROBLEM

Globally, the prevalence of the use of contraceptives has been on the rise in the past 40 years, from less than 10 to 60%, due to family planning services. On the contrary, in low- and middle-income countries, especially in sub-Saharan Africa, the use of contraceptive practice is still low while fertility, unmet need for family planning, and population growth are high (Tolefac, Nana, Yeika, Awungafac, Ntsama & Njotang 2018:1). The Ethiopian population is growing at an exponential rate (more than one hundred million) as the total fertility rate of women is as high as 4.6 children per woman (Federal Democratic Republic of Ethiopia DHS 2016:77).

Ethiopia is one of the African countries with a high fertility rate, low contraceptive use, and higher unmet need (Oumer, Manaye & Mengistu 2020:1). Ethiopian government has considered family planning services as one of the essential healthcare services and established at different levels of settings including in the community; however, contraceptive use has remained as low as 36% (Alem & Agegnehu 2021:2). Unintended pregnancy in Ethiopia continues to be a public health agenda because most women and young girls do not use modern contraceptives effectively, resulting in induced abortions (Mulatu, Chere & Negasa 2017:6). The use of modern contraceptive among all women and young girls in Ethiopia is very low (28.1%) and affected by socio-demographic and economic characteristics (Zeleke & Zemedu 2023:6).

Recent reports show that the unmet need for family planning in Ethiopia is still a major reproductive health issue that raised unintended pregnancy rates from 33.3% to 34.8% and lead to a high burden of abortion in the country (Ayele, Abdurashid, Hailu & Tefera 2023:2). According to Mulatu et al (2017:4), in Ethiopia, the prevalence of unintended pregnancy was 37.8%, and induced abortion was 39.6%; most induced abortions resulted from unintended pregnancies. The authors further recommend comprehensive approaches to emphasise awareness, access, and use of family

planning methods. Alene et al (2020:7) added that in Ethiopia, the prevalence of unintended pregnancy is still high (28%); thus, developing plans and policies on contraceptive utilisation is recommended. Moreover, a higher perecentage (28.6%) of teenage/unintended pregnancy is evidenced in Northeast Ethiopia, Wogedi Woreda (Habitu,Yalew & Bisetegn 2018:3). The prevalence of contraceptive utilisation in Ethiopia is still low and could not achieve the national expected target which was planned to reach 55% by 2020. However, only 41.4% of married women were using a modern contraceptive at the national level (Bekele et al 2021:2). Other research findings in Ethiopia show that family planning use among mothers and young girls attending postnatal clinic was significantly low (48.11%) compared to the existing global commendation on postpartum contraceptive use (Mehare, Mekuriaw, Belayneh & Sharew 2021:11).

On the other hand, there is a lack of standard strategies on contraceptive utilisation among women and young adolescents in Ethiopia (Seifu, Fahey, Hailemariam & Atlantis 2020:8). Therefore, the purpose of the study was to develop strategies to improve contraceptive use among women and young girls attending postnatal care at selected hospitals and clinics in Addis Ababa, Ethiopia.

1.3 STATEMENT OF THE RESEARCH PROBLEM

As noted in the background of the research, unintended pregnancy in Ethiopia continues to be a public health agenda because most women and young girls do not use modern contraceptives effectively, resulting in induced abortions. According to Zeleke & Zemedu (2023: 6), the use modern contraceptives among all women in Ethiopia is very low (28.1%) and influenced by different factors, including socio-demographic and economic characteristics.

Recent reports show that the unmet need for family planning in Ethiopia is still a major reproductive health problem that resulted in unintended pregnancy rates from 33.3% to 34.8% and abortion being a high burden issue in the country (Ayele et al 2023:2). Other researches indicate that unintended pregnancy rates of prevalence in Ethiopia was 37.8%, and induced abortion was 39.6%; most induced abortions resulted from unintended pregnancies (Mulatu et al 2017:4). The authors further recommend

comprehensive approaches to emphasise awareness, access, and utilisation of modern contraceptoves.

Ethiopian women and young girls attending postnatal care do not use modern contraceptives effectively; as a result, they suffer from unintended pregnancies, resulting in unsafe abortions. Unsafe abortions can present maternal, economic, and health-related challenges. The prevalence of contraceptive utilisation in Ethiopia is still low and could not achieve the national expected target, which was planned to reach 55% by 2020. However, only 41.4% of married women were using modern contraceptives at the national level (Mehare at al 2021:11). The target could not be reached due to different factors, including the level of health institutions, experience sharing, employment status of women, support from husbands, level of education, easy access of health service, and residence area. Modern contraceptive use is the best way to determine family size and prevent unintended pregnancy. Therefore, there is a need to develop clear and feasible strategies to help Ethiopian women and young girls who are attending postnatal care to utilise modern contraceptives effectively.

1.4 RESEARCH PURPOSE

The primary purpose of the study was to develop strategies to improve contraceptive use among women and young girls attending postnatal care at selected hospitals and clinics in Addis Ababa, Ethiopia.

1.4.1 Research objectives

The objectives of the research were divided into three phases as follows:

1: Quantitative

- To determine factors associated with utilisation of contraceptives among women and young girls attending postnatal care.

2: Qualitative

- To explore the perceptions of women and young girls attending postnatal care on contraceptive use.
- To explore the views of health professionals on actions to improve contraceptive use.

3: Development of strategies

- To develop strategies to improve contraceptive use among women and young girls attending postnatal care at selected hospitals and clinics in Addis Ababa, Ethiopia.

1.4.2 Research questions

Research questions were categorised in three phases as follows:

1: Quantitative

- What are the factors associated with utilisation of contraceptives among women and young girls attending postnatal care?

2: Qualitative

- What are the views of women and young girls who are attending postnatal care on determinants of contraceptive use?
- What are the views of health professionals on actions to improve contraceptive use?

3: Development of strategies

- Which strategies can be used to improve contraceptive use in women and young girls who are attending postnatal care?

1.5 DEFINITION OF TERMS

Clinic: A health institution that gives diagnostic, therapeutic, or preventive outpatient services for ill or injured patients (Britannica 2022). It can also be defined as a building, usually part of a hospital, where people can go for medical care or advice relating to a particular illness or sickness (Cambridge Dictionary 2022). In this research, a clinic refers to selected health institutions rendering postnatal care to women and young girls in the study area.

Contraception: Contraception is defined as intentional prevention of pregnancy by artificial or natural methods (Idris 2021:3). Contraceptive use helps individuals protect themselves from unintended pregnancy to achieve their desired children as their plan and available methods of contraception should be customised to individual needs

(Alemu, Ambelie & Azage 2020:2). In the current research, contraception refers to artificial or natural methods used by women and young girls attending postnatal care at selected hospitals and clinics in Addis Ababa, Ethiopia.

Hospital: A hospital is an institution providing healthcare services across various medical issues and may specialise in Paediatrics, Internal Medicine, Obstetrics, Gynaecology, Neurology, or Family Practice (WebMD 2021). A hospital can further be described as a building where people injured or ill people are given medical treatment and care (Oxford Learner's Dictionaries 2022). For this study, a hospital refers to a health institution providing obstetrics and gynaecology care, specifically rendering postnatal healthcare services to women and young girls.

Modern contraceptive methods: Are the intentional use of medical procedures or product materials that interfere with the occurrence of pregnancy as a result of sexual intercourse (Tsegaw, Mulat & Shitu 2022:1).

Postnatal care: Postnatal care is defined as "care given to the mother and her new-born baby immediately after the birth of the placenta and for the first 42 days of life" (Wudineh, Nigusie, Gesese, Tesu & Beyene 2018:2). Postnatal care also refers to care given to the mother and the baby from birth up to 6 weeks (Beraki, Tesfamariam, Gebremichael, Yohannes, Haile, Tewelde & Goitom 2020:2). In the current research, postnatal care refers to care given to women and young girls from birth to six weeks after delivery.

Strategies: A strategy is defined as various activities within an organisation and involves goals and objectives to be achieved for the organisation in order to be successful (Jamison, Simpson, Kumar, Kemp, Awate & Manning 2020:20). Strategies are regarded as set of decisions and actions for dealing with challenges or opportunities, to create sustainable outcomes (Oxford Scholarship Online 2022). In this research, strategies refer to activities the researcher developed based on the literature study and research results to improve contraceptive utilisation.

Unintended pregnancy: Is defined as "pregnancy that is either mistimed or unwanted" (Ayele, Abdurashid, Hailu & Tefera 2023:1).

Unwanted pregnancy: Is a pregnancy that occurs when a woman does not have a desire to have a child (Kassahun, Zeleke, Dessie, Gersa, Oumer, Derseh, Arage & Azeze 2019:1).

Women: A woman is a person with a female body or female sex organs (Meyer 2020:8). A woman is further defined as an adult female belonging to a specific category by birth (Merriam-Webster 2022). In this study, women refer to adult females (18 years and above) who have babies and attended a postnatal clinic from November 2022 to January 2023 at Gandhi Memorial Hospital, Bulbula Health Centre, AWWA Mother's and Children Clinic in Addis Ababa, Ethiopia.

Young girls: Young or adolescent girls are females from 10 to 18 years (WHO 2021; Population Medicine: 2021). For this research study, young girls refer to adolescents aged 10–18 who gave birth and were attending postnatal care during the period of data collection at selected healthcare facilities.

1.6 THEORETICAL FOUNDATION OF THE STUDY

A theory is a set of statements or principles devised to explain a group of facts or phenomena (Lawal, Murphy, Hogg & Nightingale 2017:2).

The Health Belief Model (HBM)

The HBM is the oldest conditioned behavioural model developed by social psychologists in the 1950s. To seek care, individual motivation and understanding is required for such a behaviour. It needs a deeper understanding of intricate factors shaping behavioural practices (Metta 2016:3). The HBM was primarily developed to explain people's health behaviour, how they respond to a certain disease and take preventive measures, and individual behaviours with different medical health problems, including diabetic mellitus, hypertension, obesity, cancer, and others (Ban & Kim 2020:4).

The HBM helps to enhance the quality of public health by comprehending people's intentions to take actions on health measures and its practical application, which is appropriate for such behaviours, resulting in an effective guide to developing a health intervention by policymakers (Al-Sabbagh, Al-Ani, Mafrachi, Siyam, Isleem, Massad,

Alsabbagh & Abufaraj 2020:3). The HBM considers that individuals will take preventative actions when they believe that there is a high index of the possibility of acquiring a certain disease (perceived susceptibility), there are severe negative impacts of the disease (perceived severity), there are benefits to gain by adopting health behaviour, and there are fewer barriers against enacting the health behaviour (Huanga, Daib & Xu 2020:3).

The current research used the HBM to study the improvement of contraceptive use because the model is appropriate to deal with participants on their contraceptive utilisation behaviour to avert unintended pregnancy from determining and spacing their families.

The HBM has components that help predict why individuals adopt healthy behaviour to prevent a disease. The elements of the HBM are perceived susceptibility, perceived barriers, perceived severity, perceived benefits, and cues to action (Alsulaiman & Rentner 2021:2).

Perceived susceptibility: Perceived susceptibility refers to how individuals perceive the risk of the disease or individuals' subjective feelings of personal vulnerability and the possibility of encountering a certain risk (Huanga et al 2020:3). There is a positive relationship between perceived susceptibility and preventative behaviour. In the current research, the concept of perceived susceptibility was used to assess the perception of participants' susceptibility towards side effects of hormonal contraceptives and the risk of getting pregnant as a result of not using contraceptives.

Perceived severity: It is the perception of individuals of the severity of a threat or how individuals feel about the seriousness of contracting the disease (Alhamd & Donyai 2021:3). In this study, the researcher assessed participants' perceived severity status of unintended pregnancy because of not using contraceptives.

Perceived benefits: are defined as the individuals' perception of benefit how individuals perceive the effectiveness of taking a healthy behaviour (Duarsa, Mardiah, Hanafi, Karmila & Anulus 2021:3). The researcher assessed the perceptions of participants' perceived benefit status on using contraceptives.

Perceived barriers: According to Metta (2020:6), perceived barriers refer to how individuals perceive the obstacles that may prevent them from adopting healthy

behaviour. It evaluates individuals and determines what would stop them from adopting the new preventive behaviour. In the current research, the researcher assessed participants' perceived barriers to using contraceptives.

Cues to action: In the HBM, cues are internal and external factors that trigger decision-making and motivate individuals to take action or prompts that remind individuals that they should act on a particular challenge (Carico, Sheppard & Thomas 2020:3). The current research assessed the cues to the action of participants regarding contraceptive utilisation. The variables are presented in Figure 1 below in a schematic presentation for a better understanding.

One of the strengths of HBM is that it is useful to identify potential perceptions of susceptibility, benefits, seriousness, and barriers that can help explain the need to engage in a specific behaviour to prevent a certain disease. Its limitations include difficulty changing the normal individual's pattern of behaviour that may affect the decision-making process and its assumptions that everybody has equal access to disease information (Shah, Mahmood & Gafor 2020:9).

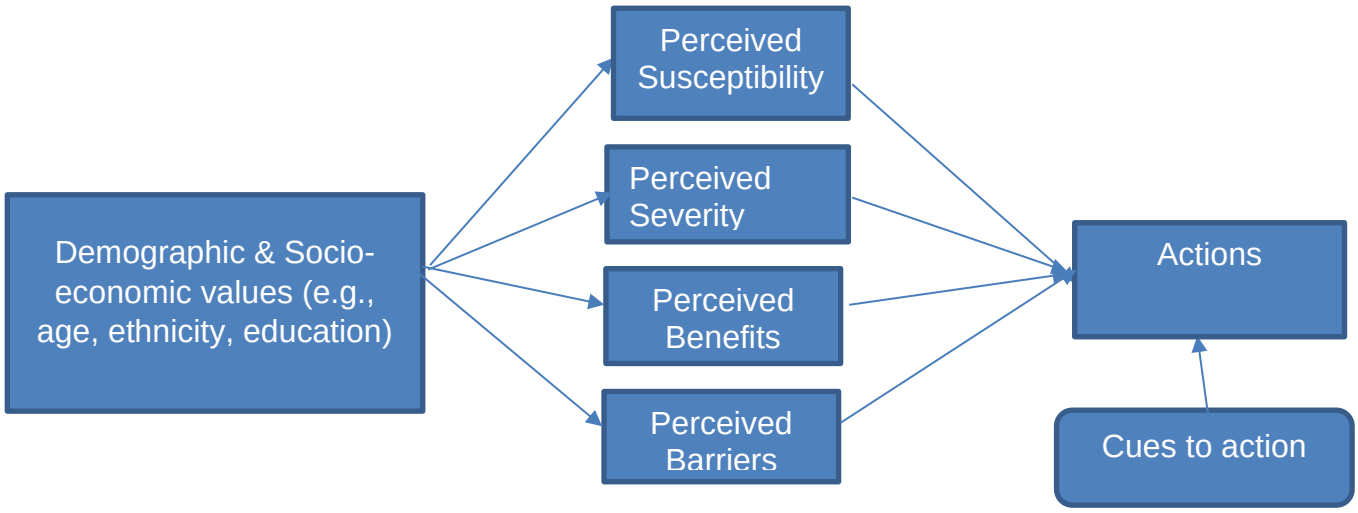

Figure 1: The Health Belief Model (Alhamad & Donyai 2021:4)

1.7 RESEARCH PARADIGM

The researcher used the pragmatism paradigm. A research paradigm is “a worldview of human constructions, a set of philosophical assumptions inherently coherent with the nature of reality” (Creamer 2018:94).

Researchers use several research paradigms, including pragmatism, transformative, critical realism, post-positivism, constructivism, realism, and feminism (Ghiara 2019:5). There are about four types of paradigm dimensions and described as follows:

Ontology: which reflects about the nature of truth and reality whether it is external or constructed. Therefore, in this reserch, Ontology may be characterised by a bilief in multiple ralities(Creamer (2018:94).. The nature of knowledge about contraception is derived from the women and young girls whose reproductive health is impacted by the use of contraceptives. The actions to improve the use of contraceptives is derived from health professionals who were providing contraceptives to women and young girls.

Epistemology: reflects about the relationship between the knower and reality and the participant, Mmultiple epistemological frameworks can be embodied within a single research study by combining quantitative and qualitative approaches (Ghiara 2019:9). In this reserch, epistemology values both qualitative and quantitative insights , with an emphasis on their usefulness in addressing research questions and solving real-world problems. The limited use of contraceptives will be addressed by developing the strategies which may be used by various stake holders to address the problem.

Methodology: : is defined as simply ‘the use of more than one qualitative approach with another’ (Emma & John 2018: 5). In this reserch, with a pragmatist approach, methodology is flexible and adaptive, allowing researcher to combine qualitative and quantitative methods to obtain better results and address reserch questions based on the objectives.

Axiology: ‘’Axiology refers to the ethical issues that need to be considered when planning a research proposal’’ (Kivunja1 & Kuyini 2017: 3). Ethical principles related to institutions and research participants were adhered to in this research study.

Pragmatism: is a type of research paradigm which contradicts the concept of truth and reality. On the contrary, it promotes the idea that single or multiple realities can be open to empirical enquiry (Kaushik & Walsh 2019:3). In this research, the

assumption of using the pragmatism paradigm is to obtain the different strengths of quantitative and qualitative results. However, the pragmatism paradigm has its own limitations and strengths. One of the strengths of pragmatism is that it values subjective and objective knowledge, and it mainly focuses on real-world problems rather than the nature of knowledge but it is liable to discrepancies between different types of data that are hard to interpret, which is considered as a disadvantage (Fiorini et al 2016:4).

In the current research, a paradigm philosophy of pragmatism was used, which combines quantitative and qualitative methods because the qualitative results will support the quantitative results and give better results at the end of the research (Leavy 2017:270).

1.8 SIGNIFICANCE OF THE STUDY

The study could benefit healthcare providers and healthcare users in improving contraceptive utilisation. The study findings assisted with developing strategies to enhance contraceptive uptake in Ethiopian women and young girls. In addition, the study can be helpful for policymakers regarding contraceptive utilisation. Moreover, Ethiopian women and young girls can benefit from the study as the findings can help them use contraceptives effectively, thus preventing unintended pregnancies and unsafe abortions.

1.9 INTRODUCTION TO RESEARCH METHODOLOGY

The study used sequential explanatory mixed method research, which is an approach that combines both quantitative and qualitative research methods to yield better results that balance the limitations of the quantitative or qualitative studies alone (Johnson & Christensen 2017:971). The rationale behind conducting mixed method research is to use qualitative findings to illustrate quantitative findings to understand the research results better.

Table 1.1: Research objectives

Quantitative	Qualitative	Outcome
To determine the factors associated with contraceptive use.	1. To explore the perceptions of women and young girls on contraceptive use. 2. To explore the views of health professionals on actions to improve contraceptive use.	To integrate results and develop strategies to improve contraceptive use among women and young girls attending postnatal care at selected hospitals and clinics in Addis Ababa, Ethiopia.

Detailed research design, methods, sampling, data collection, data analysis and ethical considerations applied for this scientific study are described in Chapter 3.

1.10 SCOPE OF THE STUDY

The scope of the research covers contraceptive use aspects, including contraceptives, counselling, pregnancy testing, complaints associated with contraceptive use, health education regarding unintended pregnancy, and awareness creation on contraceptive use.

1.11 STRUCTURE OF THE THESIS

The thesis is organised into the following six interrelated chapters:

Chapter 1: Orientation to the study

Chapter 2: Literature review

Chapter 3: Research design and methods

Chapter 4: Analysis, presentation, and description of findings

Chapter 5: Development of strategies to improve contraceptive utilisation

Chapter 6: Conclusions, limitations, and recommendation

1.12 SUMMARY

Chapter 1 outlined background to the study, purpose and significance of the study, statement of the research problem, research design and methods, scope of the study, data collection and analysis methods, and ethical considerations. The key terms for the subsequent chapters were defined. Chapter 2 presents the discussion of the literature reviewed related to this research study.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter presents reviewed and published research articles which are relevant to the improvement of contraceptive utilisation. The literature review analyses and synthesises work done in a specific area of a research topic related to one's research question in a postgraduate study (Aveyard, Payne & Preston 2021:14).

A literature review is helpful in a research project because it provides a clue on how others have conducted similar studies. The current research strategy included key concepts, including clinics, contraceptive use, hospitals, postnatal care, strategies, unintended pregnancy, women, and young girls. The search engines were books and journals which are available online from, Medline, PubMed Central and Google Scholar.

2.2 FAMILY PLANNING

Family planning is one of the programs for women, young girls and men which provides quality, low-cost, and easily accessible reproductive healthcare during their reproductive years (Ekpenyong, Nzute, Odejimi & Abdullahi 2018:1). According to Idris (2021:3), family planning helps individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births.

2.2.1 Contraceptives

Contraception can be defined as the prevention of pregnancy by artificial or natural methods that can be used intentionally by women, young girls, or men (Idris 2018:3). On the other hand, contraceptive use can be defined as a practice which enables women and young girls to protect themselves from unintended pregnancy to achieve their number of desired children according to their plan. Different kinds of methods of contraceptive methods should be available based on individual needs and choices (Alemu, Ambelie & Azage 2020:2). Contraceptive use can prevent about 230 million unintended pregnancies every year (Asresie, Fekadu Dagnew 2020:2). In addition, contraceptive use can hel[p women control their bodies , help free from worries and

traps related to unplanned and unwanted pregnancies and childbirth, their reproduction and their fertility (Alano & Hanson 2018:12).

There are different types of contraceptive methods, including standard day's method (SDM), rhythm (calendar) method, two-day method/or cervical mucus method, symptothermal method, lactational amenorrhea method (LAM), male and female condom, emergency contraceptives, progestin-only pill, combined oral contraceptive pills, injectable contraceptives, implants, intrauterine contraceptive device (IUCDs), bilateral tubal ligation (BTL), and vasectomy (FMOH 2020:27).

2.2.2 Global use of contraceptive prevalence

The use of global modern contraceptive prevalence varies in different countries for different reasons. A research survey was conducted in various countries using the Demographic Health Survey of each country on the use of contraceptives in the Caribbean and Latin America. The study focussed on the prevalence of long-acting reversible contraceptives and inequalities in 23 countries. The results showed that the lowest modern contraceptive prevalence was observed in Haiti (31·3%) and Bolivia (34·6%); inequalities were vast in Bolivia but almost non-existent in Haiti. Brazil, Colombia, Costa Rica, Cuba, and Paraguay had over 70% of modern contraceptive prevalence with low absolute inequalities (Leon, Ewerling, Serruya, Silveira, Sanhueza, Moazzam, Becerra-Posada, Coll, Hellwig, Victora & Barros 2019:1).

In 2023, in the United States of America, 40% of users discontinued contraceptives within 12 months, while close to one in five women keep on having unmet need for family planning (Ali, Kiarie & Shah 2023:1). Other researchers conducted in 61 countries on the magnitude of unintended pregnancy, and its determinants among childbearing age of women showed that the prevalence of unintended pregnancy rates is still high in low- and middle-income countries (26.46%, 95% CI: 25.30%, 27.62%), ranging from 19.25%% in Egypt to 61.71% in Bolivia with different contributing factors including working status, women with media exposure, husband's educational status (Aragaw, Amare, Teklu, Tegegne & Alem 2023: 5). There is an increasing mortality rate among women and young girls during pregnancy related to complications as a

result of lack of effective contraceptive utilisation services in low- and middle-income countries, (Negash, Chekol & Wale 2023:2).

Once women and young girls use contraceptives, it should be continuous and consistent to avoid unintended pregnancy. Research conducted in America on contraceptive use patterns within females' first sexual relationships showed that women and young girls faced a greater risk of non-marital pregnancy than those whose partners used condoms. Moreover, a group of teenagers switched to less effective contraceptive methods and were at a greater risk of contraceptive inconsistency and pregnancy. The authors further recommended that parents, service providers, policymakers, and teenagers use contraception consistently over time and within sexual relationships to help improve teenagers' motivations (Manlove & Terry-Humen 2019:16).

Failure to use contraceptives is a significant contributor to unintended pregnancy. A survey was conducted using 15 DHS data on global contraceptive failure rates. The result showed that users of short-acting and user-dependent methods, with more than six out of every 100 pill users and more than eight out of 100 condom users becoming pregnant within the first year of use, indicate failure. Exceptionally, rates of failure are high for users of traditional methods, with more than 17 failures per 100 episodes of withdrawal and 19 failures per 100 episodes of periodic abstinence. As a result, the authors found that age plays a significant role in contraceptive failure, with the youngest users experiencing failure rates up to 10 times more than older women for certain methods (Bradley, Polis, Bankole & Croft 2019:15).

One of the best contraceptive prevalence rates is exhibited in Ghana. The research was conducted on the determinants and prevalence of modern contraceptive use among sexually active female youth in the Berekum East Municipality. The result revealed that the modern contraceptive prevalence rate among the study participants was 211 (76%) (Amoah, Hinneh & Aklie 2023:7).

2.2.3 Prevalence of contraceptive use in Ethiopia

The prevalence of modern contraceptive utilisation in Ethiopia was reported to be low in various studies. Research was conducted in two North West Ethiopian districts on the prevalence and determinants of modern contraceptive utilisation among rural lactating mothers. The results revealed that modern contraceptive utilisation rate of prevalence was 45.8%, which was below the national planned target. Therefore, strengthening the health system approaches to improve antenatal and postnatal care, child immunisation services, and working on modern contraceptive utilisation to reduce unwanted pregnancies was recommended (Derso Biks, Yitayal, Ayele, Alemu, Demissie Wolde, Dellie, Azale, Misganaw, Kebede, Fetene, Gebremdhin & Atnafu 2020:2).

Another reserch was conducted in the Southern nation region of Ethiopia on contraceptive utilisation and associated factors among women of reproductive age group. The results revealed that 53% (below the national target) of reproductive age groups were using modern contraceptives but had poor knowledge and attitudes towards contraceptives. Age, residence, number of living children, and marital status were some of the factors associated with contraceptive usage. The authors recommended that policymakers address sociocultural barriers, gender myths, and specific roles and inequalities that can be barriers to contraceptive utilisation (Endriyas, Eshete, Mekonnen, Misganaw, Shiferaw & Ayele 2017:1).

Research was conducted on the determinants and prevalence of contraceptive utilisation among reproductive age groups of women in Edaga Hamus Town,Tigray Region, Ethiopia. The result showed 58.5% of prevalence of modern contraceptive utilisation, which is below the national expected target. As a result, provision of awareness creation about contraception and effective counselling and education was recommended (Tukue, Gebremeskel, Hagos, Gebremariam, Aregawi, Gebremichael, Tesfay & Arefaine 2017:1).

Modern contraceptives, specifically long-acting contraceptives, are not widely used by Ethiopian women and young girls. A research study was conducted in Ethiopia to assess the prevalence of long-acting contraceptives used by Ethiopian women and

young girls found low utilisation of long-acting contraceptives in Ethiopia. Thus, raising awareness about IUCDs and sharing experiences between public hospitals and other family planning service delivery points was recommended (Tadele & Berhanu 2021:1).

Furthermore, modern contraceptives help prevent unintended pregnancy, especially for women and young girls living with HIV, to prevent mother-to-child transmission of HIV. In this regard, a cross-sectional survey was conducted in 2018 on contraceptive use and method preference among HIV-positive women in Amhara, Ethiopia. The results showed that the prevalence of contraceptive use among HIV-positive women in Amhara region referral hospitals was still low, suggesting a high risk of acquiring unintended pregnancy (Alene & Atalell 2018:8).

On the contrary, research conducted in Western Ethiopia in 2018 on contraceptive use among sexually active women living with HIV showed a high prevalence of contraceptive use (75%). However, the research findings highlighted a high rate of unmet needs for contraceptives that require strengthening family planning services. They recommended using the HBM framework for healthcare providers, programme planners, and policymakers to develop strategies and policies for contraceptive counselling and choices (Feyissa, Harris, Forder & Loxton 2018:15).

Further research was conducted in Ethiopia by extracting EDHS 2016 data on modern contraceptive utilisation and associated factors among reproductive-age women in Ethiopia. The results showed that the prevalence of overall modern contraceptive utilisation among reproductive-age women in Ethiopia was only 20.42%. Therefore, it was concluded that the extent of modern contraceptive utilisation among women of reproductive-age group in Ethiopia was unexpectedly low (Gebre & Edosa 2020:1). To improve contraceptive utilisation and prevent unintended pregnancy, the following was recommended: considering affordability, accessibility, provision of antenatal care service, and improving maternal education level. However, the most important factor identified was the development of strategies for utilising family planning, highlighted as the most important factor in cross-sectional research conducted in Southern Ethiopia on the association of husbands' education status with unintended pregnancy (Seifu et al 2020:1).

2.2.4 Availability and provision of contraception in Ethiopia

Availability and provision of modern contraceptive methods are among the most contributory factors preventing women and young girls from utilising the service. Without the provision of all methods of contraceptives, we cannot talk about the freedom of contraceptive choice and informed decisions that women and young girls can make.

Due to the global COVID-19 pandemic and the Russia and Ukraine war, along with the political unrest and conflict in the Northern part of Ethiopia, the economic crisis has negatively affected the provision of drug supplies, including modern contraceptives in Ethiopia. The following is a list of contraceptive methods in Ethiopia: male and female condoms, progestin-only pills, emergency contraceptives, injectable contraceptives, implants, combined oral contraceptive pills and IUCDs. The cost of each listed contraceptive above, especially injectable and oral contraceptives, has drastically increased, which is difficult to find in healthcare facilities when needed.

2.3 UNINTENDED PREGNANCY

According to Mohamed et al (2019:2), “unintended pregnancy is defined as a pregnancy either mistimed (a pregnancy happening earlier than desired) or unwanted (occurance in women or young girl who already have children and do not want any more children).”

2.3.1 Prevalence and associated risks for unintended pregnancy

Unintended pregnancy rates are different across countries due to inequalities between countries, suggesting the existence of substantial regional disparities in individuals to exercise their reproductive autonomy of utilising contraceptives and family spacing rights (Bearak Popinchalk, Beavin, Ganatra, Moller, Tunçalp & Alkema 2022:7).

An unintended pregnancy primarily results from not using contraceptives. As a result, approximately 230 million pregnancies occur each year globally, of which 40% are unintended and 50% end in abortion (Ranatunga et al 2020:2). In adolescent girls aged 15–19 years, there were approximately 21 million pregnancies in developing countries in 2016; nearly half (49%) were unintended (WHO 2017:3).

Modern contraceptive methods like IUCDs and oral contraceptive pills have been recommended to prevent unintended pregnancy in the United States of America after a systematic review was conducted on multiple unintended pregnancies among women. The research findings showed that rates of unintended pregnancy was still a public health concern, and the prevalence rate of unintended pregnancy ranged from 17% to 31.6% (Aztlan-James et al 2017:1).

A cross-sectional research study was conducted in Sri Lanka on the proportion of unintended pregnancies. According to Ranatuga et al (2020:3), there is an association between suboptimal antenatal care and lower socioeconomic status, which contributes to unintended pregnancies. A mixed research study was conducted in Kenya to understand the reasons for unintended pregnancy among sexually active adolescent girls. The result revealed a high level of unintended pregnancy among sexually active adolescent girls in the study setting and better access to sexuality education for adolescent girls and boys recommended (Ajayi, Odunga, Oduor, Ouedraogo, Ushie & Wado 2021:9). The availability of contraceptive methods is one of the aspects in preventing unintended or unwanted pregnancies (Yaya et al 2018:1).

A cross-sectional study was conducted in Ghana on the burden of unintended pregnancy among pregnant women, its prevalence, and predictors. The result showed that unintended pregnancy is as high as 40% in Ghana. The authors recommended improving access to contraceptive utilisation methods and family planning information to be well implemented and evaluated by all stakeholders (Nyarko 2019:1). Other factors for experiencing unintended pregnancy include sexual violence between partners.

A research study was conducted in In South Africa using data from a South African University on the association between unintended pregnancy and sexual violence among young women and adolescent girls. The results showed that 41.9% of all respondents had experienced unintended pregnancy, and 26.3% of those pregnancies ended in abortion. Thus, increasing contraceptive utilisation information was recommended (Ajayi et al 2020:4).

Women and young girls living in refugee camps are at high risk of unintended pregnancies; thus, modern contraceptive use should be promoted and used in refugee

settings. A community-based cross-sectional study was conducted in Ethiopia in 2019 on utilising modern contraceptives and predictors in the Shimelba refugee camp in Northern Ethiopia. The results revealed that the prevalence rate of modern contraceptives among women in the Shimelba refugee camp was 47.7%, deemed decent; however, the number must increase (Seyife, Fisseha, Yebyo, Gidey & Gerensea 2019:9). Authors concluded that utilisation of modern contraceptive methods is positively associated with obtaining family planning counselling services and negatively associated with being old, single in marital status, unemployment (being a housewife), lack of partner involvement, women-only decision maker, and inconvenient service site.

Sudden discontinuation of contraceptive methods is the other factor for unintended pregnancy. A research study was conducted in Ethiopia on reasons and multilevel factors associated with unscheduled contraceptive use discontinuation using EDHS, 2016. The result showed that the prevalence of unplanned discontinuation of contraceptive use was 46.18% due to side effects – 45.3%, needing a better method – 33.6%, and inconvenience – 21.1% (Woldemariam, Gezae & Abebe 2019:1).

Various factors were indicated regarding the increased prevalence rate of unintended pregnancy in Ethiopian women, including, religion, marital status, age of women and size of household in a multi-level research conducted using the Ethiopian Demographic and Health Survey (2016). The results revealed that rates of unintended pregnancy (prevalence) was 26.6%. As a result, decreasing the prevalence of unintended pregnancy was recommended to improve maternal health (Teshale et al 2020:1).

Another research was conducted in Dilla university hospital, Ethiopia, on the magnitude of unintended pregnancy and its determinants among pregnant women. The result showed that the age of women, marital status and educational status were the variables significantly affecting the level of unintended pregnancy, and the magnitude of unintended pregnancy was 36.9% (Feyisso, Girma, Yima & Hailu 2017:6).

In 2018, a community-based cross-sectional research study was conducted in Northeast Ethiopia on the prevalence and factors associated with teenage pregnancy. The results showed that the prevalence of unintended pregnancy was 63.3%; thus, strengthening contraceptive service promotion and provision was recommended (Habitu et al 2018:1).

2.3.2 Prevention of unintended pregnancy

Strategies including the provision of quality contraceptives, availability and accessibility of contraceptives, and empowering women through higher education were recommended to prevent unintended pregnancy in a study conducted in Uganda. The study used the Ugandan DHS on unintended pregnancy determinats among married women in Uganda (Wasswa et al 2020:16).

A systematic review was conducted on adolesent girls to prevent unintended pregnancies and interventions. The result revealed that teenage pregnancy rates can effectively be reduced under school-based primary prevention strategies. In addition, contraceptive utilisation can be improved (Mohamed, Chipeta, Kamninga, Nthakomwa, Chifungo, Mzembe, Vellemu, Chikwapulo, Peterson, Abdullahi, Musau, Wazny, Zulu & Madise 2023:11).

Phenomenological qualitative research on reasons and prevention strategies for unintended pregnancy in Addis Ababa was conducted. The result showed different reasons for unintended pregnancy, including lack of access to quality family planning services, socio-cultural and economic influence, and preconception thoughts and behaviours. In addition, respondents suggested male-inclusive contraceptive counselling, service integration and comprehensive sexual education strategies to prevent unintended pregnancy (Yalew, Olayemi & Yalew 2023:6).

2.3.3 Ethiopian national family planning strategies to prevent unintended pregnancy

The Family Guidance Association of Ethiopia (FGAE) was the first association which started modern contraceptives in Ethiopia in 1966, followed by the expansion of family planning services by the Ministry of Health of Ethiopia in collaboration with other

organisations, including the United Nations Population Fund (UNFPA) and other stakeholders throughout the country from 1980 (FMOH 2020:17).

According to the FMOH (2020:17), the maternal mortality ratio has declined by 53% from 871/100,000 in 2000 to 412/100,000 in 2016 per 100,000 live births. Similarly, infant mortality decreased by 50% from 97/1,000 in 2000 to 48/1,000. This is one of Ethiopia's most notable achievements in reproductive health services, primarily in women's and men's voluntary family planning services. However, much still needs to be done to maintain this achievement and gain better results. Integrating family planning with other services is one of the strategies of the Ministry of Health of Ethiopia to address the family planning needs of women and young girls.

According to the FMOH (2020:32), the following family planning service modalities have been listed by the National Guideline for Family Planning Services in Ethiopia: social marketing through pharmacies, facility-based services (private and public), drug stores and rural drug vendors, mobile health team approaches, outreach-based community services, school health services, and workplace services social franchising. The National Guideline for Family Planning Services in Ethiopia (2020:22) considers the following guiding principles in designing family planning programmes and defined terms as follows:

- **Availability:** Availability refers to "trained providers, healthcare facilities, and contraceptive methods are available to ensure that individuals can exercise full choice from a range of contraceptive methods, including follow-up and removal services for implants and intrauterine contraceptive devices (IUCDs)."
- **Accessibility:** Accessibility refers to "the availability of trained providers, healthcare facilities, and contraceptive methods without economic, physical, sociocultural, or informational barriers."
- **Acceptability:** The term acceptability means that "healthcare, trained providers on contraceptive methods respect medical ethics, confidentiality, individual preferences, and are sensitive to gender and life cycle requirements."
- **Quality:** Quality means "individuals have access to a full range of medically and scientifically appropriate contraceptive methods, have access to clear and medically accurate information, and get the service from technically competent

providers at a well-equipped health facility that ensures client-provider interactions."

- **Empowerment:** Empowerment means "individuals are empowered as principal actors and agents to make decisions about their reproductive lives and can execute these decisions through access to contraceptive information, services, and supplies."
- **Equity and non-discrimination:** Comprehensive contraceptive services which are free from coercion, discrimination and violence are accessible to individuals. Family planning services should be provided regardless of discrimination against geography, age, ethnicity, language, HIV status, disability, income, and marital or other status.
- **Informed choice:** Information on various contraceptive methods and their use, which is provided to individuals, should be accurate, clear, and readily understood.
- **Voice and participation**: Voice and participation means "individual beneficiaries can participate meaningfully in the design, provision, implementation, and evaluation of contraceptive services, programmes, and policies.

2.4 SEXUAL AND REPRODUCTIVE HEALTH

2.4.1 World Health Organisation (WHO) approach to sexual and reproductive health services

The WHO (2018:1) has been working on sexual and reproductive health services in line with the sexual health frameworks and their linkage with reproductive health. The following areas were identified and recommended by WHO to be implemented globally by each health sector, with a particular focus on:

- Provision of comprehensive sexuality education
- Provision of counselling on the use of contraception
- Antenatal, intrapartum, and postnatal care
- Safe abortion care
- Sexually transmitted infections, prevention, and treatment

- Human immunodeficiency virus (HIV) prevention and care
- Prevention of violence against women and girls, prevention support and care
- Prevention of harmful traditional practices

2.4.2 Integration of sexual and reproductive health and Sustainable Development Goals

WHO had designed and launched a call for countries to assure universal access to reproductive and sexual healthcare services by 2030, including education, family planning information, and the integration of reproductive health into national programmes and strategies targeting 3.7 of the Sustainable Development Goals (SDGs) as a strategy through monitoring of key family planning indicators (UN 2019:2).

In 2020, China conducted research based on the targets and indicators to evaluate whether SDGs related to sexual and reproductive health targets were achieved. The results showed that abortion numbers, abortion rate, and the ratio of abortions to births increased from 2014 to 2016 while the family planning policy was relaxed (Fang, Tang, Tan & Tolhurst 2020:2).

2.4.3 Ethiopian reproductive and sexual health services

Ethiopia has revised its national reproductive health strategy (2016-2020) to reduce rates of unintended pregnancies and help individuals achieve their desired family size in line with the goal of family planning (FMOH 2020:14).

Concerning reproductive health, Ministry of Health Ethiopia is committed to achieving its goals through the following strategies:

- Delegation of services to the lowest service delivery level possible to provide all family planning methods, especially permanent and long-acting methods, without compromising quality or safety of care.
- Provission of access to and utilisation of quality family planning services, particularly for unmarried young people, married ones and those who have reached their desired family size.

- Design obedience and demand for family planning, with particular emphasis on populations abandoned and became vulnerable by gender, geographic dispersion, and wealth.

2.4.4 Health professionals participating in the provision of Ethiopian reproductive and sexual health services

According to Sidibe et al (2022:1), a research study was conducted on the attitudes, knowledge, and practices of health providers about access to and contraceptive utilisation methods among youth and adolescents in urban areas. The result revealed that 71% of youth and adolescents had a good level of knowledge about utilisation of contraceptives . In addition, 62% of participants had positive attitudes, and 41% had good prescribing practices towards utilisation of modern contraceptives by youth and adolesents.

Ethiopian health professionals are expected to provide adequate, quality reproductive health services in each healthcare facility ; however, due to various factors, health professionals in some parts of Ethiopia do not provide adequate reproductive health services. There is limited research conducted in Ethiopia regarding the health professionals participating in the provision of sexual and reproductive health services.

Phenomenological research was conducted in Ethiopia to explore providers' perceptions towards providing sexual and reproductive health services for unmarried adolescents in Gamo Zone, Southern Ethiopia. The results showed different obstacles towards the provision of reproductive and sexual health services for unmarried adolescents, which include healthcare providers' personal beliefs, attitudes, and motivation; health system factors including lack of training, shortage of essential medical supplies and community-level influences such as lack of parental support, sociocultural norms, and religious issues (Sidamo, Gidebo, Wado Abebe & Meskele 2021:1).

2.4.5 Family planning counselling in the global context

Family planning counselling is a two-way discussion and decision-making process between the client and provider, sharing objective and user-friendly information, and an approach fundamentally grounded in the rights to autonomy, dignity, privacy, respect and participation (Ali & Tran 2021:3).

Providing quality family planning counselling service is an integral part of the service, which helps women and young girls to utilise modern contraception, supported by research conducted in Uganda on modern contraceptive use among postpartum women living with HIV attending mother-baby care points in Kabarole District. The results showed a low level of using modern contraception, while there was a high level of unmet needs among postpartum women living with HIV, indicating gaps in contraceptive service delivery (Tusubira, Kibira & Makumb 2020:2).

Further research was conducted in America using data from a prospective cohort study on the prevalence and predictors of prenatal and postpartum contraceptive counselling in two Texas cities. The results showed that half of the participants received prenatal contraceptive counselling. In conclusion, it was indicated that prenatal and postpartum counselling, particularly about IUCDs and implants, was infrequent and varied by sociodemographic (Coleman-Minahan, Aiken & Potter 2017:1).

Health professionals, especially gynaecologists and midwives, can play a significant role in counselling on modern contraceptives; however, not all professionals counsel their patients. A web-based survey was conducted on contraceptive utilisation and counselling among breast cancer survivors. The results showed that 61% of participants had been given contraceptive counselling by their oncologist before or after treatment. However, 49% of those did not receive a specific recommendation for a contraceptive method. Therefore, the authors recommended that initiatives to improve comprehensive contraceptive counselling by an oncologist at the time of diagnosis be made (Mody, Gorman, Oakley, Layton, Parker & Panelli 2019:2).

Another area for consideration while counselling women and young girls on modern contraceptive utilisation is the effectiveness of counselling. Counselling effectiveness strategies on the use of modern contraceptives was studied in America using a systematic review to verify what works and does not. The results showed that a counselling conducted before abortion was associated with increased use only when accompanied by provision of broader contraceptive methods.

Effective ounseling of male partners have increased contraceptive use in two of five studies targeting women who are initiating implants, non-users, or those seeking abortion. The authors concluded that quality studies and evidence base are limited, and there is a need to condut further research study in determining the effectiveness of different counselling interventions in different areas of settings (Cavallaro, Benova, Owolabi & Ali 2019:1).

A client satisfaction survey on contraceptive utilisation is useful in correcting or maintaining a strategy. An online survey was conducted in Puerto Rico on programme fidelity and patient satisfaction among women the Zika contraception access network programme served. The results suggested that women who received high-quality client-centred contraceptive counselling were most interested after counselling and were satisfied with the contraceptive method received. The authors recommended the implementation of accessibility of contraceptive programmes with high fidelity to programme strategies in a fast-moving and complex public health emergency setting (Zapata, Romero, Rivera, Rivera-Soto, Hurst, Mendoza, Clayton, Bracero, Whiteman, & Lathrop 2020:2).

In India, a competency assessment was done on medical interns and nurses, documenting prevailing practices to provide family planning services in teaching hospitals in three states. According to the result, 22% of respondents believed that contraceptives should not be given to a married woman coming alone, and those participants who responded that it was illegal to provide contraceptives to unmarried people were 31.9%. The authors concluded that the knowledge and skills of interns and nurses regarding family planning services were inadequate (Gupta, Verma, Kaur, Iyengar, Singh & Singh 2019:2).

In the United States of America, a reserch was conducted on contraceptive initiation among women, timing, methods used, and pregnancy outcomes. The results showed delayed contraceptive initiation among African American and Hispanic women with low income, and it is also strongly associated with the short-term risk of unwanted pregnancy (Horwitz, Ross-Degnan & Pace 2018:1).

On the other hand, despite religious issues on contraceptive utilisation, Saudi Arabian women have a high prevalence of modern contraceptive utilisation. Research on the prevalence, correlates, and barriers of contraceptive use among women attending primary health centres in the Aljouf region, Saudi Arabia, recommended that health authorities and policymakers identify and work on barriers that prevent contraceptive utilisation by women (Abdel-Salam, Albahlol, Almusayyab, Alruwaili, Aljared, Alruwaili & Alnasser 2020:1).

Moreover, another area of contraceptive utilisation worth studying is provider service delivery. In this regard, research was conducted on provider perspectives on contraceptive service delivery in Johannesburg, South Africa. The results showed that respondents believed that their clinics currently met the contraceptive needs of their female patients through on-site services or referrals. Moreover, participants noted that women did not always get the counselling or method of contraception they wanted because of limited contraceptive offerings, lack of training and staff shortage. Thus, the authors recommended the provision of healthcare staff training, minimising workloads that will increase contraceptive service capacity and ensure quality in the healthcare setting (Lince-Deroche, Hendrickson, Moolla, Kgowedi & Mulongo 2020:1).

In Rwanda, a research survey was conducted on voluntary contraceptive uptake among post-abortion care clients treated with misoprostol. The results revealed that 94% of participants reported being counselled on contraception; however, only 47% reported choosing and receiving a method before being discharged from the facility. Moreover, the authors recommended accurate and high-quality post-abortion contraception counselling and method provision at both treatment and follow-up visits (Packer, Pack & McCarraher 2019:1).

2.4.6 Ethiopian family planning counselling services

Counsellingservices in family planning is an essential component of family planning services that ensure clients are provided with sufficient information on the different types of methods of contraceptives, side effects, route of administration and benefits.

In the National Guideline for Family Planning Services in Ethiopia, it is boldly documented that family planning counselling should be done by service providers using rapport building, exploring, decision-making, and implementing the decision (REDI) counselling framework techniques (FMOH 2020:26). However, the techniques of family planning counselling service require special training and health service providers do not give proper counselling services to clients in order to integrate and give meaning to family planning services.

Postpartum contraceptive counselling should be uniform and persistent, addressing all contraceptive methods to scale up contraceptive utilisation because counselling gives women and young girls a better idea of what type of modern contraceptive to use. Thus, women and young girls can use a contraceptive method of their choice. An institution-based cross-sectional study was carried out in North West Ethiopia on the role of counselling on modern contraceptive utilisation among HIV-positive women. The results revealed that the proportion of women utilising contraceptives was low (47.7%) in Amhara region referral hospitals; thus, the authors recommended encouraging patients to discuss contraceptive use with partners and repeated counselling by healthcare providers to strengthen contraceptive utilisation (Araya, Solomon, Gebreslasie, Gudayu & Anteneh 2018:8).

Timely initiation of contraceptives is another area to be considered to prevent unintended pregnancy. Most Ethiopian women and young girls do not initiate contraceptives and usually get pregnant while lactating.

2.4.7 Factors influencing women to use family planning services

Family planning services can be affected by different factors; for example, educational level and family income are two prominent factors affecting family planning services.

The more the family is educated, the higher the chance of utilising modern contraceptive methods to decide their family size. An individual's income is equally important to utilise modern contraceptives, particularly if the health facility is far from a woman's or young girl's residence. If contraceptives are expensive, income will be important to address those issues (Kassim & Ndumbaro 2020:4).

Age groups of women , residence location , and birth rates within five years are other factors influencing contraceptive utilisation or discontinuation. As women's age increases, there is a higher chance of discontinuing contraceptive utilisation, which is evidenced by research conducted in Myanmar on factors affecting the discontinuation of contcaeptive methods using analysis of the 2015–16 Myanmar DHS (Tin, Maung & Win 2020:11).

Several factors that can affect family planning service utilisation can be listed, including desire for more children, partner disapproval, previous side effects, religious beliefs, culture disapproval, marital status, ignorance, domestic violence, and difficulty in accessing services (Akamike, Okedo-Alex, Eze, Ezeanosike & Uneke 2020:9).

Religious issues are the most challenging factors affecting contraceptive use in Ethiopia. An individual behavioural model was applied to predict willingness to use modern contraceptives among pastoralist women in the Afar region, Northern Ethiopia. The results showed a low willingness to use modern contraceptives among pastoralist women. The authors recommended developing strategies and implementing tailored health education interventions to improve women's perception of the possible risks of unintended pregnancy (Kahsay, Tegegne, Mohammed & Kiros 2018:11).

Men's family planning network has been indicated to be important in using modern contraceptives. A reserch study was conducted in Madagascar on the association between contraceptive use and men's family planning networks among female partners. The results showed that men with family planning networks were 1.9 times more likely to use modern contraception as a couple than men with no family planning networks. In addition, it was recommended that interventions should focus on reaching men not only through providers but also through their social ties to foster

communication and support for contraceptive use (Comfort, Harper, Tsai, Perkins, Moody, Rasolofomana, Alperin, Schultz, Ranjalahy, Heriniaina & Krezanoski 2021:6).

Another research study also supports the role of male partners in contraceptive utilisation. For example, a research study conducted in Uganda on the role of partner influence in contraceptive adoption and discontinuation of women highlighted the significant supportive role of partners in contraceptive utilisation among Ugandan women (Sarnak, Wood, Zimmerman, Karp, Makumbi, Kibira & Moreau 2021:12).

Violence and conflicts can disrupt health systems and contraceptive utilisation and negatively affect young girls' use of modern contraceptives. Cross-sectional research was conducted in the Democratic Republic of Congo (DRC) on contraceptive use among adolescent and young women in the North and South Kivu region. The authors recommended the availability of a full range of contraceptive methods, including long-acting methods for young girls and women in humanitarian settings (Casey, Gallagher, Kakesa, Kalyanpur, Muselemu, Rafanoharana & Spilotros 2020:3).

Healthcare indicators can reveal the scope of modern contraceptive use. Research was conducted using data on the performance monitoring and accountability of healthcare system indicators associated with modern contraceptive use in Ghana, Kenya, and Nigeria. The results indicated differences in percentages of prevalence of contraceptive use in three countries: 22.7%, 33.2%, and 68.9% in Nigeria, Ghana, and Kenya, respectively. The authors concluded that evidence from the study can inform policymakers, health workers, and healthcare organisations on specific healthcare factors targeting the need for contraception in Ghana, Kenya, and Nigeria (Asaolu, Nuño, Ernst, Taren & Ehiri 2019:1).

Healthcare professionals, especially health practitioners, can advocate and help women and young girls utilise modern contraceptive methods, supported by cross-sectional research conducted in the United Arab Emirates on contraceptive utilisation among mothers of reproductive age in Ajman, United Arab Emirates. The authors further recommended creating outreach awareness in the community about the availability and use of modern contraception (Kanwal, Muttappallymyalil, Al-Sharbatti, & Ismail 2017:8).

Knowledge of modern contraceptives is crucial in contraceptive utilisation. A cross-sectional survey using data from the 2017 Ghana Maternal Health Survey was conducted on determinants of contraceptive use among sexually active unmarried adolescent girls and young women aged 15–24 years. The result showed a significant gap between knowledge and use of contraceptives among the study population. The authors recommended intensifying knowledge of adolescents and young women on contraceptives and adolescent-friendly services to prevent societal stigma on young women who access contraceptive services (Oppong, Logo, Agbedra, Adomah, Amenyaglo, Arhin-Wiredu, Afari-Asiedu & Ae-Ngibise 2021:1).

2.4.8 Unmet needs for family planning

Unmet needs for family planning refer to avoiding or postponing childbearing but not using contraception (Casterine & Sinding 2019:2). Ensuring family planning services for women and young girls is a universal human right that empowers gender equality and empowerment. In addition, family planning services remarkably enhance the health of mother and children by decreasing unintended pregnancies and death of mothers and children (HouvèssouI, AntúnezI, BertoldiI & Silveira 2022: 2).

2.4.9 Determinants of unmet needs for family planning globally

Factors like demand and supply can affect contraceptive use. Research conducted in Pakistan on demand- and supply-side factors associated with contraceptive methods using a comparative study of demographic and health surveys. The results showed that women without media exposure were less likely to use contraceptives among demand-side factors. The trend remains almost constant for 2017–2018 (Jabeen, Rathor, Riaz, Zakar & Fischer 2020:1).

Contraceptive stakeout management is one of the other areas to be considered to ensure the availability of contraceptives to increase contraceptive uptake. Research was conducted in Senegal on understanding and addressing contraceptive stakeouts to improve family planning access and uptake. The results show a significant increase in contraceptive consumption (91%) over 35 months in the first three regions where an innovative distribution system called the Informed Push Model (IMP) was implemented. It was concluded that the model provided a technical supply chain

solution that successfully addressed the availability of contraceptives (Hasselback, Dicko, Viadro, Ndour, Ndao & Wesson 2017:1).

To ensure the availability of contraceptives, a fair price should be determined and adjusted, and adequate stock should always be available in private health sectors, including drug stores and pharmacies. Although women and young girls are committed to taking modern contraceptives, it will be difficult for them to buy and utilise contraceptives if it is not readily available and costly.

A survey was conducted on in Ethiopia, Nigeria, and DRC to scale up modern contraceptive access and choice by using the private sector The result showed that 41% of stocks of contraceptives were in the Ethiopian private sector compared to about 80% of the stocks outlets were in the drug shops of Nigeria and DRC. The authors concluded that there was a missed opportunity in the private sector, particularly in drug shops, for the provision of modern contraceptives. Increasing controlling prices and choice are essential for improving women's access to and use of modern contraception. Strategies like social marketing, social franchising, and subsidising products offer promise for opening up the private sector were recommended (Riley, Garfinkel, Thanel, Esch, Workalemahu, Anyanti, Mpanya, Binanga, Pope, Longfield, Bertrand & Shaw 2018:13).

On the other hand, even if contraceptives are available, they can be discontinued due to several factors, including intimate partner violence. For example, research conducted in Nigeria indicated that one of the factors for discontinuation of contraception among sexually active married women is intimate partner violence. The results showed that women who have experienced any form of intimate partner violence were significantly influenced by their education, occupation, the number of living children, and marital duration to discontinue contraception (Kupolyi 2020:1)

Different strategies can be used to prevent and reduce the prevalence of unintended pregnancy, including expanding antenatal care services. In 2020, a cross-sectional research article was conducted in India on unintended pregnancy and maternal health complications. The results showed that 16.9% of women previously had unintended

pregnancies; thus, expanding antenatal care services and community health worker home visits were recommended (Dehingia et al 2020:1).

Other factors such as higher education, living with HIV, monogamy, and higher parity were associated with modern contraceptive utilisation in cross-sectional research using data conducted in Cameroon on HIV status and contraceptive utilisation among women in 2019. The authors recommended that in increasing contraceptive utilisation in resource-constrained settings, priority should be given to clinicians and researchers (Budhwani, Hearld, Dionne-Odom, Manga, Nulah, Khan, Welty, Welty & Tita 2019:1).

2.4.10 Determinants of unmet needs for family planning in Ethiopia

Meta-analysis research was conducted in Ethiopia to determine predictors of unmet needs for family planning. The results showed that the prevalence of unmet needs for family planning in Ethiopia ranges from 26.52% to 36.39%, which is high in early marriage. Conversely, no formal education and lack of discussion with a partner on family planning were predictors of unmet needs for family planning in Ethiopia (Getaneh, Negesse, Dessie, Desta & Moltot 2019:9).

According to Alem and Agegnehu (2021:1), different factors, including community media exposure, working status of women, age at first marriage, household wealth, women's education, number of children, distance to a health facility, community women's education, were identified in a research conducted in Ethiopia on predictors of unmet need for family planning.

2.5 SUMMARY

This chapter reviewed and discussed literature relevant to the study's topic to assist in developing strategies to improve contraceptive use in Addis Ababa, Ethiopia. Additionally, the WHO sexual and reproductive health service approaches, integration of reproductive health and sustainable development goals, country family guidelines, family planning counselling services in Ethiopia, and determinants of unmet needs for family planning in Ethiopia have been well discussed. Chapter 3 presents the study's research design and methods.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter outlines the research design, research methods, and ethical issues related to the study. Validity, reliability, and trustworthiness have been comprehensively discussed.

3.2 RESEARCH DESIGN

Research design is a plan for the proposed research that holds together the elements of a research project. It is the arrangement of conditions for the collection and analysis of data in accordance with the research purpose (Akhtar 2016:2). The research design aimed to align the research goal and objectives with the practical considerations and limitations of the research project.

The research design enabled the researcher to execute research decisions based on the research findings so that the eventual validity of the findings was maximised. The study approach combined both quantitative and qualitative research methods, referred to as mixed methods, which gives a better result and balances the limitations of the quantitative or qualitative studies alone (Johnson & Christensen 2017:971).

There are four types of mixed methods research designs, namely, sequential explanatory, sequential exploratory, concurrent triangulation, and sequential transformative (Eyler 2021:6). The researcher employed a sequential explanatory mixed research design, which was conducted by collecting and analysing the quantitative part of the data followed by collecting and analysing the qualitative part of the research and integration of results during interpretation. Priority was given to start with quantitative research since it generates reliable, factual, generalisable data. The quantitative results helped the researcher develop interview guides and better understand aspects to explore when conducting the qualitative part of the research and explain quantitative results (Fiorini, Griffiths & Houdmont 2016:6).

On the other hand, the researcher applied cross-sectional and analytical research designs using the quantitative method and exploratory and descriptive research designs using the qualitative part of the research. A questionnaire was used for

quantitative data collection, while interviews were conducted for the qualitative method, which provided an in-depth understanding of the perspectives and experiences of various issues from the participants.

3.2.1 Cross-sectional study design

The researcher used a cross-sectional study design to measure the use of contraceptives and associated factors among young girls and women attending postnatal care at selected hospitals and clinics in Addis Ababa, Ethiopia. According to Satina (2016:2), a cross-sectional study design is defined as a type of observational study design in which the investigator measures the outcome and the exposures in the study participants at the same time. The design helped the researcher identify factors associated with contraceptive utilisation.

3.2.2 Analytical study design

The researcher used an analytical research design in the quantitative part of the research. The purpose of using analytical research design was to help analyse the association of various factors with contraceptive use. According to Thapa and Tandan ([s.a.]:3), in analytical research design, a researcher uses already available data and facts to critically evaluate and analyse that specific readily available data. The design was helpful for the researcher in analysing different factors associated with contraceptive use.

3.2.3 Descriptive study design

The purpose of the descriptive design was to describe the views of women, young girls, and health professionals on how to scale up contraceptive utilisation among women and young girls attending postnatal care in Addis Ababa, Ethiopia. According to Thapa and Tandan ([s.a.]:18), it is a type of research design which requires a description of a phenomenon as it occurs naturally and describes the disease load, mortality, morbidity and aetiology, and variables to answer a research question. Descriptive research design enables researchers to provide a true picture of a situation as it naturally happens. In the current research study, the researcher obtained adequate information from women and young girls on the perception of contraceptive

use and from health professionals' rich information obtained on how contraceptive utilisation can be improved.

3.2.4 Exploratory study design

The qualitative part of the research used an exploratory research design. The purpose of using an exploratory design was to explore the views of women, young girls, and health professionals on how contraceptive utilisation can be improved. According to Casula et al (2021:3), exploratory research design answers the "why" questions by explaining "why things are the way they are" and by looking "for causes and reasons." In this regard, the design helped the researcher explore and gain an in-depth understanding of how contraceptive utilisation can be improved based on participants' explanations.

Using an interview guide, the researcher interviewed women, young girls, and healthcare professionals in selected hospitals and clinics in Addis Ababa, Ethiopia. The qualitative and quantitative results were integrated, and the research findings were used to develop strategies, which experts validated.

3.3 PHASE 1: QUANTITATIVE RESEARCH METHODS

3.3.1 Study setting

Purposive sampling method was used to select the three health institutions, namely, Gandhi Memorial Hospital in Lideta District, Bole Bulbula Health Centre, and AWWA Mother's and Children Clinic in Bole District. Selected health institutions provide different healthcare services, including family planning, antenatal care, delivery, postnatal care, medical care, and immunisation.

3.3.2 Study population

The study population included women and young girls attending postnatal care, visiting the healthcare facility to vaccinate their babies, or for other medical care and health professionals in selected hospitals and clinics during the study period at randomly selected hospitals and clinics in Addis Ababa, Ethiopia. The study used a systematic sampling technique to select participants.

3.3.3 Sampling

Sampling is “a process of selecting a group of items from a larger sample size of interest’’ (Baltes & Ralph 2020: 2).

3.3.3.1. Site sampling

The researcher used purposive sampling methods to select health facilities. Simple random sampling is a sampling method under probability sampling in which each element and each combination of factors in the population have an equal probability of being selected as a part of the sample (Showkat & Paraveen 2017:4).

There are 12 state-owned hospitals in Addis Ababa. However, not all hospitals provide exclusive maternal and childcare services, including family planning, and two were under re-innovation. The researcher purposively selected one governmental hospital, one health centre, and one non-governmental maternal and child healthcare facility that provides maternal and childcare services, including family planning.

3.3.3.2 Sampling for women and young girls

A systematic sampling technique was employed using sampling interval to choose women and young girls attending postnatal care in selected hospitals and clinics in Addis Ababa, Ethiopia.

Sample size determination

The sample size for the two groups, namely, women and young girls, were calculated using STATA, considering the prevalence of teenage pregnancy to be 28.6% (Habitu et al 2017:3).

STATA command = power two proportions 0.286, test (chi2) OR (1.9) continuity

Estimated sample sizes for two sample proportions using Pearson's chi-squared test
Ho: P2 =p1 versus Ha: P2 is different from P1.

Study parameters:

Alpha=0.05
Power=0.8
P1 =0.2860
P2 =0.4322
r=1
OR=1.90
When calculated, the estimated sample size N=364
Adding a non-response rate of 10% makes the estimated sample size 400.4.

The population size of Addis Ababa, Ethiopia, is estimated to be 3.55 million, and the proportion of women in the reproductive age group is 35.5% (1,260,250 women) of the total population (Abeje, Seme & Tiblet 2019:3).

The proportion of young girls in Addis Ababa, Ethiopia, is 8.2% (291,100 young girls) of the total population (United Nations Population Fund, 2017). Therefore, the proportion of young girls was 291,100/1,551,350=18.7%, and women were 1,260, 260/1,551,350=81.3%.

The sample size for women was 400x81.3%=325. The 325 women were drawn from the three health institutions, and 108 were selected in each healthcare facility, but one healthcare facility had 109 respondents to make the total sample size 400. The sample size for young girls was 400x18.7%=75. The 75 young girls were divided into three, and each health institution had participants of 25 young girls.

Health facilities	Mother	Young Girls
Gandhi Memorial Hospital	(n=108)	(n=25)
Bole Bulbula Health Centre	(n=108)	(n=25)
AWWA Mother's and Children Clinic	(n=109)	(n=25)
Total	325	75

3.3.5 Inclusion and exclusion criteria

- **Inclusion criteria**

Women (19-49 years old) and young girls (10–18 years) who were attending postnatal care, visiting the healthcare facility to vaccinate their babies, or for other medical care during the study time were considred as participants of the study.

- **Exclusion criteria**

Women and young girls who were not attending postnatal care, visiting the healthcare facility to vaccinate their babies, or for other medical care during the study period were excluded.

3.3.6 Data collection

Data collection ‘’is the process of gathering and measuring information schematically to answer a research question on variables of interest’’ (Kabir 2016:3).

3.3.6.1 Method of data collection for women and young girls

A questionnaire comprises central questions that guide a research project, which is typically deductive and uses directional language (Leavy 2017:287). Based on the objectives and partly adapted from previous research articles, questionnaires were developed. A total of six data collectors were recruited, and a confidentiality agreement form was signed. They were also trained by the principal investigator on how to collect data and protect participants from COVID-19. Of the six data collectors, two were female health professionals recruited and trained for data collection.

The variables measured include age, educational status, marital status, family size, future pregnancy intention, and knowledge of contraceptive methods. A translator was assigned to translate the questionnaire from English to Amharic Language and into English again. A statistician assessed the reliability of the questionnaire.

3.3.6.2 Development and testing of the data collection instrument

The researcher used questionnaires and interview guides to collect quantitative and qualitative data. In line with the study objectives, literature review and theoretical framework, questions were developed The researcher pre-tested the data-collection instruments in hospitals and clinics that were not included in the study. The purpose of pre-testing instruments was to increase the research's validity, reliability, and trustworthiness.

Data were collected using a pre-tested questionnaire for women and young girls attending postnatal care during the study period. The researcher randomly picked participants and pretested the questionnaire on two participants (one woman and one young girl) who were excluded from the sample. Based on the pre-test, adding some options to the tool was necessary. For example, in question nine of the sociocultural and reproductive characteristic question, the answer was not listed in the portion. The pre-test participant mentioned that the barrier to not using contraceptives was that she missed taking the daily pills and got a mistimed baby. The second participant recommended adding 'all' to the question 10 & 11 option list. The recommendation was considered in the questionnaire.

3.3.6.3 Data collection procedure for women and young girls

The University of South Africa College of Human Sciences Research Ethics Committee issued the researcher an ethical clearance certificate. Moreover, the Addis Ababa Public Health Research and Emergency Management Directorate provided the approval letter for the research to be conducted. In addition, the managers of the selected health institutions permitted the research to be conducted.

Six data collectors were trained to provide participants with an alcohol-based hand sanitiser and keep a two-metre distance between participants and data collectors. If participants complained of emotional disturbance, data collectors were informed about taking minor measures such as stopping asking more questions, providing tissue, or referring to a psychiatrist for counselling using a request letter should the problem persist.

Women and young girls attending postnatal care in selected health facilities were identified and selected using sampling interval techniques. Before signing the consent form, participants were given specific information and purpose related to the proposed research study. Informed consent forms were offered to all selected participants of the study. For young girls below 18 years old, their parents or guardians permitted them to participate in the study. Once parents agreed, young girls below 18 years old were given an assent form, and data were collected in a quiet, private room in the hospital or clinic.

Data collectors and the principal investigator introduced themselves to the participants. All participants signed the consent form to indicate their agreement to participate in the study. Data collectors asked questions from the questionnaires, and the women and young girls responded accordingly. The COVID-19 pandemic was still a concern, thus the principal investigator and the participants thoroughly washed their hands with soap and water. They applied an alcohol-based hand sanitiser before and after contact with the hardcopies, questionnaires, and informed consent forms. Moreover, two metres were maintained between participants and data collectors.

3.3.6.4 Data processing and analysis

In the current research, the descriptive data analysis method was employed. All questionnaires were collected and checked for spelling errors, and unnecessary text formats were removed. Quantitative data files were coded and entered into the SPSS version 28 software.

The association between variables were analysed using binary logistic regression [(p/1-p)=a+B1X1+B2X2….B1X1]. The level of significance of association was determined at P-value<0.05, and a statistician was involved in data analysis. The results were presented in graphs and tables.

3.4 PHASE 2: QUALITATIVE RESEARCH METHOD

3.4.1 Study setting

Population summary table

	Mothers	Young Girls	Health Professionals
Gandhi Memorial Hospital	(n=4)	(n=2)	(n=5)
Bulbula Health Centre	(n=4)	(n=1)	(n=5)
AWWA Mother's and Children Clinic	(m=3)	(n=1)	(n=5)
Total	11	4	15
Total number of respondents	30		

The study population comprised women and young girls attending postnatal care, visiting the healthcare facility to vaccinate their babies or for other medical care, and health professionals working in delivery, postnatal clinic, family planning, and immunisation departments at randomly selected hospitals and clinics in Addis Ababa, Ethiopia during the study period. **Non-probability sampling** is a technique that uses non-randomised methods based on judgment to draw the samples because they are easy to access (Showkat et al 2017:7). **Purposive sampling** is a type of non-probability sampling based on specific criteria that best suit the intended research result, which is the direct result of the cases sampled (Leavy 2017:79).

The research employed a purposive sampling technique. Women aged 19-49, young girls aged 10–18, and healthcare professionals who had worked for five years or more in specific departments, including the maternity ward, postnatal department, immunisation, family planning, and youth-friendly family planning service departments, were included in the study.

3.4.2 Sampling and sample size determination

The point of saturation determined the sample size for the qualitative part of the study, and the interviews continued until no new information was obtained. However, the research was conducted in three healthcare facilities and 10 sample sizes in each healthcare facility (a total of 30) were considered.

Group 1: Women

- **Inclusion criteria**

Women 19-49 years and above who were attending postnatal care, visiting the healthcare facility to vaccinate their babies, or for other medical care during the study period were included in the study.

- **Exclusion criteria**

Women under 19 years and older than 49 years old who were not attending postnatal care, visiting the healthcare facility to vaccinate their babies, or for other medical care during the study period were excluded.

Group 2: Young girls

- **Inclusion criteria**

Young girls below 10-18 years who attended postnatal care, visited the healthcare facility to vaccinate their babies, or for other medical care during the study period were included.

- **Exclusion criteria**

Young girls under 10 years who were not attending postnatal care, visiting the healthcare facility to vaccinate their babies, or for other medical care during the study period were excluded.

Group 3: Healthcare professionals

- **Inclusion criteria**

Health professionals with five years or more of work experience in family planning, postnatal care, youth-friendly family planning service departments, delivery wards, and immunisation units of the selected health facilities during the study period were included.

- **Exclusion criteria**

Health professionals who were not working in the department of family planning, postnatal care, youth-friendly family planning service departments, delivery ward, and immunisation unit during the study period were excluded. Health professionals with less than five years of work experience and aged below 25 were not included from the study.

3.4.3 Data collection

3.4.3.1 Women and Young girls

Data collection method for women and young girls

An in-depth interview is a construction site of knowledge where two (or more) individuals discuss a theme of mutual interest (Marshal & Rossman 2016:285). Face-to-face, semi-structured interviews were conducted with women and young girls using a pre-tested semi-structured interview guide. An audio recorder was used to record the interview sessions. The researcher conducted a pre-test with two women and two young girls who were purposively selected, and the results were excluded in the main study. The information obtained from quantitative data helped the researcher to develop an interview guide for the qualitative part of the research.

Data collection tool was developed partly from previous research and partly from the objective of the study. Some interview guide questions were added, including the participant's qualifications, years of service, and whether the participant had training on contraceptives. An interview guide helped address the most critical aspects of

contraceptive utilisation. The principal investigator developed research questions and objectives, designed the study, managed resources, supervised dart collectors, involved in data collection and analysis, weekly discussed with data collectors about the correctness of data collection instruments and the respondent's response , transcribed the interview guide in Amharic and later translated it into English and involved in writing the thesis for publication.

- **Data collection procedure for women and young girls**

The University of South Africa College of Human Sciences Research Ethics Committee and the Addis Ababa Public Health and Emergency Management Directorate issued the researcher ethical clearance certificates to conduct the study. Verbal consent was obtained from managers in the specific health facilities before data collection was conducted. Six data collectors trained in data collection, and the principal investigator introduced themselves to the participants. Participants were provided with information about the research's purpose before signing the consent form. The period of data collection was from November 2022 to January 2023.

Two metres were maintained between participants and data collectors to protect them from COVID-19. Furthermore, alcohol-based hand sanitisers were provided to participants. A private and quiet room was prepared for interview participants, and the Amharic language was used to conduct the interview. Finally, selected participants were interviewed using an audio recorder and semi-structured interview guide. No emotional disturbance was experienced, and there was no need to refer participants to a psychiatrist.

3.4.3.1 Health professionals

- **Data collection method for health professionals**

A face-to-face, in-depth interview was conducted by using a pre-tested semi-structured interview guide, and an audio recorder was used to record the interview sessions. The researcher conducted a pre-test in which two healthcare professionals participated. The quantitative results helped the refresher develop interview guides for the qualitative part and to explain the quantitative research results.

- **Data collection process for health professionals**

Once the ethical clearance certificate and approval letter were issued, the managers in the specific health facilities gave permission to conduct the current research. Trained data collectors and the principal investigator introduced themselves to selected health professionals. An information about the purpose of the research was given to participants before signing the consent form. A face-to-face interview was conducted at the three health institutions in a quiet and private room in Amharic language. An audio recorder was used to record the interviews and notes were taken. The data were kept confidential.

3.4.4 Data processing and analysis

Thematic analysis is a method for analysing qualitative data that entails searching across a data set to identify, analyse, and report repeated patterns (Kiger & Larpio 2020:3). According to Coe and Palmer (2022:17), a thematic analysis entails the following steps:

a) Self-familiarisation with the collected data: Collected data were reviewed and checked repeatedly for the researchers to familiarise themselves.

b) Generate initial codes: Codes were created using the software.

c) Searching for themes: Similar themes were identified and grouped.

d) Review potential themes: The most prominent themes were identified and reviewed among the themes created.

e) Defining and naming themes: The themes were well defined and named before finalising.

f) Writing up: Finally, the writing process continued.

In the current research, the researcher used all the steps mentioned above to analyse the data and ATLAS.ti version 9 computer software was used to code and categorise the data. An independent coder and statistician were involved during data analysis to ensure the trustworthiness of the data.

3.5 INTEGRATION OF QUANTITATIVE AND QUALITATIVE RESULTS

The researcher first collected and analysed the quantitative data, then collecting and analysing of the qualitative part of the reserch were followed. Integrating the results was conducted after the quantitative and qualitative data.

3.5 PHASE 3: DEVELOPMENT AND VALIDATION OF STRATEGIES

3.5.1 Development of strategies

The quantitative data of the current research were collected and analysed, followed by collecting and analysing the qualitative part of the research.

Building the data: one method of integrating results in mixed methods research in which the qualitative findings are used to build the quantitative phase of the study was followed (Leavy 1017:191).

The findings of this study were used to develop the proposed strategies. In addition, methods used in different countries to improve contraceptive use were reviewed and conceptualised in the Ethiopian context. The Guidance for Developing a Technical Strategy for Family Planning Costed Implementation Plans (2020:7) identifies three significant technical strategy development steps:

a) Situational analysis: Generate key information needed to gain an in-depth understanding of the past and current family planning programme.

b) Result formulation: Define the specific results needed to meet the family planning goal.

c) Activity planning: Develop an implementation plan describing how results will be achieved.

The current study used the three steps mentioned above to develop the strategies, which experts validated.

3.5.2 Validation of strategies

Experts were identified to validate the developed strategies. Four experts participated in the validation of the guideline. Two experts from the Ministry of Health were family planning advisers, and two from Addis Ababa Health Bureau were family planning officers working in the Family Planning and Reproductive Health Departments. Experts graded the guideline based on the criteria checklist; each score was above 80 and thus considered acceptable.

3. 5 DATA AND DESIGN QUALITY

3.5.1 Phase 1: Quantitative data and design quality

The following measures were adhered to to ensure validity and reliability:

Validity attributes to a measuring instrument and it implies whether the instrument measures the behaviour or quality it is intended to measure and is a measure of how well the measuring instrument performs its function (Surucu 2020:4). "**Face validity** assesses whether each item represents the construct being studied based on its face value, **content validity** is the degree to which the instrument covers all items necessary or sufficient to measure the construct of interest, and **construct validity** is the degree to which an instrument measures the trait or theoretical construct that it is intended to measure" (Roy, Sukumar, Philip & Gopalakrishna 2023:3).

To ensure validity, the researcher adopted triangulation by using face-to-face interviews. In addition, the researcher defined clear objectives of the research, comprehensive literature reviews relevant to contraceptive use, appropriate sampling used and ethical review obtained from Institutional review Board (IRB). To ensure face validity of the current research study, a pre-test was conducted to assess the perception of the research instrument. Participants response to the questions helped the researcher clarify the relevance of the instrument.

To ensure the content validity of the current study, the researcher reviewed a thorough literatures on contraceptive use, theories and models and previous studies. This helped the researcher identify key factors and variables that should be included in the

research instrument.To ensure construct validity, the researcher used appropriate theoretical and conceptual models relevant to contraceptive use.

According to Surucu (2020:15), **reliability** refers to the stability of the measuring instrument used and its consistency over time. To ensure the reliability of the instrument, testing and refining the data collection instrument was done, and peer examinations were conducted by reviewing other relevant research studies to enhance reliability. Record interview data were preserved for re-analysis by another independent investigator, and a statistician was involved during the analysis to strengthen the reliability of the research.

3.5.2 Phase 2: Qualitative data and design quality

Trustworthiness is described as transparency in the conceptual and empirical literature, blended with researchers' abilities and intentions, contributing to a study being sound, trustworthy, and good (Marshal et al 2016:121). Trustworthiness is a quality criterion in qualitative research. It is ensured by credibility, transferability, dependability, and conformability (Korstjens & Moser 2017:2). An independent coder was assigned to ensure trustworthiness.

For **credibility**, the researcher ensures and imparts the reader supporting evidence that the results accurately represent what was studied (Johnson, Adkins & Chauvin 2019:7). To address credibility, the researcher used triangulation, including the adoption of mixed methods, prolonged engagement with an estimated data collection time of 45 minutes to one hour in each setting, testing of interviewing tool, and conducting regular debriefing sessions.

Transferability is the extent to which the study results can be applied to other contexts or studies and generalised to and across populations of persons, settings, times, outcomes, and treatment variations (Johnson et al 2017:631). To ensure the transferability of the current research, the researcher clearly described study sites and participants, the research methodology was adequately discussed, and purposive sampling was used to form a nominated sample.

Dependability means that when the research is done with a sufficient and consistent process, similar results should be obtained when the work is repeated (Johnson et al 2019:7). To address the principle of dependability, the audit trail indicating the research process was discussed in detail including the research design and its implementation, the operational detail of data gathering, and reflective appraisal of the proposal evaluating the effectiveness of the process of the enquiry undertaken.

Confirmability is the degree to which the research findings can be confirmed by other researchers (Korstjens & Moser (2017:3). To ensure conformability, weekly investigator meetings were conducted, and triangulation techniques on the current research were applied. On a weekly basis, the principal investigator checked and discussed with data collectors the correctness of data collection instruments and the respondent's responses.

3.5 ETHICAL CONSIDERATIONS

3.5.1 Ethical issues related to sampling

The researcher is obligated to respect participants' rights, values, needs, and desires. The following safeguards were used to protect the rights of participants :

- Permission to obtain the list and access to participants was obtained, and all women and girls had a chance of being selected, as random sampling was used. Participants chosen for the qualitative aspect were knowledgeable of the subject.
- Objectives of the research were articulated both in writing and verbally so that the informant understood them.
- An information regarding data collection devices and activities were given to participants. Reports, written interpretations and verbatim transcriptions were made available to participants.
- Interests of participants, rights and wishes were initialy considered when making choices regarding reporting the data.

3.5.2 Ethical aspects related to institutions

The University of South Africa College of Human Sciences Research Ethics Committee and the Addis Ababa Public Health and Emergency Management Directorate issued the researcher ethical clearance certificates to conduct the study.

The selected health facilities' managers gave the researcher permission to conduct the proposed research. Participants' information was kept confidential, and a private room was provided during the interview. In addition, the researcher's integrity was maintained.

3.5.3 Ethical principles related to participants

The following ethical principles were adhered to during the research process:

Autonomy refers to "all persons having intrinsic and unconditional worth; therefore, they should have the power to make rational decisions and moral choices, and each should be allowed to exercise their capacity for self-determination" (Varkey 2020:3). Participants were given adequate information related to the research, including information pertaining to the interview recording, questionnaire completion, and voluntary participation in the study. Thus, participants agreed to participate in the study and signed the consent form.

Informed consent refers to "a written agreement made by a participant and the researcher to participate in a study after being informed of its benefits, purpose, risks, procedures, alternative procedures, and limits of confidentiality" (Johnson et al 2017:300). The whole process and purpose of the research were explained to participants using an information leaflet before signing the consent form. They were then offered an informed consent form to read and sign for participation.

Justice: According to Varkey (2020:4), justice refers to ''a fair, equitable selection and treatment of participants." In the current study, participants were selected with fairness for the intended research purpose. Moreover, the women and young girls attending postnatal care, health professionals working in selected hospitals, and specific departments were selected. Furthermore, inclusion and exclusion criteria

were devised to maintain fairness and adhere to the principle of justice during participant selection.

Beneficence: refers to ‘’the responsibility of researchers (professionals) to promote the wellbeing of their participants especially on clinical trials by researching and administering therapeutic interventions with the highest positive patient responsibility’’ (Singh 2017:2).

To reduce the spread of COVID-19, an alcohol-based hand sanitiser was provided and a two-metre distance between participants. Moreover, participants and data collectors were provided soap and water to wash their hands after each contact with the hardcopies, questionnaires, and informed consent forms. The study results were helpful for mothers and young girls to prevent unsafe abortions and unintended pregnancies, improving contraceptive use, and useful for policymakers.

Non-maleficence refers to “the obligation of a researcher not to harm the patient” (Varkey 2020:2). Participants were protected from any harm during data collection, including contracting COVID-19. It was understood that the study might involve emotional or psychological harm when participants share their experiences during the interviews. If participants experienced emotional harm during the interview, data collectors would stop asking any questions and provide participants with tissue. If the problem persisted, participants were referred to a counsellor at a nearby hospital for counselling. The researcher covered the consultation and treatment costs.

Confidentiality means that ‘’researchers are obliged not to disclose any information of participants to another third party without their permission’’ (Varkey 2020:4). Participants were informed that the study would be conducted voluntarily and any information they provided would be kept confidential. After data collection, the principal investigator kept all information given by participants confidential. Private rooms were provided during quantitative and qualitative data collection to maintain privacy. The statistician, data collector, independent coder, transcriber, and translator signed a confidentiality agreement form to ensure confidentiality. A code replaced participants’ names, and audio-recorded data were removed.

Anonymity can be defined as “at no time will the researcher or anyone associated with the project know the identity of the participants” (Ryerson University 2017:3). As a result, any participant identifying factor, including names and pictures, was excluded. In addition, the researcher assured participants that no one could identify their identity. The research data will be kept for at least five years after the completion of the research.

3.6 SUMMARY

This chapter describes the research design, research methods, study population, sampling, inclusion and exclusion criteria, data collection methods, and development and testing of data collection instruments. Moreover, the characteristics of the data collection process to ensure the data quality of the research and the validity of the study were also discussed. Ethical considerations relating to data collection and analysis were discussed, including aspects relating to institutions and participants. Chapter 4 discusses data analysis, presentation, and the description of findings.

CHAPTER 4

DATA ANALYSIS, PRESENTATION, AND DESCRIPTION OF FINDINGS

4.1 INTRODUCTION

This chapter analyses the data and presents and discusses the study's findings. The chapter is organised as follows: response rate, data analysis, the results for Phase 1: Quantitative approach and Phase 2: Qualitative approach, and the integration of results. More emphasis was given to the quantitative phase because larger /adequate/ number of participants were selected in the quantitative phase and adequate number of research findings were assumed to be obtained and the qualitative results strengthened the quantitative results.This study was conducted to improve contraceptive use among women and young girls attending postnatal care in selected hospitals and clinics in Addis Ababa, Ethiopia.

4.2 1: QUANTITATIVE DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.2.1 Quantitative data analysis and management

The study was conducted in three healthcare institutions, namely, Gandhi Memorial Hospital in Lideta District, Bole Bulbula Health Centre, and AWWA Mother's and Children Clinic in Bole District. SPSS version 28 computer software was used for data entry and analyses. The researcher collaborated with a statistician in some aspects of data analysis, specifically in multivariable level logistic regression analysis methods. Data analysis was done using descriptive and analytical statistics and presented in tables and figures.

Four hundred questionnaires were distributed to women and young girls, and the number of questionnaires returned was 400, which made the respondent rate 100%, which is considered very good. Women and young girls attending postnatal care in Gandhi Memorial Hospital, Bulbula Health Centre, and AWWA Mother's and Children Clinic were given verbal and written instructions to respond to questions. All the respondents completed the questionnaire.

4.2.2 Quantitative results presentation

This section describes respondents' sociodemographic information, including age, occupational status, education level, fertility preferences, and people living with the respondent.

The following table shows the age frequency of mothers and young girls attending postnatal care in Gandhi Memorial Hospital, AWWA Mother's and Children Clinic, and Bulbula Health Centre during the study period.

Sociodemographic characteristics

- **Age**

A frequency table was developed based on the collected data and was further categorised into groups for simplicity. As shown in the table below, the minimum age of respondents was 17, and the highest age was 40. The percentage of age categories from 17–22 was 104 (26%), for age groups 23–28 was 170 (42.5%), for age groups 29–34 was 94 (23.5%), and for 35–40 was 32 (8%).

Table 4.1: Frequency of age distribution of respondents (N=400)

Age range	Frequency	Percent (%)
17–22	104	26.0
23–28	170	42.5
29–34	94	23.5
35–40	32	8.0
Total	400	100.00

- **Marital status**

Marital status was the other sociodemographic characteristic of respondents. A frequency table was developed to show the marital status of respondents. The following table shows that singles were 36 (9%), married women and young girls were 356 (89%) and divorced/separated/widowed were eight (2%).

Table 4.2: Frequency of marital status of respondents (N=400)

Marital status	Frequency	Percentage (%)
Single	36	9.0
Married	356	89.0
Divorced /separated/widowed	8	2.0
Total	400	100.0

- **Occupational status**

Based on frequency Table 4.3, of the 400 women and young girls, 23 (5.8%) were students, 60 (15%) were civil servants, 60 (15%) were business owners, 222 (55.5%) were housewives, and 35 (8.8%) of respondents were in other occupational categories.

Table 4.3: Frequency of occupational status of respondents (N=400)

Occupation	Frequency	Percentage (%)
Student	23	5.8
Civil servant	60	15.0
Business	60	15.0
Housewife	222	55.5
Other	35	8.8
Total	400	100.00

- **Level of education**

From frequency Table 4.4, 62 (15.5%) of the respondents did not attend formal education at all, 149 (37.3%) of respondents were at primary school levels, 110 (27.5%), and 79 (19.8%) of respondents were college/university students.

Table 4.4: Frequency of level of education of respondents (N=400)

Level of education	Frequency	Percentage (%)
No formal education	62	15.5
Primary school	149	37.3
Secondary school	110	27.5
College/ University	79	19.8
Total	400	100.00

- **With whom the participant is living**

Frequency Table 4.5 shows that 12 (3%) of the respondents were living with their parents, four (1%) with their mothers only, 45 (11.3%) with their fathers only, 313 (78.3%) with their husbands, 11 (2.8%) with relatives, and 15 (3.8%) were living alone.

Table 4.5: Frequency of respondents with whom they live with (N=400)

Living with	Frequency	Percentage (%)
Both parents	12	3.0
Mother only	4	1.0
Father only	45	11.3
Husband	313	78.3
Relative	11	2.8
Alone	15	3.8
Total	400	100.00

4.2.3 Barriers to contraceptive use by participants

Barriers to using contraceptives were explored, and 159 (39.8%) of respondents mentioned a lack of modern contraceptives. The other 27 (6.8%) mentioned the inaccessibility of contraceptives, 102 (25.5%) mentioned religious issues, six (1.5%) indicated that contraceptives were costly, and 106 (26.5%) of respondents indicated husband and wife disagreement as a barrier that prevented them from taking modern contraceptives, as indicated on Table 4.6.

Table 4.6: Frequency table showing barriers that prevent women and young girls from taking contraceptives (N=400)

Barriers to taking contraceptives	Frequency	Percentage (%)
Lack of modern contraceptive	159	39.8
Not accessible	27	6.8
Religious	102	25.5
It is costly	6	1.5
Husband and wife disagreement	106	26.5
Total	400	100.00

4.2.4 Respondents' discussions with healthcare workers about contraceptives utilisation

The following table demonstrates the frequency of discussion between women and young girls with family planning healthcare workers. It is indicated in the frequency table that 255 (63.7%) of respondents have discussed contraceptive utilisation with family planning healthcare workers, while 145 (36.3%) did not discuss it with family planning healthcare workers.

Table 4.7: Respondents' discussions with nurses about contraceptive utilisation (N=400)

Discussion With nurses	Percent	Frequency (%)
Discussed	255	63.7
Not discussed	145	36.3
Total	400	100.00

4.2.5 Possible reasons for failure to avoid unintended pregnancy by respondents

In Table 4.8, the results showed that 270 (67.5%) respondents believed that the reason they failed failure to prevent unintended pregnancy was a lack of awareness about family planning, 33 (8.3%) respondents indicated method failure, 22 (5.5%) indicated poor access to contraceptives, 73 (18.3%) mentioned husband or partner disapproval, and two (0.5%) respondents did not know the reason (Table 4.8).

Table 4.8: Frequency for reasons of failure to avoid unintended pregnancy (N=400)

Reasons for failure to avoid unintended pregnancy	Frequency	Percentage (%)
Lack of awareness about FP	270	67.5
Method failure	33	8.3
Poor access to contraceptive	22	5.5
Partner disapproval	73	18.3
Other	2	0.5
Total	400	100.00

4.2.6 Type of contraceptives used by participants

Less than a quarter, 67 (16.8%), of respondents used oral contraceptive pills, 22 (5.5%) used condoms, 187 (46.8%) used injectable contraceptives, 73 (18.3%) used implants, 18 (4.5%) used IUCDs, and 33 (8.3%) respondents never used contraceptives, as indicated in Table 4.9.

Table 4.9: Frequency of types of contraceptives used by respondents (N=400)

Contraceptives used by respondents	Frequency	Percentage (%)
Pills	67	16.8
Condom	22	5.5
Injectable	187	46.8
Implant	73	18.3
IUCDs	18	4.5
Never used	33	8.3
Total	400	100.00

In response to why respondents did not use contraceptives, 72 (18%) respondents indicated that it was because of lack of knowledge, 134 (33.5%) mentioned fear of side effects of contraceptives, 21 (5.3 %) said it was due to religious issues, 10 (2.5%) mentioned that contraceptives were unavailable, 41(10.3%) said it was because they forgot to take their pills,

119 (8.9%) said they wanted to get pregnant, two (0.5%) mentioned that it was because there was no husband, and one (0.3%) said it was because she was lactating (Table 4.10).

Table 4.10: Frequency of reasons for not using contraceptives (N=400)

Reasons for not using contraceptives	Frequency	Percentage (%)
Lack of knowledge	72	18.0
Fear of side effects of hormonal contraceptives	134	33.5
Religious issues	21	5.3
No contraceptives	10	2.5
Forgot to take pills	41	10.3
I need to get pregnant	119	29.8
No husband	2	0.5
I am lactating	1	0.3
Total	400	100.00

4.2.8 Fertility preferences

Respondents were asked about their fertility preferences. Almost half [194 (48.5%)] of the respondents indicated the need to have more children, whereas 68 (17%) did not need to have any more children. A little more than a quarter, 115 (28,7%), believed it was up to God, and 23 (5.8%) did not have any preferences, as shown in Table 4.11.

Table 4.11: Frequency of fertility preferences (N=400)

Fertility preferences	Frequency	Percentage (%)
Need more children	194	48.5
Does not need more children	68	17.0
Up to God	115	28.7
No opinion	23	5.8
Total	400	100.00

4.2.9 Autonomy of contraceptive utilisation

Lack of freedom of choice and utilisation of contraceptives is one of the factors hindering contraceptive use. Table 4.11 shows that 368 (92%) respondents have full autonomy to use contraceptives, whereas 19 (4.8%) did not have full autonomy to

decide on contraceptive use. Furthermore, 13 (3.3%) indicated they make decisions with their husbands.

Table 4.11: Frequency of autonomy of contraceptive utilisation (N=400)

Freedom of contraceptive use	Frequency	Percentage
I have freedom	368	92.0
I have no freedom	19	4.8
I decide with my husband	13	3.3
Total	400	100.00

4.2.10 Multivariable Logistic Regression

A multivariable logistic regression was done to determine the association of different factors in contraceptive use. Factors were age group, marital status, level of education, occupation, fertility preference, discussion with family planning workers, advantages of family planning methods, and sources of information about family planning methods to determine participants' knowledge about contraceptive methods.

Table 4.12: Multivariable Logistic Regression of factors associated with contraceptive use

Factors variable	Contraceptive use			95% CI		
	No = 33	Yes = 367	AOR	LCI	UCI	P-value
Age group						
Below 25 years	20 (60%)	177	Ref			
Above 25 years	13(39.9%)	190	1.19	0.71	1.98	0.51
Marital status						
Single	4 (12.1%)	32	Ref			
Married	29(87.8%)	327	0.62	0.22	1.74	0.36
Divorced/separated/widowed	0	8	1.87	0.17	20.6	0.61
Education						
No formal education	3 (9%)	59	Ref			
Primary school	13(39.9%)	136	0.53	0.24	1.18	0.12
Secondary school	8(24.2%)	102	0.58	0.25	1.33	0.20
College/ University	9(27.2%)	70	0.39	0.15	1.00	0.05
Occupation						
Student	4(12.1%)	19	Ref			
Civil servant	7(21.2%)	53	2.1	0.57	7.71	0.26
Business	6(18.1%)	54	0.57	0.16	1.97	0.37
Housewife	12(36.3%)	210	1.42	0.43	4.72	0.57
other	4(12.1%)	31	0.95	0.25	3.56	0.94
Fertility						
Need more children	19(57.5%)	175	Ref			
No Need more children	3(9%)	65	0.62	0.32	1.21	0.16
Up to God	10(30.3%)	105	0.67	0.39	1.16	0.16
No opinion	1(3%)	22	3.53	0.75	16.69	0.11
Discuss with workers						
Yes	14(42.4%)	241	Ref			
Not discussed	19(57.5%)	126	1.59	0.91	2.78	0.11
Heard						
Yes	28(84.8%)	328	Ref			
No	5(15.1%)	39	1.57	0.58	4.26	0.37
Advantages of FP methods						
Advantageous	23(69.6%)	331	Ref			
Not Knowledgeable	10(30.3%)	36	0.44	0.18	1.07	0.07
Source of information						
School	7(21.2%)	74	Ref			
Family	5(15.5%)	38	0.73	0.28	1.86	0.50
Church/Mosque	1(3%)	12	0.67	0.17	2.61	0.56
Radio/Television/ne	14(42.4%)	205	0.78	0.40	1.51	0.45
Health facility	5(15.5%)	38	0.37	0.16	0.89	0.03

The multivariable regression model (Table 4.12) shows that being married, age above 25, being a primary school attendant, being a housewife, having a desire to have more children, having heard about modern contraceptives, discussion with family planning workers, having knowledge of family planning methods, and source of information about modern contraceptive methods were analysed to assess the level of significance on contraceptive use.

Based on the multivariable regression model, different variables, including age, marital status, education, occupational status, fertility preference, discussion with nurses about family planning, and whether respondents have heard about contraceptives, were assessed using a multivariable logistic regression model. However, all the variables were not significant on contraceptive use because, in all of the above variable results, the p-value was not less than 0.05.

Notably, respondents who had heard about contraceptive methods at health facilities (AOR 0.37,95% CI =0.16, 0.89, P-value 0.03) were significant with contraceptive use.

4.3 DISCUSSION AND INTERPRETATION OF QUANTITATIVE DATA

This research study assessed and discussed different variables in line with contraceptive use.

- **Age**

The research findings indicate variations in contraceptive utilisation. It is noted that the majority [170 (42.5%)] of respondents were in the 23–28 age group, and a low proportion of respondents were exhibited in age groups 35–40, which constituted 32 (8%) of the respondents. The age distribution table shows that age groups from 23–28 women are more committed to contraceptives than young girls and older women. Research conducted in Guinea shows that contraceptive use is significantly associated with age groups among young women (aged 23–28) than young adolescents (aged 17–22) (Sidibé, Delamou, Salim Camara, Dioubaté, Manet, El Ayadi, Benova & Kouanda 2020:7).

In addition, research conducted in 29 sub-Saharan countries showed that with the individual-level factors, higher prevalence of contraceptive use was evidenced among women aged 25–29 (Ahinkorah, Budu, Aboagye, Agbaglo, Arthur-Holmes, Adu, Archer, Aderoju & Seidu 2021:7).

- **Marital status**

Marital status is one of the factors that affect contraceptive utilisation. According to the results, there is a higher rate [356 (89%)] of contraceptive use in married women than single or divorced women. Thirty-nine (9.0%) singles and eight (2%) divorced/separated used contraceptives. The results of the research conducted in Bure District, Ethiopia, were consistent with the current research, indicating that the majority (94.1%) of the respondents were married (Ashebir & Tadesse 2023:3).

- **Occupational level**

The occupational level of respondents was assessed, and the research findings revealed that higher number of respondents [222 (55.5%)] were housewives, and 23 (5.8%) were students. In the Ethiopian context, a student is expected to graduate from college, get a job, get married, and have children. A student having a baby may experience socioeconomic challenges and psychological stigma in society. Moreover, an employed woman is more likely to utilise contraceptives compared to a woman who is not employed (Mahfouz, Elmahdy, Ryani, Abdelmola, Ali Kariri, Yahya, Alhazmi, Almalki, Adhabi, Hindi, Muqri & Towhary 2023:7).

- **Educational level**

The educational level of respondents was assessed, and the research findings revealed a higher level of modern contraceptive use among 149 (37%) primary school students. This result contradicts other research studies, which suggest a high level of utilisation of modern contraceptives in women and young girls whose educational status is above college and universities (Alo, Daini, Ubah, Adelusi & Asuelimhen 2020:5). Furthermore, the level of education is a crucial factor in adequate knowledge about modern contraceptives, especially for young girls in primary and secondary schools. Respondents in primary school may understand the benefit of using contraceptives to avert unwanted pregnancy. This finding was similar to research

conducted in 20 African countries indicating that women in primary, secondary, or higher education were more likely to use modern contraceptives compared with women without a formal education (Apanga, Kumbeni, Ayamga, Ulanja & Akparibo 2020:4).

One of the possible reasons for the research finding could be that primary and secondary students are more likely to be engaged in social media rather than other commitments and responsibilities, which may have helped them get more information about contraceptive use. Another reason could be that the research was only conducted in three health facilities and needs a comprehensive large-scale study.

Discussions with healthcare professionals about contraceptive utilisation

Discussion about family planning with healthcare workers affects contraceptive utilisation of women and young girls. The research findings show that the majority, 255 (63.7%) of respondents, have discussed this with family planning healthcare workers, but 145 (36.3%) did not discuss it with family planning healthcare workers. Discussing family planning methods with healthcare workers is crucial for women and young girls to utilise modern contraceptives that enable knowing the side effects of contraceptives and which contraceptive method is safe and convenient for long-term use. This study confirms high contraceptive use among women and young girls who have consulted healthcare workers.

According to Ashebir and Tadesse (2020:7), a study conducted in Bure District Amhara regional State of Ethiopia showed that women who contacted healthcare workers were more likely to use modern contraceptives in the postpartum period (Ashebir & Tadesse 2023:7). Moreover, the research results also highlighted some reasons for failure to avoid unintended pregnancy. Among respondents, 270 (67.5%) believed that the reason for failure to prevent unintended pregnancy was a lack of awareness about family planning, followed by husband or partner disapproval, as indicated by 73 (18.3%) respondents.

The current research finding is consistent with studies on understanding the reasons for unintended pregnancy among sexually active adolescent girls. The results showed that one of the reasons for the failure to avoid unintended pregnancy was poor

knowledge of contraceptive methods (Ajayi, Odunga, Oduor, Ouedraogo, Ushie & Wado 2021:6).

Autonomy for contraceptive utilisation

The research finding shows that the majority of the respondents [368 (92%)] have full autonomy over whether to use contraceptives, but 19 (4.8%) respondents did not have the autonomy to decide on using contraceptives. Thirteen (3.3%) decided after a discussion with their husbands. Husband and wife discussions on contraceptive utilisation should be well promoted as Seidu, Ahinkorah, Armah-Ansah, Dadzie, Aboagye, Ameyaw, Budu, Zegeye and Yaya (2022:6) found that the odds of using contraceptives were higher in women who have a joint discussion with their husbands or partners than the decision made by a husband or a wife alone.

Occupational status

The research finding shows that the majority, 222 (55.5%) of respondents, were housewives, 60 (15%) were civil servants, 60 (15%) were business owners, 35 (8.8%) indicated other occupational categories, and 23 (5.8%) were students. The findings reveal that housewives are more likely to use contraceptives than civil servants, business owners, or students. This result is similar to a cross-sectional study conducted in Saudi Arabia, indicating that the highest percentages of contraceptive users were housewives (80.9%) (Mahfouz et al 2023:7).

The need for more children

The research finding shows that the majority of respondents [194(48.5%)] mentioned the need for more children. It is understood that if a woman needs more children, she may use contraceptives. The current research finding was consistent with a multilevel analysis of the 2018 Mali DHS indicating that women who wanted more children had a lower odd of using contraceptives compared to those who reported not wanting more children (Ahinkorah, Seidu, Appiah, Budu, Adu, Aderoju, Adoboi & Ajayi 2020:10).

Access to information about contraceptives

Access to information about modern contraceptives is one of the strategies for improving contraceptive uptake. The more information access to modern contraceptives, the more likely they are to utilise contraceptives effectively. The research finding in the multivariable regression model showed that respondents who have heard about contraceptives in health facilities are significant (AOR 0.37,95% CI =0.16, 0.89, P-value 0.03) with contraceptive use. Health facilities can play a more significant role in counselling on modern contraceptive utilisation than other means of promotion.

The current research finding is similar to a reserch conducted in Nigeria, with a multilevel logistic indicating that there is an association between attendance and facility visits in modern contraceptive utilisation (Alo et al 2020:3). The role of nurses in health facilities should be conducting counselling and awareness on modern contraceptive use as it has been recommended by most of the participants.

In conclusion, contraceptive utilisation is affected by different factors, including lack of awareness about family planning, decision-making on contraceptive utilisation, discussion and counselling with family planning workers about contraceptive utilisation, women's education and employment. Strategies aimed at improving contraceptive utilisation is crucial by providing education and updated information regarding contraceptives for women and young girls, involving husbands and partners in contraceptive utilisation, media campaigning and awareness creation about family planning, and providing a conducive environment to discuss women and young girls with family planning workers about contraceptives.

4.4 PHASE 2: QUALITATIVE DATA ANALYSIS AND PRESENTATION OF RESEARCH RESULTS

This section presents qualitative approaches, including the interview guide, data management and analysis, themes, sub-themes, presentation and discussion of results. According to Adedoyin (2020:6), qualitative research gathers and interprets non-numerical data to understand the human and social environment.

The researcher conducted face-to-face interviews using pre-tested interview guides with women, young girls, and health professionals. Thus, a thematic analysis of the data was done. The researcher asked women and young girls 13 questions (Appendix H) and interviewed healthcare professionals on nine questions (Appendix G).

4.5 DATA MANAGEMENT AND ANALYSIS

Data were collected from women, young girls, and healthcare professionals at Gandhi Memorial Hospital, Bulbula Health Center and AWWA Mother's and Children Clinic using in-depth face-to-face interviews. Thirty participants were interviewed, namely 15 women and young girls and 15 healthcare professionals. Field notes were taken by the researcher and information was collected from participants using an aidio tape recorder. Participants were interviewed in a quite private room to protect participants' anonymity and confidentially. In addition, names of participants were not used; the researcher used codes to refer to them. The transcribed data and audio recorded data were only accessible to the principal investigator and kept in a safe place. One of the commonest principles for assessing the adequacy of purposive samples in qualitative research is saturation (Hennink & Kaiser 2021:1). Data collection continued until data saturation (until no new information was obtained).

For each participant, the time lengh of interview for data collection was approximately 45 minutes. Following the interview guide, participants were asked open-ended questions , and flexibility was maintained. Data were coded and categorised using ATLAS. ti version 9 computer software. The findings were categorised into themes and sub-themes. Interpretations of the significance of each variable followed the respective themes. Finally, a discussion of data was presented. The method of analysis is discussed in detail in Chapter 3.

4.6 QUALITATIVE DATA PRESENTATION

The presentation of the study's findings begins with the participants' demographic characteristics.

4.6.1 Sociodemographic characteristics of women and young girls

Women and young girls participated in the in-depth interview. After Participant 12, the data reached a point of saturation (no new information emerged). However, to clarify and confirm the saturation point, the researcher continued interviewing three more participants and decided the saturation point would be at the fifteenth participant.

The participants' demographic characteristics are described according to age and marital status. Five participants in each healthcare facility participated in the study.

- **Age**

Participants were categorised into two groups. The first participant group was young girls (age <18 years). The second group was made up of women (age >18 years). The frequency table below (Table 4.1) shows that most, 11 (73.3%), participants were 18 years and above, while four (26.6%) were below 18.

Table 4 13: Age categories of women and young girls (N=15)

Age category	Frequency	Percentage
< 18 years	4	26.6
> 18 years	11	73.3
Total	15	100

- **Marital status**

Participants' marital status was explored in the interview. The research findings reveal that all 14 (93.3%) participants were married. Marriage is important for financial support and for sharing pregnancy-related challenges. Moreover, the husband or partner will share baby care and other costs.

Table 4.14: Marital status of participants

Marital status	Frequency	Percentage (%)
Married	14	93.3
Single	1	6.6
Total	15	100

4.6.2 Sociodemographic characteristics of health professionals

Purposively selected health professionals participated in the in-depth interview. The participants' characteristics are described in terms of professional qualification and year of service. Participant health professionals were from different health qualification backgrounds, including clinical nurses, midwives, public health professionals, general practitioners and pharmacists. A total of 15 participants engaged in the in-depth interviews, and after Participant 12, the data reached a point of saturation (no new information emerged). But, for clarity and to confirm saturation point, the researcher continued interviewing three more participant and decided the saturation point to be at the 15th participant

1. Qualification

Table 4.3 presents the participant's qualifications. Table 4.15 shows that eight (53.3%) participants were degree holders, four (26.6%) were diplomas holders, one (6.6%) was a degree holder, one (6.6%) was a degree holder, and one (6.6%) was a diploma holder.

Table 4.15: Qualification of participants

Qualification	Frequency	Percentage (%)
Degree in Medicine	1	6.6
Degree Public health	1	6.6
Degree in Nursing	8	53.3
Diplomas Midwifery	4	26.6
Diploma Pharmacy	1	6.6
Total	15	100.00

- **Years of service**

Table 4.15 shows that eight (53,3%) participants had five years of work experience, three (20%) had 10 years of work experience, two (13.3%) had eight years of work experience, one (6.6%) had seven years of work experience, and one (6.6 %) had six years of work experience.

Table 4.16: Years of service for participants

Year of service	Frequency	Percentage (%)
10 years	3	20
8 years	2	13.3
7 years	1	6.6
6 years	1	6.6
5 years	8	53.3
Total	15	100.00

4.6.3 Themes and sub-themes

The study findings are categorised into four main themes and nine sub-themes, as indicated in the table below.

Table 4.17: Themes and sub-themes

Themes	Sub-themes
Theme 1: Knowledge and motivation to use contraceptive	1.1 Types of contraceptives known by participants 1.2 Types of contraceptives used by participants
Theme 2: Participants' views on partner's role in contraceptive use	1.3 Views of women on partners' support of contraceptive use 1.4. Male partners to take contraceptives
Theme 3: Barriers to contraceptive use	3.1 Side effects of contraceptives and other factors 3.2 Religious factors
Theme 4: Health professionals' views on contraceptives	4.1 Training of health professionals on family planning 4.2 Advocacy on contraceptive use 4.3 Provision of contraceptives

Theme 1: Knowledge and motivation for contraceptive use

Regarding knowledge and motivation to use contraception, participants mentioned various methods of modern contraceptives they are using.

- **Sub-theme 1.1: Types of contraceptives known by participants**

The participants knew various modern contraceptive methods and mentioned them adequately. Among the modern contraceptives, implants were mentioned by most participants, followed by oral contraceptive pills. The participants shared the following:

*"I know most of the methods of modern contraceptives theoretically heard about them from school, friends and health facilities. To mention some methods, injectables, oral contraceptive pills, implants, and intrauterine devices." (*WY8, AWWA)

"*I know most of the modern contraceptive methods to mention some of the methods: oral contraceptive pills, implants, intrauterine devices and condoms."* (WY14, GH)

Despite adequate knowledge of modern contraceptives, women and young girls may not translate it to practice. For example, a 19-year-old young girl shared the following regarding her knowledge of modern contraceptives:

*“I usually hear about one type of modern contraceptive that is an injectable contraceptive method, but I did not use any contraceptive modern contraceptive, and I am not planning to use contraceptives.” (*WY4, GH)

- **Sub-theme 1.2: Types of contraceptives used by participants**

Participants’ knowledge of contraceptive use was explored, and respondents were asked to name the modern contraceptives they use. One of the participants shared:

*“I used to take injectable contraceptives because I did not experience any side effects, and I am still using injectable contraceptive methods.” (*WY6, AWWA)

Another 19-year-old girl was requested to explain the types of contraceptives she used. She explained that she has used different types of modern contraceptive methods:
“*Yes, I used intrauterine devices, Injectables, oral contraceptive pills and currently, I am using implants under my left arm.” (*WY2, GH)

Theme 2: Partner support

Participants were requested to share their views on the partners’ role in improving modern contraceptive use among women and young girls.

- **Sub-theme 2.1: Views of women on partners’ support of contraceptive use**

The participants shared the following regarding their partners’ role in improving contraceptive uptake:

*“It is obvious that some husbands do not allow their wives to take contraceptives, and as a result, there will be unintended pregnancy. Hence, in my opinion, the husband should be co-operative with the mother on contraceptive use.” (*WY8, AWWA)

A 22-year-old young girl shared the following:

“One of the reasons for not taking contraceptives is a disagreement between partner/ husband and a woman and, therefore, I think always, there should be a clear discussion on contraceptive use between the husband and wife or partners.” (WY12, BHC)

A 23-year-old girl was asked the same question. She replied:

*“Mutual discussion between partners and wives is very important, and a husband should respect his wife and discuss equally with his wife about contraceptive use.” (*WY13, BHC)

Another participant opined:
“*I think the husband should be well aware of contraceptives and support his wife in all matters, and husbands should be counselled.” (*WY15, AWWA)

- **Sub-theme 2.2: Male partners to take contraceptives**

In the current research, some participants recommended male partners to take contraceptives. One participant shared:

“*Women have many responsibilities at home. In addition, they may have a medical illness; for example, mothers may be diabetic; thus, husbands should also utilise contraceptives.” (*WY1, GH)

A 25-year-old woman opined:

*“In my opinion, a woman has many responsibilities at home, including cooking and other commitments; therefore, husbands should take contraceptives because a mother cannot breastfeed her baby and take contraceptives at the same time.” (*WY9, BHC)

Theme 3: Barriers to contraceptive use

Participants were requested to share their views and mention some factors/barriers to contraceptive use. Accordingly, participants have highlighted several factors.

- **Sub-theme 3.1: Side effects of contraceptives**

Regarding barriers to contraceptives, participants have mentioned several factors that prevent women and young girls from using modern contraceptives. A 34-year-old woman was requested to identify barriers/factors to contraceptives. She responded as:

*"Most women and young girls refrain from taking contraceptives due to fear of hormonal contraceptive side effects, and I think side effects of contraceptives can affect women and young girls from using modern contraceptives." (*WY3, GH)

A 30-year-old woman shared a different view:

"There are many reasons that can affect women from utilisation of modern contraceptives. For example, women who experienced side effects of contraceptives may not use contraceptives again, neighbours or other peoples may influence women and young girls from using contraceptives, religious issues." (WY14, GH)

A 19-year-old young girl responded:

*"There are many factors, for example, side effects of contraceptives can affect women from using contraceptives; if the mother wants to get pregnant, she may not use contraceptives." (*WY7, AWWA)

A 23-year-old woman responded:

"Yes, I used implants, and since then, I see my menses every day; now I am getting tired." (WY13, BHC)

A 30-year-old woman responded:

"I heard that contraceptives have many side effects; for example, my period was irregular some time ago but later became normal." (WY8, AWWA)

Another 30-year-old woman responded:

"*Yes, my weight increased, and I experienced high blood pressure when I used the implant." (*WY15, AWWA)

Another 30-year-old woman responded:

"My neighbours used to tell me that contraceptives had unwanted side effects. For example, "Yes, I used to take implants and experienced increased body weight and irregular periods." (WY14, GH)

- **Sub-theme 3.2: Religious factors**

Among the different factors highlighted by participants on barriers to contraceptive use, some of the respondents mentioned the religious issue:
*"Mostly religious issues can affect women and young girls from using modern contraceptives." (*WY13, BHC)
Another 30-year-old woman responded:

*"I think it could be due to other medical health problems, religious issues that prevent women from using modern contraceptive methods." (*WY15, AWWA)

Theme 4: Healthcare professionals' views on factors that can improve the use of contraceptives

Fifteen healthcare professionals participated in the in-depth interview. Participants were from different health professional backgrounds, including medical doctors, public health professionals, nurses, midwives and pharmacists. Health professionals were requested to share their views on improving contraceptive use. Most healthcare professional participants shared their views on advocacy for contraceptive use, training of health professionals on family planning, and provision of contraceptives to all health facilities.

"Generally, conducting continuous social media campaigning on contraceptive use, contraceptive use education and training in different social gatherings and meetings,

*awareness creation on those women and young girls who come to healthcare facility for contraceptive service utilisation." (*HP3, AWWA).

- **Sub-theme 4.1: Training of healthcare professionals on family planning**

Participants shared their views on the training of health professionals regarding contraceptive use and family planning to scale up contraceptive use for women and young girls in Addis Ababa, Ethiopia. One participant made the following statement:

*"Ministry of Health of Ethiopia should provide updated information and training on contraceptives for all health professionals, conduct media promotion on contraceptive use, and provide contraceptive stocks for all health facilities." (*HP5, GH)

A health professional who had served for more than five years in the healthcare system added:

"Ministry of Health of Ethiopia should provide updated training on family planning for health professionals, create awareness on contraceptives using all kinds of media including radio, television, and other social media streams." (HP7, BHC)

Another health professional responded:

"Ministry of Health of Ethiopia should provide training for health professionals, conduct different campaigns on contraceptive use and refresher courses for health professionals." (HP15, BHC)

- **Sub-theme 4.2: Advocacy on contraceptive use**

Participants shared their views of advocacy on contraceptive use. The health professionals recommended that the Ministry of Health of Ethiopia work on the advocacy of contraceptive use, especially in schools and universities, using different mediums.

"Especially for the youth, a lot has to be done. The youth are the country's future and can bring change. There should be continuous health education and awareness for mothers and young girls in schools about contraceptives. The youth should always be

*given a chance. There could be abortion and other related problems in youth, and then it will affect them with their education and even in their lives." (*HP1, BHC)

Another health professional participant responded:

*"The most important thing is advocacy and awareness of contraceptive utilisation. Mostly young girls experience to seeing their first menses, and there is a need to do health education on contraceptives for schoolgirls aged above 13 and for university students." (*HP2, AWWA)

Sub-theme 4.3: Provision of contraceptives

The provision of contraceptives is one of the factors that affect contraceptive use. With regard to the provision of contraceptives to all health facilities, most health professionals suggested that the Ministry of Health of Ethiopia provide contraceptives to all health sectors, including private health facilities.

*"The Federal Ministry of Health is the highest governmental body next to the House of Federation and is expected to do a lot about contraceptive use, provide contraceptives to all health facilities, integrate family planning services with other healthcare services, formulate new policies about contraceptive use, provide training for health professionals, work on service delivery, work in collaboration with Ministry of Education and other sectors." (*HP13, AWWA)

A health professional who had served the healthcare industry for more than 10 years responded:

*"The Ministry of Health of Ethiopia should provide appropriate, updated information and training for health professionals, and provide adequate supply of contraceptives in each health facility." (*HP14, AWWA)

A health professional who has served the healthcare industry for more than five years responded:

"Ministry of Health should work on the provision of contraceptives to all health facilities and provide training for all health professionals." (HP12, GH)

4.7 QUALITATIVE DATA INTERPRETATION AND DISCUSSION OF RESULTS

With the help of codes created with ATLAS.ti version 9 computer software, thematic analysis was done manually. Transcription of the audio-recorded participants' verbal responses was made after repeatedly listening to participants' descriptions of their experiences. The listening and transcription helped the researcher pick up important aspects of the interview to compare and contrast with the next interviewee, where necessary. The quotes were conducted in Amharic language and later transcribed and translated into English by the researcher.

Proof reading of all the completed transcripts was done to obtain the overall sense of the research, reflect on the meaning, and obtain clues regarding the existence of data segments in the form of words or phrases of interest that were outstanding as informative or could be assigned certain meanings/labels/terms or descriptive words referred to as codes. The codes identified during this preliminary reading were listed on a separate sheet of paper to note how frequently they appeared later during the detailed analysis.

The following sub-sections provide a detailed discussion and presentation of the results based on the objectives and themes of the study. In support of narratives from the participants, data was presented. In addition, data was described in detail with literature conrol in the discussion section.

Thirty participants participated in the qualitative part of the research (15 health professionals and 15 women and young girls). Participant codes were given based on the data collection site by writing with the acronyms "WY1, BHC" for the first woman and young girl participant in Bulbula Health Centre. "HP1, GH'" was written for the first health professional participant in Gandhi Memorial Hospital. Lastly, "WY2, AWWA" was written for the second woman and young girl participant in AWWA MCH Clinic.

Age of women and young girls

The research findings reveal that majority 11 (73.3%) of the respondents were above 18 years. Table 4.1, it is evident that age groups above 18 are more committed to utilising contraceptives than age groups below 18 years. Research conducted in 261 Demographic and Health in 103 low- and middle-income countries between 2000 and

2017 supports the current research results, suggesting that the use of modern contraceptives was higher among adult women (>18 years) by 11.9 percentage points (PPs) (95% CI, 11.7 to 12.1 PPs) (31.6% [95% CI, 30.3% to 32.8%] for adolescents (Li, Patton, Sabet, Zhou, Subramanian & Lu 2020:4).

Marital status of women and young girls

The current study assessed respondents' marital status. The majority 14 (93.3%) of the respondents who were married were more likely to utilise contraceptives than single people. Research conducted in Indonesia on parity and partial status as factors influencing contraceptive use among adolescents supports the current research result, indicating that most (96.4%) of the respondents were married (Mas'udah, Pristya & Andarmoyo 2021:3).

Qualification of healthcare professionals

This research finding shows that the majority 8 (53.3%) of respondents were nurses, followed by four (26.6%) midwives. For unknown reasons, there were more nurses than midwives in family planning, youth-friendly services, delivery ward, and immunisation departments in each selected health facility. Although most participants in the current study were nurses, other healthcare professionals with different qualifications may have the required knowledge of contraceptives. This result is supported by a research article conducted on the education and training of healthcare workers for contraceptive service delivery in 21 countries across Europe where contraceptives are provided by four healthcare professional groups including gynaecologists, midwives, general practitioners and nurses (Sedleckya, Raševićb & Bitzer 2020:5).

Healthcare professionals' years of service

Work experience is valuable in any field of study. The more work experience one has, the more knowledge and skills they acquire. The research finding in the current study shows that the majority [eight (53.3%)] of the respondents have years of work experience in a healthcare facility, followed by three health professionals with 10 years

of work experience in healthcare facilities. The research finding is consistent with research conducted in urban Guinea, which suggests a positive association between the number of years of experience of health workers and their likelihood of providing maternal and child health services to adolescents (Sidibé, Kolié, Grovogui, Kourouma, Camara, Delamou & Kouanda 2022:10).

Theme 1: Knowledge and motivation for contraceptive use

In the current research, participants were interviewed to assess their knowledge about contraceptive methods. Based on the interview, most participants demonstrated their knowledge of various modern contraceptive methods and mentioned them by name. Among the modern contraceptives, implants were mentioned by most participants, followed by oral contraceptive pills. Participants also mentioned the types of contraceptives they were using at the time of the interview and some of the contraceptive methods, including oral contraceptive pills, injectables, implants and IUCDs.

Awareness creation about modern contraceptive methods in colleges and universities is one of the best strategies to enhance contraceptive utilisation for Ethiopian women and young girls. Research conducted by Ukoji, Anele and Imo (2022:5) revealed that if adequate promotion and awareness are created, women and young girls' knowledge of contraceptive use can be enhanced.

Theme 2: Views of women on partner support in contraceptive use

The participants were interviewed to share their views on their partner's support of contraceptive use. Participants strongly recommended that partners should freely discuss and support the ideas of their partners/wives regarding contraceptive use. Moreover, the participants also mentioned that some male partners do not allow their wives/partners to use contraceptives. They further recommended that male partners take contraceptives instead of the wives as an alternative. The reason for their recommendation was that being pregnant has several psychological and physiological changes to women, who also have many household responsibilities and challenges, including cooking, breastfeeding, and other challenges.

In Ethiopia, it is uncommon to see male partners utilise modern contraceptives due to different cultural and attitude factors. As a result, awareness creation and health education of male partners to utilise modern contraceptives is crucial. This research is supported by a study conducted in Ethiopia, which shows low male partner participation in contraceptive use (Wondim, Degu, Teka & Diress 2020:9).

Generally, partners' involvement and support of wives, especially in choosing modern contraceptives, is crucial. Research indicated that partner support influences women's modern contraceptive use (Agyekum, Henry, Kushitor, Obeng-Dwamena, Agula, Asuming, Toprah, Agyei-Asabere Shah & Bawah 2022:9).

Theme 3: Barriers to contraceptive use

The research findings in the current research revealed various barriers to contraceptive use. Respondents mentioned different barriers that can prevent women and young girls from using contraceptives. Among the barriers, side effects of hormonal contraceptives and religious factors were highlighted by most of the respondents. The side effects of modern contraceptives include weight gain, headache, irregularity of menses, bleeding, and high blood pressure, which are some of the most common side effects of modern contraceptives that women and young girls in this research complained about. This result is supported by a systematic review of research conducted in sub-Saharan African countries (Bain, Amu & Tarkang 2021:9).

In addition, religious beliefs affect contraceptive use because people believe and follow a particular religion, and the law forbids participants to use modern contraceptives. In this regard, current research participants mentioned religion as a barrier to contraceptive use. This research is supported by research conducted in Ethiopia (Wondimagegne, Debelew, Koricha 2023:6).

Theme 4: Healthcare professionals' views on factors that can improve the use of contraceptives

Finally, Healthcare professionals were interviewed to share their views on factors that can improve the use of contraceptives. Most healthcare professionals shared their

views, particularly on advocacy of contraceptive use, training of health professionals on family planning, and provision of contraceptives to all healthcare facilities.
This research finding reveals that most participants recommended that healthcare professionals be trained in family methods. Adequate knowledge of health professionals on family planning methods, especially in counselling techniques, is crucial. If women and young girls do not receive adequate information from healthcare professionals about contraceptive use, they will not utilise modern contraceptives effectively. This research is supported by research conducted in Nepal (Puri, Moroni, Pearson, Pradhan & Shah 2020:5).

Another critical factor suggested by healthcare professionals was the advocacy of contraceptive use, which should be well promoted and conducted. The research participants recommended that the Ministry of Health of Ethiopia conduct the advocacy work. These findings are supported by research conducted in Africa, Asia and the Pacific, Europe, and North America in a study that interviewed 23 key informants working in family planning and respondents agreed that ensuring the rights of women and young girls to family planning service should be a political agenda for leaders through advocacy to ensure that access to family planning is the right of every woman (Hardee & Jordan 2021:12).

Regarding the shortage of contraceptives, the research finding shows that most healthcare participants have complained about a considerable shortage of contraceptives in each healthcare facility. If no contraceptives are in stock, there is nothing to discuss about improving contraceptive uptake. Respondents recommended that the Ethiopian Ministry of Health ensure contraceptives are available in all healthcare facilities, including private ones.

In support of these findings, research conducted on improving access to and use of contraception by adolescents indicated that even when adolescents want to avoid, delay, space, or limit childbearing and need to utilise contraception, they are not always able to obtain the contraceptives or contraceptive services they need (Chandra-Mouli & Akwara 2020:4).

4.8 INTEGRATION OF QUANTITATIVE AND QUALITATIVE RESULTS

The researcher employed a sequential explanatory mixed research design and integrated the results during interpretation. The researcher first collected and analysed quantitative data, followed by the collection and analysis of the qualitative data. The researcher integrated the quantitative and qualitative data results to support the quantitative results with qualitative results and yield a better result. The qualitative results have assisted the quantitative results. The combined quantitative and qualitative data results were identified, selected, and listed for further guideline development and recommendation purposes.

The qualitative part of the research did not support some results. Those results were: respondents' discussion with nurses about family planning methods, reasons for failure to avoid unintended pregnancy, fertility preferences of respondents, and autonomy of respondents on contraceptive use. These were presented and discussed in the quantitative part of the research.

Combined results of quantitative and qualitative data revealed barriers to the use of contraceptives (lack of knowledge and awareness, religious issues, fear of hormonal side effects of contraceptives, shortage of contraceptives), male partner support and involvement in contraceptive use, including discussion with wives and the use of contraceptives by male partners, empowering women through education and employment, health professionals recommendations for improvement on health system factors, including training of health professionals on family planning, conducting advocacy on contraceptive use in the community, primary school, universities, provision of contraceptives to all health facilities including private health sectors, integration of family planning services with other services, and working in collaboration with the Ministry of Education and other related sectors.

In addition, all health facilities lack standard operating procedures (strategies, protocols, manuals), and health professionals are dissatisfied with receiving updated information, training, and capacity building on family planning services. Based on the results, strategies were developed to improve contraceptive utilisation of women and young girls in Addis Ababa, Ethiopia. Strategies were developed to overcome barriers to contraceptive utilisation for women and young girls and improve contraceptive

uptake. The recommendations aimed to improve contraceptive utilisation for women and young girls in all service delivery settings.

4.9 INTEGRATION OF RESULTS TO THE HEALTH BELIEF MODEL

In the current research, the HBM was applied, and the researcher integrated the results with the model.

4.9.1 Perceived susceptibility

Among the four variables of the HBM, perceived susceptibility to side effects of hormonal contraceptives was reflected by participants as a result of using hormonal contraceptives.

4.9.2 Perceived barriers

The other variable reflected by participants was perceived barriers to contraceptive use. Some previewed barriers were lack of knowledge and awareness, religious issues, and shortage of contraceptives.

4.9.3. Perceived benefits

Participants reflected the perceived benefits of using contraceptives. Participants explained that advocacy of contraceptive use, particularly for young girls at colleges and universities, should be conducted. Participants explained that the benefits of contraceptive use are to avoid unintended pregnancy, unsafe abortion and other health-related problems.

For better understanding, the variables participants mentioned are highlighted in orange in Figure 2 below.

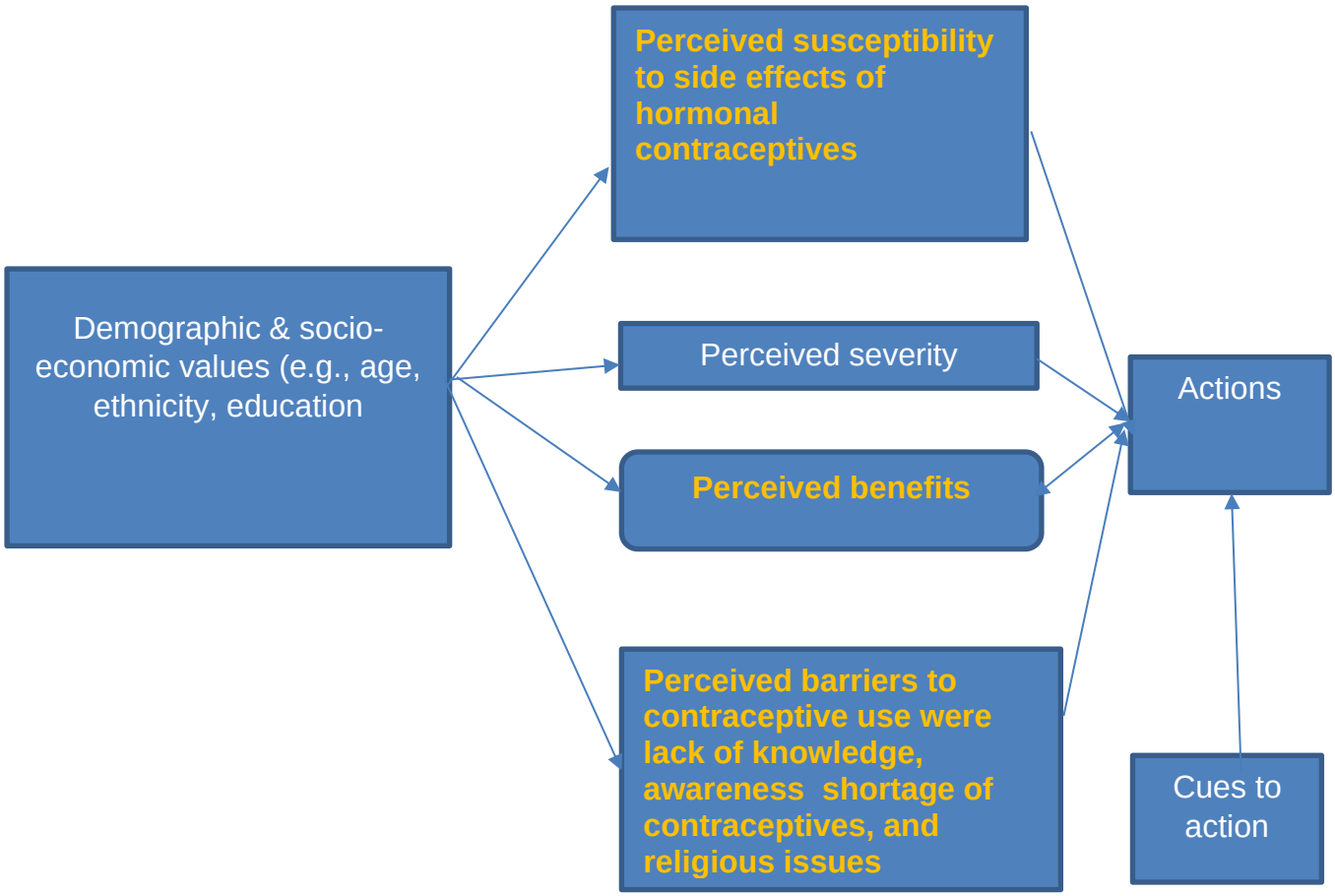

Figure 2: The Adapted Health Belief Model (Alhamad & Donyai 2021:4)

4.10 SUMMARY

This chapter presents and discusses the main findings of the quantitative and qualitative results. All the results in the quantitative part have been discussed and supported by the literature. In addition, in the qualitative part of the research, all the emerging themes were analysed and discussed in relation to the literature. Finally, quantitative and qualitative results were integrated, and the main findings were listed and discussed. Chapter 5 presents the development of strategies to improve contraceptive use.

CHAPTER 5

DEVELOPMENT OF STRATEGIES TO IMPROVE CONTRACEPTIVE USE

5.1 INTRODUCTION

This chapter presents strategies for improving contraceptive use in Addis Ababa, Ethiopia. A mixed methods study was used to integrate the study results, which helped develop strategies to improve contraceptive use.

5.2 DEFINITION OF STRATEGIES

According to Jamison et al (2020:20), a strategy is a concept involving various activities within an organisation and involves goals and objectives that organisations must achieve in order to be successful.

5.3 PURPOSE OF THE STRATEGIES

The strategies aim to improve contraceptive use for women and young girls in Addis Ababa, Ethiopia. Furthermore, they can be used in all healthcare settings across the country to provide quality family planning services.

5.4 SCOPE OF THE STRATEGIES

The proposed strategies can be used in all healthcare facilities, including hospitals, healthcare centres, and clinics in Addis Ababa. The strategies can also be used at the national level across the country and aimed at improving contraceptive utilisation for women and young girls who need family planning services.

5.5 STEPS FOLLOWED IN THE DEVELOPMENT OF THE STRATEGIES

According to the Guidance for Developing a Technical Strategy for Family Planning Costed Implementation Plans (2020:7), developing technical strategies requires the following three basic steps:

- **Situational analysis**: generate key information needed to understand the past and current family planning programme situation in-depth. In this study, key information was generated from participants and respondents.

Result formulation: define the specific results that need to be achieved to meet the family planning goal. In the current study, the researcher identified and defined specific results.

- **Activity planning:** develop an implementation plan describing how results will be achieved.

The current study used the three steps mentioned above to develop the strategies. Furthermore, the researcher developed an implementation according to the following steps:

- Key information was generated from participants and respondents
- Specific results were selected, and defined Implementation plans were developed

The researcher followed a strict logical reasoning process to develop the guidelines. The logical reasoning process entailed selecting and interpreting information from a given context, making connections, and verifying and drawing conclusions based on provided and interpreted information considering the associated rules and processes (Bronkhorst, Hugo, Roorda, Gerrit, Suhre, Cor, Goedhart & Martin 2020:5). The research study was conducted by using mixed research methods. The reasoning process involved both induction and deduction reasoning theories.

Deductive reasoning is a basic form of reasoning which starts from a general hypothesis and examines the possibilities to reach a specific logical conclusion (Oussi 2020:2). In this study, the researcher drew conclusions from the responses of participants through analysis of collected data. Conversely, inductive reasoning is a statement that starts with non-theoretical empirical phenomena, which should ideally result in a proposed or supported theory (Okoli 2022:5). In this case, a conclusion was drawn based on respondents' views. The strategies were based on the research study's findings and the literature review related to the study.

5.6 THE DEVELOPED STRATEGIES

Agents, recipients, implementers, challenges, product

Agents/facilitators: In this study, agents are non-governmental healthcare facilities that can provide contraceptives, such as the Ministry of Health, governmental healthcare facilities, and pharmacies that own contraceptives.

Recipients/users: Are mainly women and young girls attending postnatal care.

Implementers: Are registered healthcare professionals, including midwives, nurses, and axillary nurses, religious leaders and male partners.

Challenges: Are side effects that happen to the recipients, especially hormonal contraceptives that cause irregular menstrual bleeding.

Product: In this study, a product refers to all contraceptive methods, including implants, injectable Depo-Provera, diaphragm, male and female condoms, intrauterine devices, tubal ligation, and oral contraceptives.

Benefits of the strategies: The developed strategies will benefit women and young girls, all healthcare professionals working at regional or national levels in family planning departments. In addition, it will assist in healthcare policy planning and serve as a baseline for future research. Developed strategies will be distributed to all health sectors after communicating health authorities.

The results of the research revealed barriers to effective contraceptive utilisation, which are listed below:

- Lack of knowledge and awareness
- Religious issues
- Fear of hormonal side effects of contraceptives
- Shortage of contraceptives
- Lack of training or updates for health professionals regarding contraceptive

Based on the results, strategies were developed to improve contraceptive use among women and young girls in Addis Ababa, Ethiopia. The primary objective of the strategies is to overcome the barriers to contraceptive utilisation for women and young girls in Addis Ababa, Ethiopia. The health belief model was the guiding conceptual framework which was used in the development of strategies. The only family planning

guideline was the one developed by Family Guidance Association of Ethiopia. The guideline is very comprehensive and not detailed one.The current strategies are very detailed and are based on a research finding. The strategies are very helpful in scaling up contraceptive use of women and young girls in Ethiopia.The following strategies are developed for use in hospitals, health centres, and clinics in government and private healthcare settings across the country.The researcher will advocate for managers and policymakers to adopt and refine the strategies and scale them up nationally to improve contraceptive use.

1. Lack of knowledge and awareness on contraceptive use

Regarding knowledge and motivation for contraceptive use, most participants mentioned various modern contraceptive methods. Participants also mentioned the contraceptives they are currently using and indicated their motivation for contraceptive use, which is encouraging, but persistent awareness creation should be conducted to sustain the utilisation of contraceptives. On the other hand, participants in the qualitative part of the research explained that lack of awareness and knowledge was one of the factors preventing them from utilising contraceptives and was a barrier to avoiding unintended pregnancy.

Strategy 1: The Ministry of Health of Ethiopia should take measures to devise a strategy to work on consistent advocacy and awareness in schools, universities, and social gatherings in the community.

- Awareness of contraceptive utilisation must be achieved through various social media, including radio, television, and other media streams, as well as on-site education on family planning for primary school and university students.
- Awareness creation in different Ethiopian cultural gatherings such as “edir & equb” (the former means contributing money monthly and giving it to a participant on a lottery basis for business use; the latter means contributing and giving money to someone who lost relatives for condolences). During this time, people gather and spend time together, which is convenient to raise awareness about contraceptive use in collaboration with community leaders.

- In summary, a strategy to address advocacy and education on modern contraceptives for all adolescent girls and women should be developed and implemented accordingly.

Rationale: The current gap in knowledge and awareness of contraceptive use should be addressed. Participants in the study explained that lack of awareness and knowledge was one of the factors that prevented them from utilising contraceptives, and it was one of the barriers to avoiding unintended pregnancy.

2. Religious issues

Research conducted in western Ethiopia revealed that religious issues are one of the prominent factors affecting contraceptive use among women and young girls (Tigabu, Demelew, Seid, Sime & Manyazewal 2018:4). The respondents explained that one of the barriers to contraceptive use was religious issues. In this regard, there is a need to work on religious leaders through:

- Preparing separate strategies for religious followers who are against modern contraceptive use
- Enhancing knowledge about contraceptive use
- Educating and focusing on natural methods of contraceptives
- Providing education about the dangers of unsafe abortions and unwanted pregnancies
- Evaluating common practices in the area and providing relevant services of contraceptive methods

Strategy 2: The Ministry of Health of Ethiopia to develop a strategy to address religious issues concerning contraceptive use.

Rationale: There should be a formation of committee members from religious leaders who will convince and educate women and young girls in their congregation to use modern contraceptives or natural contraceptive methods to space their children, thereby avoiding unintended pregnancies and unsafe abortions.

3. Fear of hormonal side effects of contraceptives

Another factor affecting women and young girls to use contraceptives was fear of hormonal side effects, which participants in the current study noted. A cross-sectional study conducted in rural Ethiopia showed that infertility was one of the fears of hormonal side effects of contraceptives by women and young girls (Sedlander, Yilma, Emaway & Rimal 2022:7). Regarding hormonal side effects of modern contraceptives, health professionals should:

- Counsel and provide women and young girls with appropriate information about the hormonal side effects of modern contraceptives.
- Mention some side effects, including weight gain, abnormal uterine bleeding, and increased blood pressure that clients may experience. Moreover, they should be reassured that those hormonal side effects are not life-threatening but somewhat tolerable, and the advantages outweigh the risks.
- Address and counsel about fear of infertility issues questioned by women and young girls.
- Counsel, promote, and provide other alternative methods of contraceptives if available, including female condoms, diaphragms, cervical caps, spermicides, vaginal rings, sponges, and patches, promoting natural calendar and permanent sterilisation methods.
- This study noted that some forgot to take contraceptive pills; thus, there should be a mechanism to remind one to take their pills, either by setting an alarm clock or using other injectables or implants as birth control.

Strategy 3: The Ministry of Health of Ethiopia should devise a mechanism to address the fear of hormonal side effects due to modern contraceptive use. The Ministry should offer alternative contraceptives, including vaginal rings, female condoms, spermicides, sponges, diaphragms, cervical caps, and patches, promoting natural colander and permanent sterilisation methods. The above-mentioned contraceptive methods are not well-publicised in Ethiopia. Therefore, the Ministry of Health of Ethiopia should create awareness through different media streams and train health professionals on new contraceptive methods.

Rationale: Health professionals should ensure that women and young girls receive appropriate information and counselling about the hormonal side effects of modern contraceptives when going for family planning services in healthcare facilities. Moreover, it should be mentioned that these minimal side effects are not life-threatening conditions; instead, they are tolerable. Additionally, health professionals should counsel and provide other alternative contraceptive methods available in the healthcare facility. In this regard, the following should be considered:

- **Shortage of contraceptives**

Regarding the shortage of contraceptives, some health professional participants have witnessed a shortage of modern contraceptives in healthcare facilities. All health facilities, including government, private, and non-governmental, should be equipped with adequate modern contraceptives. In the absence or shortage of contraceptives, it is difficult to talk about improving contraceptive use.

Strategy 4: All health facilities should have affordable, easily available modern contraceptives. The Ministry of Health of Ethiopia should be responsible for providing affordable contraceptives to all health facilities.

Rationale: To improve contraceptive use among women and young girls, there should be easily accessible, affordable modern contraceptives in all healthcare facilities, including government, private, and non-governmental clinics, pharmacies, hospitals, and health centres.

- **Lack of training or updates for health professionals regarding contraceptive use**

To improve contraceptive use among women and young girls in Ethiopia, patients should receive appropriate information about the types of modern contraceptive methods, side effects, and other related issues. Thus, health professionals should have the knowledge and skills to teach and provide appropriate patient information. In the current study, health professional participants complained that there were no updates and training on modern contraceptives, which was previously done. Moreover, some nurses were assigned to family planning departments without appropriate training and updates in some health facilities.

Strategy 5: The Ministry of Health of Ethiopia should provide updated information on contraceptives through:

- Conducting research on modern contraceptives.
- Providing off-site and in-service training for health professionals.
- Providing updated information using workshops for each health facility.

Rationale: If health professionals are not knowledgeable, they cannot provide appropriate information for women and young girls; instead, they may confuse patients by giving incorrect information. Hence, all health professionals should undergo in-service training, off-site training, and workshops about family planning methods and show appropriate certificates of training prior to assignment in the family planning department.

- **Partner support and involvement in contraceptive use**

Most of the participants in the study shared their views on partner support and discussion regarding contraceptive use. Some of the participants recommended male partners to use contraceptives instead of women.

Strategy 6: With guidance from the Ministry of Health of Ethiopia, the following should be done:

- Health professionals should inform women and young girls to come with their male partners when they come for family planning services.
- Health professionals should counsel male partners to discuss contraceptive use with their female partners/wives.
- Male partners should be counselled to use condoms or other permanent contraceptive methods.
- Health professionals should conduct outreach programmes and teach the community about contraceptive utilisation.

Rationale: In the Ethiopian culture, it is not common practice for a male partner to use contraceptives; however, consistent counselling and awareness creation are crucial. This may assist male partners in using condoms or consider other permanent sterilisation methods such as a vasectomy. Women have many responsibilities at home and face physiological and psychological challenges during pregnancy, and

male partners should discuss and support women in all matters, especially in utilising contraceptives.

5.7 VALIDATION OF THE DEVELOPED STRATEGIES

The presented strategies were sent to experts with field experience for validation. The experts were purposively selected based on their practical and programmatic experience in strategic development. Validation aimed to ensure the proposed strategies were feasible, acceptable, and practical to improve contraceptive use. Four experts were selected from different organisations: two from the Ministry of Health and two from the Addis Ababa Health Bureau working in the Family Planning and Reproductive Health Departments.

Table 5.1: Biographic information of experts

Ser. No.	**Qualification**	**Occupation**	**Work experience**
1	Medical Doctor	Family Planning adviser	10 years
2	Medical Doctor	Family Planning adviser	3 years
3	MSc in Reproductive Health	Family Planning Officer	10 years
4	Master's in Public Health	Family Planning Officer	4 years

The strategies were sent to the experts for validation. The abstract of the study ethical clearance certificate was attached to the guidelines. Participants were requested to validate each guideline, while the experts were expected to grade the total score from 100. The strategies will be considered acceptable if the score is 80 and above.

The participants were expected to evaluate each guideline and requested to score using the Likert scale described in Table 5.2. The strategies met the quality standard if the score was >80, partially met if the score was 50-79, and if the total score was below 50, the guideline did not meet the quality standard. Experts evaluated the guideline, and each score was above 80; thus, it was considered acceptable. The strategies were acceptable and met the criteria. Table 5.2 below highlights the criteria for validating each guideline.

Table 5.2: Criteria for validating each strategy

Criteria	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
Clarity: The specific strategy is simple and easily understandable				
Specificity: The strategy specifically focuses on quality health service delivery				
Reliability: The strategy can be used consistently by other healthcare facilities				
Flexibility: The strategy can be flexible				
Effectiveness: The strategy can achieve the objective, which is to enhance the quality of health services				
Validity: The strategy is justifiable or evidence-based				
Relevance: The strategy is appropriate for enhancing quality health services				
Applicability: The strategy users are clearly defined, as described in the scope of the guideline				
Acceptability: The strategy is realistic and acceptable by MOH/RHB/ZHD and stakeholders				
Achievability: The strategy can be executed by MOH/RHB for implementing quality health services				

Source: Structure of a Likert Scale (Tanujaya, Mumu & Indra Prahmana 2023:4)

Summary results of the questionnaire completed by the experts

Expert 1result (%)	Expert 2 result (%)	Expert 3 result	Expert 4 result (%)
95	95	90	80

5.8 SUMMARY OF STRATEGIC DEVELOPMENT

Contraceptive utilisation can be improved when consistent awareness is delivered to the community, when health professionals are equipped with adequate knowledge and skills for counselling women and young girls on contraceptive utilisation, and when an adequate supply of contraceptives is ensured to all healthcare facilities, including government, private, and non-governmental healthcare facilities.

Awareness creation through different media is critical to help women and young girls utilise modern contraceptives effectively. The effectiveness of media promotion should adequately evaluate whether it is delivered to the intended client. Media, particularly radio, can reach remote women and young girls more effectively than other media because women and young girls in rural areas may not have access to the internet, mobile phones, or television compared to women and young girls living in urban settings.

Awareness creation on contraceptive use should also be conducted in cultural and social gatherings, including “edir” and “equb” and other similar gatherings because individuals at all levels are expected to gather and interact in these settings. Moreover, religious issues were highlighted as one factor affecting contraceptive use. In this regard, religious leaders are key individuals who can convince and advise women and young girls to utilise modern contraceptives or use other natural contraceptives like the colander method to avoid unintended pregnancies and unwanted measures, including unsafe abortions.

Moreover, it became evident that health professionals should get appropriate training and skills in counselling and family planning techniques to deliver effective counselling and advice on contraceptive use for women and young girls. In the past years, NGOs provided different training for health professionals in collaboration with the Ministry of Health of Ethiopia; however, the policy changes for NGOs do not provide training for health professionals. Therefore, it is the mandate of the Ministry of Health of Ethiopia to organise and train health professionals on family planning methods and counselling techniques.

Another issue on contraceptive use is the provision of contraceptives. There are different methods of modern contraceptives, but health facilities only provide oral

contraceptive pills and injectable contraceptives. Women and young girls should be able to access various methods like IUCDs, implants, female condoms, and other methods, but they are inaccessible in health facilities.

5.9 CONCLUSION

The strategic development is the goal of the research, which will be beneficial for all federal and regional healthcare staff on the uptake of contraceptive utilisation in Ethiopia. Chapter 6 presents conclusions, contributions, limitations, and recommendations.

CHAPTER 6

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

This chapter presents the conclusions, contributions, limitations, and detailed recommendations for each stakeholder.

6.2 RESEARCH DESIGN AND METHOD

The purpose of the study was to develop strategies to improve contraceptive use among women and young girls attending postnatal care in selected hospitals and clinics in Addis Ababa, Ethiopia. The objectives of the study were divided into three phases as follows:

Phase 1: Quantitative

- To determine the factors associated with contraceptive use.

Phase 2: Qualitative

- To explore the perceptions of women and young girls on contraceptive use.
- To explore the views of health professionals on actions to improve contraceptive use.

Phase 3: Development of strategies

- To develop strategies to improve contraceptive use among women and young girls attending postnatal care in selected hospitals and clinics in Addis Ababa, Ethiopia. Experts validated the developed strategies.

Research methodology indicates the logic of development of the process used to generate theory, a procedural framework within which the research is conducted (Mohajan 2017:3). The study followed a mixed method approach, as indicated in Chapter 1.

Mixed method research combines both quantitative and qualitative approaches to yield better results; moreover, it balances the limitations of doing quantitative or qualitative studies alone. The aim of using a mixed method was to increase the trustworthiness of the research, and the qualitative results can support the quantitative results and provide better results. The findings of the research study were used to develop strategies to improve contraceptive use among women and young girls attending postnatal care in Addis Ababa, Ethiopia. In this regard, it was necessary to understand the factors affecting contraceptive utilisation and healthcare providers' views on increasing contraceptive utilisation among Ethiopian women and young girls.

The researcher employed a sequential explanatory mixed research design and integrated the results during interpretation. According to Fiorini et al (2016:6), using sequential explanatory research, the qualitative data are useful for illustrating quantitative findings and supporting each other to obtain better results. The findings of the results were used to develop strategies to improve contraceptive use among women and young girls attending postnatal care in Addis Ababa, Ethiopia.

The population consisted of women and young girls in governmental hospitals, health centres, non-governmental clinics, and health professionals in each selected healthcare facility. Conclusions were drawn and recommendations were made for future research. The chapter further summarises the findings, conclusions, and recommendations and provides strategies for improving contraceptive utilisation.

To improve contraceptive use, monitoring and evaluation should be done to assess whether the quality of contraceptive use is improved. Therefore, in measuring the improvement of contraceptive use, there is a need to have a specific tool or instrument that meets the requirements of the context.

6.3 SUMMARY AND INTERPRETATION OF RESULTS

Phase 1: Quantitative approach – specific gaps identified

1. Shortage of modern contraceptive

As shown in Figure 4.6 of Chapter 4, 159 (39.8%) respondents mentioned a lack of modern contraceptives when asked to mention some of the barriers to contraceptive use. Without modern contraceptives, it is challenging to advocate for improving contraceptive use.

Health professionals mentioned the shortage of contraceptives in the qualitative part of the research. In one of the study sites of the current research, there were only two types of contraceptives throughout the year, namely, injectables and oral contraceptive pills. Other methods, such as IUCDs, condoms, implants, female condoms, and foam tablets, were unavailable. Even if IUCDs and implants were available, health professionals were not trained to implant and insert such contraceptive methods in the specific health facility.

2. Lack of awareness about modern contraceptive

Respondents were asked to mention possible reasons for failure to avoid unintended pregnancy. Most 270 (67.5%) of the respondents believed that the failure to prevent unintended pregnancy was a lack of awareness about family planning.

Awareness creation is one of the most critical factors that can help women and young girls utilise modern contraceptives. Awareness of contraceptive utilisation must be created using different social media, including radio, television, and other media streams, as well as on-site education on family planning for primary school and university students.

3. Fear of side effects of hormonal contraceptives

The majority, 134 (33.5%) of the respondents, indicated that fear of the side effects of hormonal contraceptives was one of the reasons why participants did not use contraceptives, as indicated in Figure 4.10. This is because respondents did not have adequate information and counselling regarding modern contraceptives, and

participants were not offered alternative contraceptives instead of hormonal contraceptive methods. Some respondents explained that they experienced headaches, irregular periods, weight gain, and increased blood pressure as side effects of hormonal contraceptives.

The study noted that some individuals forgot to take their contraceptive pills. Thus, there should be a mechanism to remind one to take their contraceptive, either by setting the alarm or using other injectables, implants, or other modern contraceptive methods for birth control.

Phase 2: Qualitative phase – gaps identified

1. Partner support

Participants in the current research shared their views on partner support and discussion regarding contraceptive utilisation. Some participants recommended male partners take contraceptives instead of women.

Concerning male partners' use of contraceptives, the idea is essential, but it does not seem practical for males to use contraceptives in the Ethiopian cultural context. However, it is a common practice for male partners to use male condoms. Consistent counselling and awareness creation are crucial.

2. Religious barriers to contraceptive use

Some specific religions, such as the Islamic religion, for example, forbid the use of any method of contraception. Additionally, most religions in Ethiopia do not allow interference with natural pregnancy in any scientific way. However, due to economic and other psychological problems, unintended pregnancy is terminated by unsafe abortion, which may endanger the lives of women and young girls. In this sense, empowering postnatal women, and young girls with knowledge of modern and natural contraceptive methods is advisable.

In addition to the developed intervention strategies, it is advisable to prepare a separate guideline suitable for religious followers against modern contraceptive use and focus on enhancing knowledge about natural contraceptive methods. Education

should also focus on the dangers of unsafe abortion and unwanted pregnancy, and evaluation should be done on common practices in the area. The provision of relevant services of contraceptive methods is essential. It is also advisable to provide education on sexual moral values, women's self-development and self-worth, and employment to avoid unintended pregnancies.

3. Lack of training for health professionals on family planning

Most health professionals who participated in the research study explained that they did not receive any training regarding family planning after graduation; instead, they used documents they had at university and college when serving clients. Updated information and training seem crucial in counselling and providing appropriate information about modern contraceptive utilisation for women and young girls.

6.4 RECOMMENDATIONS

The following recommendations are put forward based on the findings of the study:

1. Recommendations to the Ministry of Health

- To address lack of awareness about modern contraceptive gaps, there should be continuous awareness creation by the Ministry of Health, Ethiopia, using different media, including information leaflets, radio, television, Facebook, and other forms of social media about modern contraceptive use. The advocacy should address the adverse effects of unintended pregnancy, where to get modern contraceptives, and minimal side effects of hormonal contraceptives.
- There should be college/university and reproductive health clubs that can improve awareness about safe, effective, and youth-friendly contraceptive use services.
- The Ministry of Health, Ethiopia, should advocate for male involvement and self-empowerment measures for young girls who do not want to engage in sexual activities.
- The Ministry of Health of Ethiopia must avail all forms of modern contraceptives to healthcare facilities, including privately owned NGOs, governmental clinics, hospitals, health centres, pharmacies, and drug stores, to address the shortage

of contraceptives. In addition, it should be more accessible and affordable to clients whenever they want to use it.

2. Recommendations to religious leaders

To address the religious issues on contraceptive use, there is a need to work on religious leaders; thus, the following recommendations are made:

- Prepare a separate strategy for religious leaders whose beliefs are against pre-marital sex and the use of modern contraceptives to educate and empower men, women, and young girls on alternative strategies.
- Enhance knowledge about contraceptive use for religious leaders and followers.
- Health professionals should educate religious leaders on natural contraceptive methods to teach their religious followers.

  Health professionals should educate religious leaders about the dangers of unsafe abortions and unwanted pregnancies and inform their religious followers.
- The Ministry of Health of Ethiopia should evaluate common practices in the area and provide relevant services for contraceptive methods.

3. Recommendations to health professionals

To address the fear of the side effects of hormonal contraceptives, health professionals have a responsibility to counsel, educate, and inform the public about the minimal side effects of hormonal side effects of modern contraceptives.

4. Recommendations to the Federal or Regional Health Bureaus for lack of training about family planning for health professionals

The Ministry of Health of Ethiopia should address the lack of training for health professionals about family planning. Federal or regional health bureaus should organise and arrange training to provide updated information on family planning methods and techniques of IUCDs insertion and implantation techniques of contraceptives for health professionals at all healthcare facility levels. Furthermore,

the Ministry of Health of Ethiopia should identify and approach skilled university professionals to educate health professionals on the above skills to scale up modern contraceptive use for Ethiopian women and young girls across the country.

6.5 CONTRIBUTIONS OF THE STUDY

This section presents the contribution of the research study to the existing body of knowledge on increasing contraceptive use. The study has contributed to the development of intervention strategies for contraceptive utilisation uptake. All healthcare facilities and providers can utilise the strategies at all levels, including in Addis Ababa and outside of the capital throughout the country.

In Ethiopia, it is common to see young girls with unintended pregnancies exposed to unsafe abortions and some dying due to complications such as infections. Moreover, in Ethiopian culture, abortion is unacceptable due to religion and other fears, such as family stigma. As a result, young girls try to hide their emotions, pain and bleeding, leading to unwanted psychological and physiological health challenges. The strategies that have been developed will be used as a baseline for future research. Conversely, it is common for young girls who have been raped or those who engage in unprotected sex regularly to purchase emergency contraceptives from the pharmacy. As such, policymakers can adopt the developed strategies for effective contraceptive use for women and young girls.

In light of the progressive healthcare system in Ethiopia, it was important to conduct such research and develop strategies to provide improved contraceptive uptake for women and young girls across the country. The developed strategies will contribute to the quality of contraceptive use among women and girls in Ethiopia. The study is conducted in limited healthcare facilities in Addis Ababa, and further large-scale studies that include urban and rural communities in scaling up contraceptive uptake are recommended.

6.6 LIMITATIONS OF THE STUDY

The study was conducted in Addis Ababa, the capital city of Ethiopia, where health facilities with more medical supplies and human resources are available compared to rural regions, where access to health-related resources is limited. Thus, the study findings may not be applicable to those rural regions.

6.7 CONCLUSION

The objectives of the study were to determine factors associated with contraceptive use, explore the perceptions of women and young girls on contraceptive use, explore the views of health professionals on actions to improve contraceptive use, and integrate results and develop strategies to improve contraceptive use among women and young girls attending postnatal care at selected hospitals and clinics in Addis Ababa, Ethiopia.

As part of the research objective, different factors associated with contraceptive use among women and young girls were presented by participants, including the shortage of contraceptives, lack of awareness about modern contraceptives, fear of contraceptive side effects, lack of partner support, and religious issues. Moreover, awareness creation, proper counselling, and involvement of stakeholders, including the government and religious leaders, in scaling up contraceptive uptake were some of the ways to improve contraceptive use, as explained by respondents. The developed strategies focus on lack of knowledge and awareness on contraceptive use, religious issues, fear of hormonal side effects of contraceptives, shortage of contraceptives, lack of training for health professionals on contraceptive use, partner support, and involvement in contraceptive use. All the objectives of this research were met.

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APPENDIX A: ASSENT FORM FOR MINORS

Title of the research project: STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA

Researcher's name(s): Zinaw Mesafint Dessie, Professor Lumadi Thanyani

Researcher's contact number: +251913314468 or 10108629@mylife.unisa.ac.za

What is this research project all about?

I am conducting this research to develop strategies to improve contraceptive use among women and young girls attending postnatal care in Addis Ababa, Ethiopia. The findings of the research will be to prevent unwanted pregnancy and unsafe abortion, useful for policymakers and serve as a baseline for future research studies regarding contraceptive utilisation.

Why have I been invited to take part in this research project?

You are being invited to take part in this research because your participation is crucial for the current research. The outcome of the research depends partly on your participation, and an interview will be conducted to understand your views on contraceptive use.

What will happen to me in this study?

Your role in this study entails providing your perspective and experience related to contraception utilisation, ways of improving contraceptive use, determinants of unintended pregnancy, and methods of family planning you used. You will be requested to take part in an interview using an audio recorder.

The person transcribing the interviews, data collectors, and independent coders will sign a confidentiality agreement form to ensure the information remains strictly confidential. The interview will last from 45 minutes to 1 hour.

Can anything bad happen to me?

The forecast of potential harm in the study may involve emotional or psychological harm when you share your experience. You will also be required to invest your valuable time through research participation.

The interviews or questions will take place at a convenient time to avoid disrupting your convenience or work. Please do not hesitate to ask for any help from the investigator if you experience any discomfort so that you will be referred to a psychiatrist for counselling.

Will anyone know I am in the study?

You have the right to insist that your name will not be recorded anywhere and that no one, apart from the researcher and identified members of the research team, will know about your involvement in this research or your name will not be recorded anywhere and no one will be able to connect you to the answers you give.

Your answers will be given a code number or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods, such as conference proceedings.

Your answers may be reviewed by people responsible for ensuring that research is done properly, including the transcriber, independent coder, data collectors and Research Ethics Review Committee members. Otherwise, records that identify you will be available only to people working on the study unless you give permission for other people to see the records.

The information collected from this research project will be kept confidential and secured against unauthorised access. Information about the study participants will be kept confidential by assigning codes to the data to maintain anonymity when the data is used for research reports, journal articles, and conference proceedings.

Who can I talk to about the study?

If you would like to be informed of the final research findings, please contact Zinaw Mesafint at +251913314468 or 10108629@mylife.unisa.ac.za. The findings are accessible for 10 years.

Should you require further information or want to contact the researcher about any aspect of this study, please call +251913314468 or email 10108629@mylife.unisa.ac.za.

Should you have concerns about the way in which the research has been conducted, you may contact Professor T.G Lumadi at lumadtg@unisa.ac.za or tel +27124296513. You can contact the research ethics chairperson of the CREC, Dr K.J Malesa, maleskj@unisa.ac.za 012 429 6054 if you have any ethical concerns.

What if I do not want to do this?

You can withdraw from participating in the research at any time.

Do you understand this research study, and are you willing to participate?

YES	NO

Has the researcher answered all your questions?

YES	NO

Do you understand that you can STOP being in the study at any time?

YES	NO

_____ _____

Signature of Child Date

Source: Stellenbosch University

APPENDIX B: CONFIDENTIALITY AGREEMENT WITH RESEARCH THIRD PARTIES

(Statistician)

Hereby, I _____ ID number _____, in my personal capacity as a **statistician** collaborating with Zinaw Mesafint Dessie on research entitled **"STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA,"** acknowledge that I am aware of and familiar with the stipulations and contents of the conditions of ethical clearance specific to this study.

I shall conform to and abide by these conditions. Furthermore, I am aware of the sensitivity of the information collected and the need for strict controls to ensure confidentiality obligations associated with the study.

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

I also confirm that I have been briefed by the research team on the protocols and expectations of my behaviour and involvement in the research as a **statistician**.

Signed:  Date: 28/03/2022

Researcher's signature:  Date:28/03/2022

Source: UNISA

APPENDIX C: CONFIDENTIALITY AGREEMENT WITH RESEARCH THIRD PARTIES

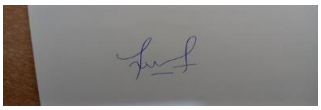
(Independent coder)

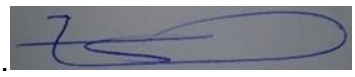
Hereby, I _____ ID number _____, in my personal capacity as an **independent coder** collaborating with Zinaw Mesafint Dessie on research entitled **"STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA"** study, acknowledge that I am aware of and familiar with the stipulations and contents of the conditions of ethical clearance specific to this study.

I shall conform to and abide by these conditions. Furthermore, I am aware of the sensitivity of the information collected and the need for strict controls to ensure confidentiality obligations associated with the study.

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

I also confirm that I have been briefed by the research team on the protocols and expectations of my behaviour and involvement in the research as an **independent coder**.

Signed. ……  Date: 28/03/2022

Researcher's signature …  Date: 28/03/2022

Source: UNISA

APPENDIX D: CONFIDENTIALITY AGREEMENT WITH RESEARCH THIRD PARTIES

(Data capturer)

Hereby, I _____ ID number _____, in my personal capacity as a **data capturer** collaborating with Zinaw Mesafint Dessie on research entitled "**STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA"** study, acknowledge that I am aware of and familiar with the stipulations and contents of the conditions of ethical clearance specific to this study.

I shall conform to and abide by these conditions. Furthermore, I am aware of the sensitivity of the information collected and the need for strict controls to ensure confidentiality obligations associated with the study.

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

I also confirm that I have been briefed by the research team on the protocols and expectations of my behaviour and involvement in the research as a **data capturer**.

Signed: 

Date: 28/03/2022

Researcher's signature …  Date: 28/03/2022

Source: UNISA

APPENDIX E: CONFIDENTIALITY AGREEMENT WITH RESEARCH THIRD PARTIES

(Translator)

Hereby, I _____ ID number _____, in my personal capacity as **a translator** collaborating with Zinaw Mesafint Dessie on research entitled "**STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA"** study, acknowledge that I am aware of and familiar with the stipulations and contents of the conditions of ethical clearance specific to this study.

I shall conform to and abide by these conditions. Furthermore, I am aware of the sensitivity of the information collected and the need for strict controls to ensure confidentiality obligations associated with the study.

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

I also confirm that I have been briefed by the research team on the protocols and expectations of my behaviour and involvement in the research as **a translator**.

Signed: 

Date: 28/03/2022

Researcher's signature …  Date: 28/03/2022

Source: UNISA

APPENDIX F: CONSENT TO PARTICIPATE IN THIS STUDY

Research title: STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA

Researcher:
(Zinaw Mesafint)

‘’I, _____ (name of participant), confirm that the researcher requesting my consent to take part in current research has told me about the, procedure, nature, anticipated inconvenience and potential benefits of participation’’.

The researcher had explained to me (I have read) and understood the study as clearly described in the information sheet.

To participate in this study, I have had sufficient opportunity to ask questions and am ready to participate in the current stusy.

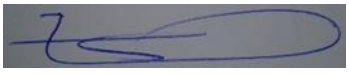
‘’I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable)’’.

‘’I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified. I agree to the recording of audio using an audio recorder. I have received a signed copy of the informed consent agreement.’’

Participant Name & Surname…… (please print)

Participant Signature……..Date……

Researcher’s Name & Surname Zinaw Mesafint Dessie… (please print)

Researcher’s Signature:  Date: 28/03/2022

APPENDIX G: INTERVIEW GUIDE FOR WOMEN AND YOUNG GIRLS ON HOW CONTRACEPTIVE USE CAN BE IMPROVED

1. How old are you?
2. What is your marital status?
3. How many live children do you have?
4. Which method of contraceptive do you know?
5. Have you ever used contraceptives before, or are you currently using contraceptives?
6. Have you experienced side effects of contraceptives?
7. Was your last baby intended?
8. What are the factors that affect contraceptive use?
9. Which method of contraceptive do you think is best?
10. What should be done by mothers and young girls to improve contraceptive utilisation?
11. What should your partner do to improve contraceptive utilisation?
12. What should be done by nurses to improve contraceptive utilisation?
13. What should be done by the Ministry of Health to improve contraceptive utilisation?

የድህረ ወሊድ ክትትል በማድረግ ላይ ባሉ እናቶች ና ወጣት ሲቶች የወሊድ መቆጣጠሪያ አጠቃቀም እንዲሻሻል ለማድረግ በሚደረግ የስትራተጂክ ቅድ ዝግጅት ላይ በተመረጡ ሆስፒታሎች ና ክሊኒኮች ላይ የሚደረግ ጥናታዊ ምርምር

አዲስ አበባ፡ ኢትዮጵያ

ሀ. ለእናቶች አና ወጣት ሲቶች የወሊድ መቆጠጠሪያ ዘዲ እዉቀትን በተመለከተ የሚጠየቁ ጥያቄዎች የሚደረግ ቃለ መጠይቅ

1. ስንት ዓመትሽ ነው ?

2. የጋብቻ ሁኔታ እንዴት ነው ?

3. በህይወት ስንት ልጆች አሉሽ ?

4. ምን ዓይነት የወሊድ መቆጣጠሪያ ዘዴዎችን ታውቂያለሽ ?

5. ካሁን በፊት የወሊድ መቆጣጠሪያ ወስደሽ ታውቂያለሽ ?

6. የወሊድ መቆጣጠሪያ ወስደሽ የጎንዮሽ ጉዳት አጋጥሞሽ ያውቃል ?

7. በመጨረሻ የወለድሽው ልጅ በፍላጎት ነበር ?

8. የወሊድ መቆጠጠሪያ ዘዴን ንዳንጠቀም የሚያደረጉ ነገሮች ምን ምን ናቸዉ?

9. ከሊድ መቆጠጠሪያ ዘዴወች የትገናዉ ይሻላል ?

10. የወሊድ መቆጠጠሪያ አጠቃቀምን ለማሻሻል በእናቶች አና ወጣት ሲቶች ምን መደረግ አለበት?

11. የወሊድ መቆጠጠሪያ አጠቃቀምን ለማሻሻል በትዳር ጉደና ምን መደረግ አለበት?

12. የወሊድ መቆጠጠሪያ አጠቃቀምን ለማሻሻል በነርሶች ምን መደረግ አለበት?

13. የወሊድ መቆጠጠሪያ አጠቃቀምን ለማሻሻል በጠና ጥበቃ ሚኒስትር ምን መደረግ አለበት?

ኧመሰግናልሁ !

APPENDIX H: INTERVIEW GUIDE FOR HEALTHCARE PROFESSIONALS ON HOW CONTRACEPTIVE UTILISATION CAN BE IMPROVED

1. What is your qualification?
2. How long have you worked with providing or advising on contraceptives?
3. Did you have training on contraceptives or family planning?
4. What is a modern contraceptive?
5. What do you think is the effect of unwanted pregnancy on the mother?
6. What do you think is the effect of unwanted pregnancy on the country?
7. What should the mother, husband, parents, and young girls do to improve contraceptive utilisation?
8. What should the health professionals do to improve contraceptive utilisation?
9. What should the Ministry of Health, Ethiopia, do to improve contraceptive utilisation?

Source: Mulatu, Chere and Negasa (2017:3–4), Feyisso, Girma, Yimam & Hailu (2017:3-4) and developed based on the objectives.

ለ. የወሊድ መቆጠጠሪያ አጠቃቀምን ለማሻሻል ለጤና ባልሙያዎች ሚጤቁ ጥያቅወች

- ዘመናዊ የወሊድ መቆጣጣሪያ ዘዲ ምንድን ነዉ?
- ያልተፈለገ ርግዝና በናትየዋ ላይ ሊያመጣ የሚችለዉ ጉዳት ምንድን ነዉ?
- ያልተፈለገ ርግዝና በሃገር ላይ ሊያመጣ የሚችለዉ ጉዳት ምንድን ነዉ?
- የወሊድ መቆጠጠሪያ አጠቃቀምን ለማሻሻል በእናቶች አና ወጣት ሲቶች ምን መደረግ አለበት?
- የወሊድ መቆጠጠሪያ አጠቃቀምን ለማሻሻል በጠና ባለሙያወች ምን መደረግ አለበት?
- የወሊድ መቆጠጠሪያ አጠቃቀምን ለማሻሻል በጠና ጥበቃ ሚኒስትር ምን መደረግ አለበት?

ኧመሰግናልሁ !

APPENDIX I: QUESTIONAIRE FOR WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE

Sociodemographic characteristics

1. How old are you? _____

2. What is your religion?

   - Orthodox
   - Muslim
   - Protestant
   - Catholic
   - Other

3. What is your marital status?

   - Married
   - Single
   - Divorced/separated/widowed

4. What is your level of education?

   - No formal education
   - Primary school
   - Secondary school
   - College/University

5. What is your occupational status?

   - Student
   - Civil servant
   - Business
   - Housewife
   - Other

6. Indicate with whom you are living with

- Both parents
- Mother only
- Father only
- Husband
- Relative
- Alone

Sociocultural and reproductive characteristics

How many living children do you have?

- 2
- 3
- 4
- 5
- 6 and above

2. Indicate your fertility preferences

- Need more children
- Do not need more children
- Up to God
- Not applicable

3. How many previous pregnancies did you have?

- <2
- 3-4
- +5

4. Do you communicate well with your husband on contraceptive use?

- Yes
- No
- No husband

5. Did family planning workers discuss with you about contraceptive use?

- Discussed
- Not discussed

6. Did you want the current pregnancy?

- Wanted
- Mistimed
- Unwanted

7. How long does it take you to reach FP service?

- <1 hour
- 1-2 hours
- >2 hours

8. Do you have full autonomy to decide whether to use contraceptives or not at all?

- I have the freedom to decide to use contraceptives
- I do not have the freedom to decide to use contraceptives

9. What are the barriers that prevent you from taking modern contraceptives (perceived barriers)?

- Lack of modern contraceptive
- Not accessible
- Religious
- Costly

10. What do you think will happen if you don’t take contraceptives (perceived susceptibility)

- Unintended pregnancy
- Abortion
- Abortion-related medicolegal illness

11. What are the benefits of using modern contraceptive pills (perceived benefits)

- Prevents unintended pregnancy
- Prevents the risk of abortion

- Other

Family planning knowledge and practice

1. Have you heard about family planning before?

- Yes
- No

2. What is your gap preference to have children between consecutive f

- Two or more years
- Less than two years
- I don’t know
- No opinion

3. Do you know about the different kinds of contraceptive methods?

- Yes
- No

4. Do you know the advantages of contraceptive methods?

- Yes, I know

No, I do not know

5. Are contraceptives accepted by your religion?

- Yes
- No

6. What do you think is the reason for failure to avoid unintended pregnancy?

- Lack of awareness about FP
- Method failure
- Poor access to contraceptive
- Husband or partner's disapproval
- Other ……

7. Indicate the family planning methods you know.

- Pills
- Condom
- Injectable
- IUCD
- Implants
- others

8. Indicate your source of information on how to get family planning service

- School
- Family
- Church/Mosque
- Radio/Television/Newspaper
- Health facility

9. Indicate the type of family planning method you used

- Pills
- Condom
- Injectable
- Implants
- Never used

10. What is the reason that you did not use contraceptives?

- Lack of knowledge
- Fear of side effects
- Religious issue
- Contraceptive not available
- Other

11. Have you heard of emergency contraceptives?

- Yes
- No

12. Have you ever used an emergency contraceptive?

- Yes
- No

13. Indicate the right time to be effective when using emergency contraceptive

Immediately after sex

- Within 24 hrs
- Within 48 hrs
- Within 72 hrs

Thank you.

የድህረ ወሊድ ክትትል በማድረግ ላይ ባሉ እናቶች ና ወጣት ሲቶች የወሊድ መቆጣጠሪያ አጠቃቀም እንዲሻሻል ለማድረግ በሚደረግ የስትራተጂክ ቅድ ዝግጅት ላይ በተመረጡ ሆስፒታሎች ና ክሊኒኮች ላይ የሚደረግ ጥናታዊ ምርምር

<u>አዲስ አበባ፡ ኢትዮጵያ</u>

<u>ሀ. ለእናቶች አና ወጣት ሲቶች የሚደረግ ቃለ መጠይቅ</u>

<u>የመህበራዊ ስነ- ህዝብ ባህሪያት ጥያቄዎች</u>

1. አድሚሰ ስንት ነዉ? 2, ሀይማኖትስ ምንድን ነዉ?

    1. ኦርቶዶክስ
    2. ሙስሊም
    3. ፕሮቲስታንት
    4. ካቶሊክ
    5. ሊላ

3. የጋቢቻ ሁኒታ እንዲት ነዉ?

    1. ያግባች
    2. ያላግባች

3. የፈታች4. የትምህርት ደረጃ

    1 . በልምድ
    2 . 1ኛ ደረጃ
    3 . 2ኛ ደረጃ
    4 . ኮሊጅ/ ዩኒቨርስቲ

5. የስራ ሁኒታ

    1. ተማሪ

2 . ሲቪል ሰራተኛ

3 . ነጋዲ

4 . የቢት እመቢት

5 . ሊላ

6. ከማን ጋር ነዉ የምትኖሪዉ?

1 . ከእናት እና አባት ጋር

2 . ከእናት ጋር

3 . ከአባት ጋር

4 . ከባል ጋር

5 . ከዘመድ ጋር

6 . ብቸኛ

<u>ለ. የማህበራዊ እና የመራቢያ ባህሪዎች ጥያቄ</u>

7. በህይዎት ያሉ ስንት ልጆች አሉስ

ሀ. 1

ለ. 2

ሐ.3

መ. 4

ሠ. 5

ረ. 6 እና ከዛ በላይ

8. ምን ያህል ልጅ እንዲኖረዎት ይፈልጋሉ

1. ተጨማሪ ልጅ እንዲኖረኝ እፈልጋልሁ

2. ተጨማሪ ልጅ እንዲኖረኝ አልፈልግም

3. አንደ እግኢአብሒር ፈቃድ

4. መልስ የለኝም

9. ካሁን በፊት ምን ያህል ጊዚ አርግዘሳል

1. ከ 2 በታች

2. ከ 3-4

3. ከ 5 በላይ

10. ከባለቢትስ ጋር የወሊድ መቆጣጠሪያን በተመለከተ ያላችሁ ተግባቦት እንዲት ነዉ

1. አዎ

2. አልግባባም

3. ባል የለኝም

11. የወሊድ መቆጣጠሪያን አስመልክቶ ከቢተሰብ እቅድ ባልሙያዎች ጋር ተወያዪተስ ታቂያለስ

1. ተዎያዪቻለሁ

2. አልተወያየሁም

12. ያሁኑን እርግዝና ፈልግሲዉ ነበር
    1. ፈልጊዉ ነበር
    2. ያለጊዚዉ ነዉ ያረገዚኩት
    3. እርግዝናዉን አልፍለኩትም ነበር

13. የወሊድ መቆጣጠሪያ ሚትዎጅብት ቦታ ከቢትስ ምን ያህል ጊዚ ይወስዳል
    1. ከ 1 ሰአት በታች
    2. ከ 1-2 ሰአት
    3. ከ 2 ሰአት በላይ
14. የወሊድ መቆጣጠሪያ ለመዉስድመ ሆነ ላለምዉሰደ ሙሉ ሲልጣን አለሰ
    1. አለኝ
    2. ለኝም

<u>ሐ. የወሊድ መቆጠጠሪያ ዘዲ እዉቀትን በተመለከተ የሚጠየቁ ጥያቂዎች</u>

15. ስለ ወሊድ መቆጣ ጣጠሪያ ዘዲዎች ካሁን በፊት ሰምተሽ ታቂያለሽ
    1. ሰምቻለሁ
    2. አልሰማሁም
16. በምተዎለጃቸዉ ሊጆች መካከል የስንት አመት ልዩነት በመካከላቸዉ እንዲኖር ትፈሊጊያለስ
    1. 2 አመት እና ከዛ በላይ
    2. ከ 2 አመት በታች
    3. አላቅም
    4. አስተያየት መስጠት አልፈልግም
17. የወሊድ መቆጣጠሪያ ዘዲዎችን ጥቅም ታቂያለሽ
    1. አዉቃለሁ
    2. አላቅም
18. ባንቺ ሃይማኖት የወሊድ መቆጣጠሪያ መዉሰድ ይፈቀዳል
    1. ይፈቀዳል
    2. አይፈቀድም
19. ያልተፈለገ እርግዝናን ለመከላከል ያልተቻለዉ ለምንድን ነዉ ብለሰ ታስቢያልሰ
    1. ስለ ወሊድ መቆጣጠሪያ ዘዲዎች እዉቀት ማነስ
    2. የወሊድ መቆጣጠሪያ ዘዲዎች አለመስራት
    3. የወሊድ መቆጣጠሪያ ዘዲዎች ኧቅርቦት ችግር
    4. ባል ወይም ሚስት ሳይስማሙ ሲቀሩ
    5. ለላ
20. ከሚከተሉት የወሊድ መቆጣጠሪያ ዘዲዎች ዉስጥ የምታዉቂያቸዉን ኧመልክች
    1. የሚዋጥ ኧንክብል
    2. ኮንዶም
    3. በመርፊ የሚሰጥ

4. በማህጸን ዉሰጥ የሚቀመጥ
5. በክንድ የሚቀበር
6. ሊላ

24. ስለ የወሊድ መቆጣጠሪያ ዘዲዎች የት ነዉ የስማሽዉ
1. ትምህርት ቢት
2. ክቢተሰብ
3. ቢትክርስቲያን / መስጊድ
4. ራዲዮ/ ቲሊቪዠን/ጋዚጣ
5. ጤና ተቛም
25. ከሚከተሉት የወሊድ መቆጣጠሪያ ዘዲዎች ዉስጥ የተጠቀምሻቸዉን ኧመልክች

1. የሚዋጥ ኧንክብል
2. ኮንዶም
3. በመርፊ የሚሰጥ
4. በማህጸን ዉሰጥ የሚቀመጥ
5. በክንድ የሚቀበር
6. ኧልተጠቀምኩም
26. የወሊድ መቆጣጠሪያ ዘዲዎችን ያልተጠቀምሽበት ምክኒያት ምንድን ነዉ

1. የኧዉቀት ማነስ

2. የጎንዮሽ ጉዳቱን ፈርቸ

3. የሀይማኖት ጉዳይ

4. የወሊድ መቆጣጠሪያ ዘዲ ስለሊለ
5. ሊላ
27. ስለ ድንገተገ የወሊድ መቆጣጠሪያ ዘዲ ታዉቂያለሽ
1, ኧወ ኧቃለሁ
2, ኧላቅም
3. የድንገተገ የወሊድ መቆጣጠሪያ ዘዲ ተጠቀመሽ ታዉቂያለሽ
4. ተጠቅሚያለሁ
5. ኧልተጠቀምኩም
28. ትክክለገና የድንገተገ የወሊድ መቆጣጠሪያ ዘዲ የሚሰራበትን ሰኧት ኧመልክቸ
1, ወዲያዉኑ ከግብረስጋ ግንኙነት በሁዋላ
2. በ 24 ሰኧት ጊዚ ዉስጥ
3. በ 48 ሰኧት ጊዚ ዉስጥ
4. በ 72 ሰኧት ጊዚ ዉስጥ

ኧመሰግናልሁ!

PPENDIX J: PARTICIPANT INFORMATION SHEET FOR HEALTH PROFESSIONALS

Ethics clearance reference number:

Research permission reference number (if applicable):

Title: **“STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA”**

Dear Prospective Participant,

My name is Zinaw Mesafint Dessie, and I am doing research with Lumadi Thanyani, a Professor in the Department of Health Studies, towards a PhD in Public Health at the University of South Africa. We have not received funding for this study. We are inviting you to participate in a study entitled “Strategies to improve contraceptive use among women and young girls attending postnatal care in selected hospitals and clinics, Addis Ababa, Ethiopia.”

WHAT IS THE PURPOSE OF THE STUDY?

I am conducting this research to develop strategies to improve contraceptive use among women and young girls attending postnatal care in Addis Ababa, Ethiopia. The research findings will be to prevent unwanted pregnancy and unsafe abortion, useful for policymakers and serve as a baseline for future research studies regarding contraceptive utilisation.

WHY AM I BEING INVITED TO PARTICIPATE?

You are invited to participate in this research because your experience on improving contraceptive use is valuable in conducting the proposed research. The number of

study participants will be relatively small; thus, interviews will be conducted as I would like to understand the phenomenon in detail.

WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?

Your role in this study entails providing your perspective and experience related to contraception utilisation, ways of improving contraceptive use, determinants of unintended pregnancy, and methods of family planning you used.

You will be requested to take part in an interview using an audio recorder. The person transcribing the interviews, data collectors, and independent coders will sign a confidentiality agreement form to ensure the information remains strictly confidential. The interview will last from 45 minutes to 1 hour.

CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Participation in this study is entirely voluntary, and you are under no obligation to consent. If you decide to participate, you will be given this information sheet to keep and asked to sign a written consent form. You are free to withdraw at any time without losing any of your rights or benefits or giving a reason.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

The proposed research's benefits will contribute to new knowledge on ways of improving contraceptive utilisation among women and young girls who wish to space their family size. The research findings will be useful for policymakers on the contraceptive uptake for Ethiopian women and young girls.

Moreover, the research findings can be used as a baseline for future beseech studies regarding contraceptive utilisation among women and young girls in Addis Ababa, Ethiopia, to prevent unwanted pregnancy and unsafe abortion.

ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?

The forecast of potential harm in the study may involve emotional or psychological harm when you share your experience. You will also be required to invest your valuable time through research participation. However, the interviews or questions will take place at a convenient time to avoid disrupting your convenience or work. Please do not hesitate to ask for any help from the investigator if you experience any discomfort so that you will be referred to a psychiatrist for counselling.

WILL THE INFORMATION I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

You have the right to insist that your name will not be recorder recorded anywhere and that no one, apart from the researcher and identified members of the research team, will know about your involvement in this research or your name will not be recorded anywhere and no one will be able to connect you to the answers you give.

Your answers will be given a code number or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods, such as conference proceedings.

Your answers may be reviewed by people responsible for ensuring that research is done properly, including the transcriber, independent coder, data collectors and Research Ethics Review Committee members. Otherwise, records that identify you will be available only to people working on the study unless you give permission for other people to see the records.

The information that will be collected from this research project will be kept confidential and secured against unauthorised access. Information about the study participants will be kept confidential by assigning codes to the data to maintain anonymity when the data is used for research reports, journal articles, and conference proceedings.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

Hard copies of your answers will be stored by the researcher for a minimum period of five years in a locked cupboard/filing cabinet at the principal investigator's house for future research or academic purposes; electronic information will be stored on a password-protected computer.

Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. Hard copies will be shredded, and electronic copies will be permanently deleted from the computer's hard drive through a relevant software programme, if necessary.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

You will not receive any financial incentives to participate in this research. However, the investigator will provide you with a bottle of water and a snack during the interview.

HAS THE STUDY RECEIVED ETHICS APPROVAL?

This study has received written approval from the Research Ethics Review Committee of the *College of Human Science,* Unisa. A copy of the approval letter can be obtained from the researcher if you so wish.

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If you would like to be informed of the final research findings, please contact Zinaw Mesafint at +251913314468 or 10108629@mylife.unisa.ac.za. The findings are accessible for 10 years.

Should you require further information or want to contact the researcher about any aspect of this study, please call +251913314468 or email 10108629@mylife.unisa.ac.za.

Should you have concerns about the way in which the research has been conducted, you may contact Professor T.G Lumadi at lumadtg@unisa.ac.za or teal +27124296513.

Contact the research ethics chairperson of the CREC, Prof K.B Khan, khankb@unisa.ac.za or on 012 429 6549 if you have any ethical concerns.

Thank you for taking the time to read this information sheet.

Zinaw Mesafint Dessie

Source: UNISA

APPENDIX K: PARTICIPANT INFORMATION SHEET FOR PARENTS/ GUARDIANS

Ethics clearance reference number:

Research permission reference number (if applicable):

Title: **"STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA"**

Dear Prospective Participant,

My name is Zinaw Mesafint Dessie, and I am doing research with Lumadi Thayani, a Professor in the Department of Human Science, towards a PhD in Public Health at the University of South Africa. We have not received funding for this study. We are inviting you to participate in a study entitled **"Strategies to improve contraceptive use among women and young girls attending postnatal care in selected hospitals and clinics, Addis Ababa, Ethiopia."**

WHAT IS THE PURPOSE OF THE STUDY?

I am conducting this research to develop strategies to improve contraceptive use among women and young girls attending postnatal care in Addis Ababa, Ethiopia. The research findings will be to prevent unwanted pregnancy and unsafe abortion, useful for policymakers and serve as a baseline for future research studies regarding contraceptive utilisation.

WHY AM I BEING INVITED TO PARTICIPATE?

Your daughter is invited to participate in this research because her experience on improving contraceptive use is valuable in conducting the proposed research. The number of study participants will be relatively small; thus, interviews will be conducted as I would like to understand the phenomenon in detail.

WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?

Your daughter's role in this study entails providing her perspective and experience on contraception utilisation, ways of improving contraceptive use, determinants of unintended pregnancy, and methods of family planning you used. Your daughter will be requested to participate in an interview using an audio recorder.

The person transcribing the interviews, data collectors and independent coders will sign a confidentiality agreement form to ensure the information remains strictly confidential. The interview will last from 45 minutes to 1hour.

CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Your daughter’s participation in this study is entirely voluntary and is under no obligation to consent. If she decides to participate, she will be given this information sheet to keep and asked to sign a written consent form. She is free to withdraw at any time without losing any of her rights or benefits or giving a reason.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

The proposed research's benefits will contribute to new knowledge on ways of improving contraceptive utilisation among women and young girls who wish to space their family size. The research findings will be useful for policymakers on the contraceptive uptake for Ethiopian women and young girls.

Moreover, the research findings can be used as a baseline for future beseech studies regarding contraceptive utilisation among women and young girls in Addis Ababa, Ethiopia, to prevent unwanted pregnancy and unsafe abortion.

ARE THERE ANY NEGATIVE CONSEQUENCES FOR HER IF SHE PARTICIPATE IN THE RESEARCH PROJECT?

The forecast of potential harm in the study may involve emotional or psychological harm when you share your experience. She will also be required to invest her valuable time in research participation. The interviews or questions will take place at a

convenient time to avoid disrupting your convenience or work. Please, she should not hesitate to ask any help from the investigator if she experiences any discomfort so that she will be referred to a psychiatrist for counselling.

WILL THE INFORMATION THAT SHE CONVEY TO THE RESEARCHER AND HER IDENTITY BE KEPT CONFIDENTIAL?

She has the right to insist that her name will not be recorded anywhere and that no one, apart from the researcher and identified members of the research team, will know about her involvement in this research or her name will not be recorded anywhere and no one will be able to connect her to the answers she gives. Her answers will be given a code number or a pseudonym, and she will be referred to in this way in the data, any publications, or other research reporting methods, such as conference proceedings.

Her answers may be reviewed by people responsible for ensuring that research is done properly, including the transcriber, independent coder, data collectors and Research Ethics Review Committee members. Otherwise, records that identify her will be available only to people working on the study unless you give permission for other people to see the records.

The information that will be collected from this research project will be kept confidential and secured against unauthorised access. Information about the study participants will be kept confidential by assigning codes to the data to maintain anonymity when the data is used for research reports, journal articles, and conference proceedings.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

Hard copies of her answers will be stored by the researcher for a minimum period of five years in a locked cupboard/filing cabinet at the principal investigator's house for future research or academic purposes; electronic information will be stored on a password-protected computer.

Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. Hard copies will be shredded, and electronic copies will be

permanently deleted from the computer's hard drive through a relevant software programme, if necessary.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

She will not receive any financial incentives to participate in this research. However, the investigator will provide her with a bottle of water and a snack during the interview.

HAS THE STUDY RECEIVED ETHICS APPROVAL?

This study has received written approval from the Research Ethics Review Committee of the *College of Human Science,* Unisa. A copy of the approval letter can be obtained from the researcher if you so wish.

HOW WILL SHE BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If she would like to be informed of the final research findings, please contact Zinaw Mesafint at +251913314468 or 10108629@mylife.unisa.ac.za. The findings are accessible for 10 years.

Should she require further information or want to contact the researcher about any aspect of this study, please call +251913314468 or email 10108629@mylife.unisa.ac.za.

Should you/she have concerns about the way in which the research has been conducted, you/she may contact Professor T.G Lumadi at lumadtg@unisa.ac.za or tell +27124296513.

Contact the research ethics chairperson of the CREC, Prof K.B Khan, khankb@unisa.ac.za, 012 429 659 if you have any ethical concerns.

Thank you for taking the time to read this information sheet.

Zinaw Mesafint Dessie

Source: UNISA

APPENDIX L: PARTICIPANT INFORMATION SHEET FOR WOMEN

Ethics clearance reference number:

Research permission reference number (if applicable):

Title: **"STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA"**

Dear Prospective Participant,

My name is Zinaw Mesafint Dessie, and I am doing research with Lumadi Thanyani, a Professor in the Department of Human Science, towards a PhD in Public Health at the University of South Africa. We have not received funding for this study. We are inviting you to participate in a study entitled **"STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA."**

WHAT IS THE PURPOSE OF THE STUDY?

I am conducting this research to develop strategies to improve contraceptive use among women and young girls attending postnatal care in Addis Ababa, Ethiopia. The research findings will be to prevent unwanted pregnancy and unsafe abortion, useful for policymakers and serve as a baseline for future research studies regarding contraceptive utilisation.

WHY AM I BEING INVITED TO PARTICIPATE?

You are invited to participate in this research because of your experience with your previous pregnancies and your attendance at postnatal service, which are valuable in conducting the proposed research. The number of study participants will be relatively small; thus, interviews will be conducted as I would like to understand the phenomenon in detail.

WHAT IS THE NATURE OF MY PARTICIPATION IN THE CURRENT STUDY?

You will be one of the participants in the current study and your role entails providing your perspective and experience in contraception utilisation, ways of improving contraceptive use, determinants of unintended pregnancy, and family planning methods you used.

You will be requested to participate in an interview using an audio recorder or answer questions with your permission. The person transcribing the interviews, data collectors and independent coders will sign a confidentiality agreement form to ensure the information remains strictly confidential. The interview will last from 45 minutes to 1 hour.

CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Participation in this study is entirely voluntary, and you are under no obligation to consent to participation. If you decide to participate, you will be given this information sheet to keep and asked to sign a written consent form. You are free to withdraw at any time without losing any of your rights or benefits or giving a reason.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

The proposed research's benefits will contribute to new knowledge on ways of improving contraceptive utilisation among women and young girls who wish to space their family size. The research findings will be useful for policymakers on the contraceptive uptake for Ethiopian women and young girls. Moreover, the research findings can be used as a baseline for future beseech studies regarding contraceptive utilisation among women and young girls in Addis Ababa, Ethiopia, to prevent unwanted pregnancy and unsafe abortion.

ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?

The forecast of potential harm in the study may involve emotional or psychological harm when you share your experience. You will also be required to invest your

valuable time through research participation. The interviews or questions will take place at a convenient time to avoid disrupting your convenience or work. Please do not hesitate to ask for any help from the investigator if you experience any discomfort so that you will be referred to a psychiatrist for counselling.

WILL THE INFORMATION I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

You have the right to insist that your name will not be recorded anywhere and that no one, apart from the researcher and identified members of the research team, will know about your involvement in this research or your name will not be recorded anywhere and no one will be able to connect you to the answers you give. Your answers will be given a code number or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods, such as conference proceedings.

Your answers may be reviewed by people responsible for ensuring that research is done properly, including the transcriber, independent coder, data collectors and Research Ethics Review Committee members. Otherwise, records that identify you will be available only to people working on the study unless you give permission for other people to see the records.

The information collected from this research project will be kept confidential and secured against unauthorised access. Information about the study participants will be kept confidential by assigning codes to the data to maintain anonymity when the data is used for research reports, journal articles, and conference proceedings.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

Hard copies of your answers will be stored by the researcher for a minimum period of five years in a locked cupboard/filing cabinet at the principal investigator's house for future research or academic purposes; electronic information will be stored on a password-protected computer.

Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. Hard copies will be shredded, and electronic copies will be

permanently deleted from the computer's hard drive through a relevant software programme, if necessary.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

You will not receive any financial incentives to participate in this research. However, the investigator will provide you with a bottle of water and a snack during the interview.

HAS THE STUDY RECEIVED ETHICS APPROVAL?

A written ethical approval certificate is issued to this study from the Research Ethics Review Committee of the *College of Human Science,* Unisa. If you so wish, a copy of the ethical certificate can be obtained from the researcher

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If you would like to be informed of the final research findings, please contact Zinaw Mesafint at +251913314468 or 10108629@mylife.unisa.ac.za. The findings are accessible for 10 years.

Should you require further information or want to contact the researcher about any aspect of this study, please call +251913314468 or email 10108629@mylife.unisa.ac.za.

Should you have concerns about the way in which the research has been conducted, you may contact Professor T.G Lumadi at lumadtg@unisa.ac.za or tell: +27124296513.

Contact the research ethics chairperson of the CREC, Prof K.B Khan, khankb@unisa.ac.za or 012 429 6549 if you have any ethical concerns.

Thank you for taking the time to read this information sheet.

Zinaw Mesafint Dessie

Source: UNISA

APPENDIX M: PARTICIPANT INFORMATION SHEET FOR YOUNG GIRLS BELOW 18 YEARS

Ethics clearance reference number:

Research permission reference number (if applicable):

Title: **"STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA"**

Dear Prospective Participant,

My name is Zinaw Mesafint Dessie, and I am doing research with Lumadi Thayani, a Professor in the Department of Human Science, towards a PhD in Public Health at the University of South Africa. We have not received funding for this study. We are inviting you to participate in a study entitled "**STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA."**

WHAT IS THE PURPOSE OF THE STUDY?

I am conducting this research to develop strategies to improve contraceptive use among women and young girls attending postnatal care in Addis Ababa, Ethiopia. The research findings will be to prevent unwanted pregnancy and unsafe abortion, useful for policymakers and serve as a baseline for future research studies regarding contraceptive utilisation.

WHY AM I BEING INVITED TO PARTICIPATE?

You are invited to participate in this research because your experience on improving contraceptive use is valuable in conducting the proposed research. The number of study participants will be relatively small; thus, interviews will be conducted as I would like to understand the phenomenon in detail.

WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?

Your role in this study entails providing your perspective and experience in contraception utilisation, ways of improving contraceptive use, determinants of unintended pregnancy, and family planning methods you used. You will be requested to take part in an interview using an audio recorder.

The person transcribing the interviews, data collectors and independent coders will sign a confidentiality agreement form to ensure the information remains strictly confidential. The interview will last from 45 minutes to 1hour.

CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Participation in this study is entirely voluntary, and you are under no obligation to consent. If you are asked to sign a written consent form. You are free to withdraw at any time without losing any of your rights or benefits or giving a reason.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

The proposed research's benefits will contribute to new knowledge on improving contraceptive utilisation among women and young girls who wish to space their family size. The research findings will be useful for policymakers on the contraceptive uptake for Ethiopian women and young girls. Moreover, the research findings can be used as a baseline for future beseech studies regarding contraceptive utilisation among women and young girls in Addis Ababa, Ethiopia, to prevent unwanted pregnancy and unsafe abortion.

ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?

The forecast of potential harm in the study may involve emotional or psychological harm when you share your experience. You will also be required to invest your valuable time through research participation. The interviews or questions will take place at a convenient time to avoid disrupting your convenience or work. Please do not hesitate to ask for any help from the investigator if you experience any discomfort so that you will be referred to a psychiatrist for counselling.

WILL THE INFORMATION I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

You have the right to insist that your name will not be recorded anywhere and that no one, apart from the researcher and identified members of the research team, will know about your involvement in this research or your name will not be recorded anywhere and no one will be able to connect you to the answers you give.

Your answers will be given a code number or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods, such as conference proceedings.

Your answers may be reviewed by people responsible for ensuring that research is done properly, including the transcriber, independent coder, data collectors and Research Ethics Review Committee members. Otherwise, records that identify you will be available only to people working on the study unless you give permission for other people to see the records.

The information collected from this research project will be kept confidential and secured against unauthorised access. Information about the study participants will be kept confidential by assigning codes to the data to maintain anonymity when the data is used for research reports, journal articles, and conference proceedings.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

Hard copies of your answers will be stored by the researcher for a minimum period of five years in a locked cupboard/filing cabinet at the principal investigator's house for future research or academic purposes; electronic information will be stored on a password-protected computer.

Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. Hard copies will be shredded, and electronic copies will be permanently deleted from the computer's hard drive through a relevant software programme, if necessary.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

You will not receive any financial incentives to participate in this research. However, the investigator will provide you with a bottle of water and a snack during the interview.

HAS THE STUDY RECEIVED ETHICS APPROVAL?

This study has received written approval from the Research Ethics Review Committee of the *College of Human Science,* Unisa. A copy of the approval letter can be obtained from the researcher if you so wish.

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If you would like to be informed of the final research findings, please contact Zinaw Mesafint at +251913314468 or 10108629@mylife.unisa.ac.za. The findings are accessible for 10 years.

Should you require further information or want to contact the researcher about any aspect of this study, please call +251913314468 or email 10108629@mylife.unisa.ac.za.

Should you have concerns about the way in which the research has been conducted, you may contact Professor T.G Lumadi at lumadtg@unisa.ac.za or tell +27124296513.

Contact the research ethics chairperson of the CREC, Prof K.B Khan, khankb@unisa.ac.za or 012 429 6549 if you have any ethical concerns.

Thank you for taking the time to read this information sheet.

Zinaw Mesafint Dessie

Source: UNISA

APPENDIX N: PERMISSION LETTER TO CONDUCT RESEARCH

Request for permission to conduct research at Gandhi Memorial Hospital/ Bole Bulbulla Health Centre/AWWA Mother's and Children Clinic, Addis Ababa, Ethiopia**.**

"STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA"

23rd January, 2022

Gandhi Memorial Hospital

Lideta/Bole Kifleketema

Obstetrics and Gynecology Department

Addis, Ababa

Dear Sir/ Madam,

I, Zinaw Mesafint Dessie, am doing research with Lumadi Thanyani, a professor in the Department of Human Science, towards a PhD in Public Health at the University of South Africa. We have not received funding for this study. We are inviting you to participate in a study entitled **"STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HOSPITALS AND CLINICS IN ADDIS ABABA, ETHIOPIA."**

The aim of the study is to develop strategies to improve contraceptive use among women and young girls attending postnatal care in selected hospitals and clinics in Addis Ababa, Ethiopia.

Your company has been selected because your health institution has been given different healthcare services, including antenatal care, delivery, immunisation, postnatal care and many other services for several years. Therefore, the right participants and informants are assumed to be obtained in your organisation.

The study will entail a mixed method approach, combining quantitative and qualitative research methods by providing questionnaires for mothers and young girls attending

postnatal care. Interviews will be conducted with mothers, young girls, and healthcare professionals in your health facility. The benefits of this study are to develop strategies among women and young girls attending postnatal care in your health facility and serve as a baseline for future research studies regarding contraceptive uptake.

Moreover, by improving modern contraceptive utilisation, family size can be determined and spaced, and the risk of unwanted pregnancy and unsafe abortion can be prevented. The strategies will further help the development of context-specific contraceptive utilisation methods and ways of improving contraceptive use among women and young girls in Addis Ababa, Ethiopia.

In the qualitative part of the research, the study may involve emotional or psychological harm when people share their experiences during interviews or answering questions.

Plan to manage potential harm: all participants will be given detailed information related to the proposed research. Moreover, participants will be given an information sheet prior to the interview. The data collector will stop asking any more questions, give space for participants to breathe, provide tissue, and give supportive care if any unexpected harm occurs. The data collector will actively listen to the participant and give due time to reflect on her emotions. Participants will be referred with a request letter to a psychiatrist for counselling at the nearby hospital if the problem persists, and the costs of counselling (card fee, medicine) will be covered by the researcher.

The study's findings will be disseminated to the hospitals and clinics where it is conducted after publication.

Yours sincerely,

Zinaw Mesafint

Principal investigator

APPENDIX O: EDITORIAL CERTIFICATE

NIM Editorial Midrand, Gauteng, 1685 Cell: +27 82 587 4489 Email: info@nimeditorial.co.za www.nimeditorial.co.za Reg. No. 2016/488856/07

28 September 2023

To Whom It May Concern,

This certificate confirms that the thesis entitled; **STRATEGIES FOR HEALTHCARE PROFESSIONALS TO IMPROVE THE USE OF CONTRACEPTIVE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE AT SELECTED HEALTHCARE FACILITIES IN ADDIS ABABA, ETHIOPIA** by **ZINAW MESAFINT DESSIE** was edited by an expert English editor with a PhD. The following issues were corrected: grammar, spelling, punctuation, sentence structure, phrasing, and formatting.

Signed on behalf of NIM Editorial by:

Dr N.I. Mabidi
Founder & Chief Editor

APPENDIX P: PERMISSION LETTER TO CONDUCT THE STUDY

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City Government of Addis Ababa Health Bureau

REF.N.O. A/A/4619/227
DATE 24/2/15

TO:

- GANDHI MEMORIAL HOSPITAL
- BOLE SUB-CITY HEALTH OFFICE
- AWWA MCH CLINIC

Subject: Request to access Facilities to conduct approved research

This letter is to support **ZINAW MESAFINT DESSIE** conduct research which is entitled as **"STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE IN SELECTED HOSPITALS AND CLINICS, ADDIS ABABA, ETHIOPIA."** The study proposal w as duly reviewed and approved by Addis Ababa Health Bureau 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.

The Addis Ababa City Administration Health Bureau

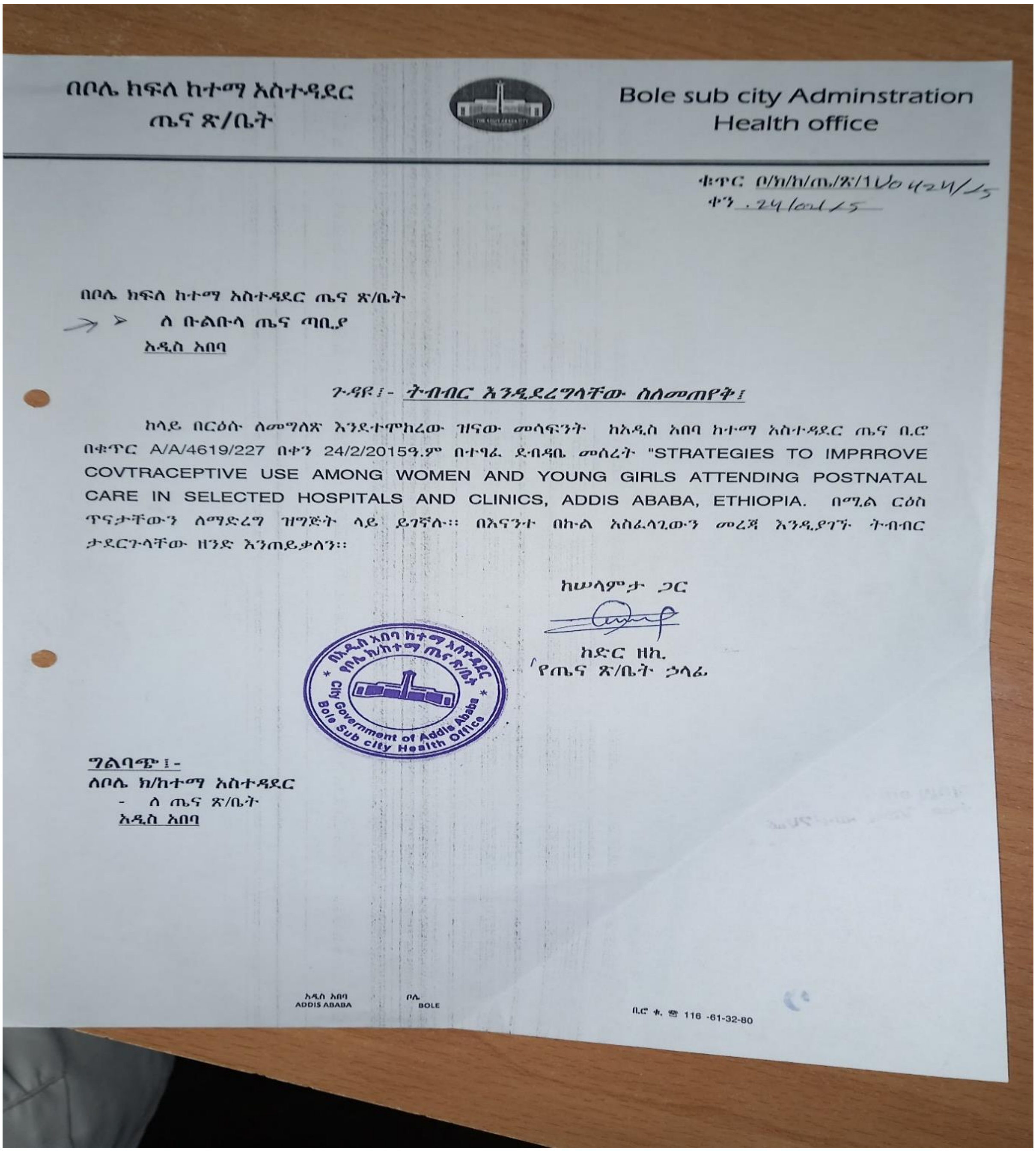
With Regards

Ethical Clearance Committee

Cc

- ZINAW MESAFINT DESSIE
- ETHICAL CLEARANCE COMMITTEE

APPENDIX Q: PERMISSION LETTER TO CONDUCT THE STUDY



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Bole sub city Adminstration
Health office

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City Government of Addis Ababa Bole Sub city Health Office

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APPENDIX R: UNISA ETHICAL CERTIFICATE TO CONDUCT THE STUDY

UNISA university of south africa

COLLEGE OF HUMAN SCIENCES RESEARCH ETHICS REVIEW COMMITTEE

25 July 2022

NHREC Registration # :
Rec-240816-052
CREC Reference # :
10108629 _CREC_CHS_2022

Dear Mr. ZINAW MESAFINT DESSIE

Decision:
Ethics Approval from 25 July 2022 to 25 July 2027

Researcher(s): Name: Mr Z.M Dessie
Contact details: 10108629 @mylife.unisa.ac.za
Supervisor(s): Name: Prof T.G Lumadi
Contact details: lumadtg@unisa.ac.za

Title: STRATEGIES TO IMPROVE CONTRACEPTIVE USE AMONG WOMEN AND YOUNG GIRLS ATTENDING POSTNATAL CARE IN SELECTED HOSPITALS AND CLINICS, ADDIS ABABA, ETHIOPIA

Degree Purpose: PhD

Thank you for the application for research ethics clearance by the Unisa College of Human Science Ethics Committee. Ethics approval is granted for five years.

The ***medium risk application*** *was reviewed by* College of Human Sciences Research Ethics Committee, in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the College Ethics Review Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the

confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress reports.

5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
7. No fieldwork activities may continue after the expiry date **(25 July 2027).** Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

The reference number ***10108629_CREC_CHS_2022*** *should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Yours sincerely,

Signature: 

Prof K.B Khan
CHS Research Ethics Committee Chairperson
Email: khankb@unisa.ac.za
Tel: (012) 429 8210

Signature: PP 

Prof K. Masemola
Exécutive Dean: CHS
E-mail: masemk@unisa.ac.za
Tel: (012) 429 2298