FACTORS AFFECTING UTILISATION OF MATERNAL HEALTHCARE FACILITIES IN ETHIOPIA

by

MARUTA MELAT BENTI

submitted in accordance with the requirements

for the degree of

MASTER OF PUBLIC HEALTH

in the subject

HEALTH STUDIES

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: PROF R MMUSI-PHETOE

AUGUST 2021

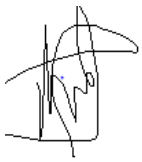
Student number: 61981664

DECLARATION

I declare that **FACTORS AFFECTING UTILISATION OF MATERNAL HEALTHCARE FACILITIES IN ETHIOPIA** is my own work and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the dissertation to originality checking software and that it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at UNISA for another qualification or at any other educational institution.



28 AUGUST 2021

SIGNATURE **DATE**

Maruta Melat Benti

DEDICATION

I dedicate this dissertation to my child Anani

ACKNOWLEDGEMENTS

I would like to earnestly and unreservedly thank my supervisor, Prof Rose Mmusi-Phetoe, for her brilliant ideas, committed guidance and constructive criticism throughout the research processes. She was always there to guide me and give me focus throughout thevarious stages of the research. I will forever remain grateful to Prof Rose Mmusi-Phetoe for her intellectual resourcefulness and mentorship.

I sincerely thank the Department of Health Studies (present graduates, faculty and staff) and the University of South Africa for hosting me. I was touched by their encouragement and support; it assisted me in the completion of this dissertation.

Many thanks to Dr Ibsa Mussa for sharing your experiences with me and for devoting your time to this thesis.

Finally, my heartfelt gratitude to my family, especially my mother, my father and my sister. Your love, prayers, encouragement and support shaped me into the person I am now. I cannot thank you enough. You mean the world to me. May the Almighty always bless each one of you.

FACTORS AFFECTING UTILISATION OF MATERNAL HEALTHCARE FACILITIES IN ETHIOPIA

STUDENT NUMBER: 61981664
STUDENT: MARUTA MELAT BENTI
DEGREE: MASTER OF PUBLIC HEALTH
DEPARTMENT: HEALTH STUDIES, UNIVERSITY OF SOUTH AFRICA
SUPERVISOR: PROF R MMUSI-PHETOE

ABSTRACT

Improving maternal and newborn health requires improved utilisation of maternal healthcare facilities and services. The study's overall purpose was to explore the factors associated with the utilisation of maternal healthcare facilities in Jimma Zone Serbo woreda of Oromiya National Regional State, Ethiopia. The study established what proportion of women attended different components of maternal healthcare facilitiesin Ethiopia in five years preceding the study.

A cross-sectional study of 384 women – selected through multistage techniques – was conducted. Data were collected using a structured interviewer-administered questionnaire, and analysed using Statistical Program for Social Sciences (SPSS) version 25.0 statistics 17.0.

The study found that 93.1%, 85% and 71.1% of the respondents utilised antenatal care (ANC) services, skilled delivery, and postnatal care (PNC) services, respectively. Several factors were found to be associated with the utilisation of maternal healthcare facilities and services in respect of ANC, skilled delivery, and PNC. These included a lack of privacy affecting the quality of care at the facility level, and socio-economic factors, including respondents' level of education, occupation, income and decision-making power.

Key terms

Antenatal care; factors; maternal healthcare facilities; postnatal care; reproductive ages, skilled delivery.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ANC	Antenatal care
DHS	Demographic and Health Survey
EDHS	Ethiopia Demographic and Health Survey
EMDHS	Ethiopia Mini Demography Health Survey
FDRE	Federal Democratic Republic of Ethiopia
FMoH	Federal Ministry of Health
MDGs	Millennium Development Goals
MMR	Maternal Mortality Rate
PNC	Postnatal Care
SBA	Skilled Birth Attendant
SDGs	Sustainable Development Goals
SPSS	Statistical Program for Social Sciences
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children's Fund
WHO	World Health Organization

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

The promotion of maternal health and reduction of the maternal mortality ratio (MMR) have emerged as global priorities because of a significant gap in the status of women's wellbeing between developed and developing countries (World Health Organization [WHO] 2018).Maternal deaths were estimated to be 295,000 globally in the year 2017 (United Nations Development Programme [UNDP] 2018:1), and it has been estimated that 99% of all maternal deaths occur in developing countries, with more than half occurring in sub-Saharan Africa (WHO 2018).Ethiopia is one of the countries in sub-Saharan Africa that contributes a significant share to MMR; it recorded 401 deaths per 100,000 live births in 2017 (Central Statistical Agency(CSA) [Ethiopia]& ICF 2019) despite significant efforts to improve maternal health outcomes (Tessema, Laurence, Melaku, Misganaw, Woldie, Hiruye, Amare, Lakew, Zeleke & Deribew 2017:1).

Neonatal mortality also remains a challenge. The WHO (2020) reported 27 neonatal deaths per 1,000 live births in Sub-Saharan Africa country due to pregnancy and birth-related complications in 2019. Moreover, according to the WHO (2016:2) and Bahl and Daelmans (2015), 2.7 million babies dieannually during the first 28 days of life, and 2.6 million third-trimester stillbirths have been recorded annually owing to mothers' health status.

Like most developing countries in sub-Saharan Africa, neonatal mortality in Ethiopia is on the rise. The country's estimated neonatal mortality rate was 29 per 1,000 live births in 2016 and 30 per 1000 live births in 2019 (Dheresa & Daraje 2021).

Studies on maternal and neonatal mortality in developing countries have established the need for antenatal care (ANC), skilled delivery assistance, and postnatal care (PNC) to promote better health outcomes during pregnancy andchildbirth (Ayele, Melku & Belda 2019).Poor health outcomes among women and their neonates can be attributed towomen's under-utilisation of modern and maternal healthcare services in Ethiopia

(Mekonnen& Mekonnen 2002; Tarekegn, Lieberman &Giedraitis 2014). More than 80% of maternal deaths can be prevented if pregnant women's access to essential maternity care, such as ANC, institutional delivery and PNC is ensured (Shija, Msovela & Mboera 2011). Institutional skilled birth attendants and emergency obstetric care could also contribute to improved maternal health outcomes.

1.2 BACKGROUND INFORMATION TO THE RESEARCH PROBLEM

It is widely recognised that improving maternal health and reducing maternal mortality is dependent on access to and the provision of maternal health services – both prenatal and postnatal – by trained medical personnel (Adhikari 2016).The World Bank's report asserts that an improvement in and access to maternal healthcare services for pregnant women in developed and developing countries remains one of the most critical issues for socio-economic development (World Bank 2015). The report (World Bank 2015:36) further notes that, in developed countries where women have access to basic healthcare, giving birth is a positive and fulfilling experience. Conversely, for many women in developing countries where access and the utilisation of maternal healthcare facilities is a challenge, childbearing is associated with suffering, ill-health and even death (World Bank 2015:36).

Although Ethiopia has witnessed some progress in reducing the MMR over the past decade, by 2015 its MMR was 412/100,000 live births, far behind the country's Millennium Development Goal (MDG) target of 279/100,000 live births. Several factors contributed to the country's slow progress towards the set target, including a lack of access to skilled birth attendants at healthcare facilities and limited high-quality obstetric and newborn care (Federal Ministry of Health [FMoH] 2015). According to the Ethiopian Demographic and Health Survey of 2016, only one in four live births in the five years preceding the survey was overseen by a skilled birth attendant (28%) or occurred in a health facility (26%) (CSA & ICF 2016). The problem is exacerbated by a weak referral system, contextual, socio-cultural and gender-related factors that influence women's ability to seek and receive skilled delivery assistance, resulting in poor maternal health outcomes.

Many strategies were designed and implemented to address some of the economic, social, and physical factors and barriers contributing to poor maternal health outcomes

(Onah, Ikeako& Iloabachie 2006). However, women's utilisation of maternal healthcare facilities is often influenced by various socio-cultural, economic, and health system factors operating at the community, household, and individual level, as well as within the larger social and political environments (Onah et al 2006). It is therefore imperative to address health system factors and socio-economic barriers to increase women's overall utilisation of health services.

1.3 RESEARCH PROBLEM

Poor health outcomes, such as high maternal and neonatal deaths, have been associated with the under utilisation of healthcare facilities in Ethiopia. The CSA and ICF(2014:34-35) determined that 16% of births were assisted by a skilled birth attendant, of which only 5% were assisted by a doctor, and 11% by a nurse or a midwife during the period 2010–2014. It was further reported that approximately 2% of births were assisted by health extension workers, and 51% of births were assisted by a relative or some other person (CSA & ICF 2014:34-35). Moreover, traditional birth attendants assisted 27% of home deliveries, while 5% of home births were unattended (CSA & ICF 2014:34-35). The above study showed that an estimated 82% of women did not receive any skilled delivery assistance. According to a 2016 multilevel analysis by the EMDHS, significant variations in the utilisation of ANC and institutional delivery services were found to be attributed to an array of individual, household and context-related factors (CSA & ICF 2016). Against this background, the need to investigate factors affecting women's utilisation of maternal healthcare facilities in Ethiopia was deemed essential.

1.4 PURPOSE AND OBJECTIVES

1.4.1 Research purpose

The purpose of this study was to explore the factors associated with the utilisation of maternal healthcare facilities in Ethiopia.

1.4.2 Research objectives

The research objectives were to:

- Determine the proportion of women who received ANC, skilled delivery and PNC atmaternal healthcare facilities over the five years prior to data collection.
- Determine what factors affect women's utilisation of maternal healthcare facilities in the study area.

1.4.3 Research questions

The main research questions were:

- What proportion of women received ANC, skilled delivery and PNC atmaternal healthcare facilities in the five years prior to data collection?
- What factors are affecting women's utilisation of maternal healthcare facilities in the study area?

1.5 SIGNIFICANCE OF THE STUDY

The insights gained from this study will generate crucial findings regarding the utilisation of maternal healthcare facilities in Jimma Zone Serbo woreda of Oromiya National Regional State, Ethiopia. The findings may be used to identify possible interventions to improve women's utilisation of maternal healthcare facilities in Ethiopia. Furthermore, the research findings will provide insight to policymakers, healthcare practitioners, women and the community at large regarding the factors that affect women's health, in particular. The study's findings will be published in international and local journals to disseminate knowledge and experience.

1.6 DEFINITIONS OF KEY CONCEPTS

1.6.1 Antenatal care (ANC)

ANC refers to the care given by healthcare professionals to pregnant women during pregnancy (WHO 2016a:19).

1.6.2 Maternal health

Maternal health relates to the health of women during pregnancy, childbirth, and in the postpartum period (WHO 2015:8).

1.6.3 Maternal healthcare facility

A maternal healthcare facility is a place where maternal healthcare services are provided, including ANC, skilled delivery and PNC (Nuamah, Agyei-Baffour,Mensah, Boateng, Quansah, Dobin & Addai-Donkor 2019).

1.6.4 Maternal healthcare service utilisation

This concept denotes the use of professional health services provided to women during pregnancy, delivery, and in the postpartum period (Mustafa, Jeffree & Husain 2016:112).

1.6.5 Postnatal care (PNC)

PNC is provided to mothers and their newborn(s) for up to six weeks after delivery(Gillet, Lange, Godin, Devos & Moens 2014:4).

1.6.6 Proportion

A proportion is a special type of ratio in which the numerator is included in the denominator (Creswell, Bates and Sheikh (2013:9).

1.6.7 Skilled birth attendant

A skilled birth attendant is a person who has been educated and trained to proficiently manage pregnancy, childbirth, and the postnatal period (Utz, Siddiqui, Adegoke & Broek 2013:1063).

1.6.8 Skilled delivery

Skilled delivery refers to a delivery that takes place at any healthcare facility staffed by skilled birth attendants (Yoseph, Abebe, Mekonnen, Sisay & Gonete 2020). The terms 'delivery', 'skilled delivery' and/or 'institutional delivery'are used interchangeably in this dissertation.

1.6.9 Traditional birth attendant

A traditional birth attendant is a person who is not professionally educated in childbirth, but has a skill that is gained through practice to manage uncomplicated deliveries (Sarmento 2014:1).

1.7 OPERATIONAL DEFINITIONS

The definitions in this section are operationalised according to their use in the current study.

1.7.1 Dependent variables

Utilisation of maternal healthcare facilities: Healthcare facilities where women receive services during pregnancy, childbirth, and in the postpartum period.

1.7.2 Independent variables

1.7.2.1 Maternal characteristics

Age: Refers to a woman's age at the time of the survey.

Marital status: Refers to the woman's domestic status at the time of the study. The categories included married, separated (divorced), widowed and single (never married).

Education: The highest level of education attained by the woman.

Employment status and occupation: Women who were employed at the time of data collection for a wage, salary or profit.

Parity: Is the total number of births a woman experienced up to the time of data collection, including live births and stillbirths.

Women's autonomy: Implies women's decision-making power.

1.7.2.2 Healthcare facilities characteristics

Travel time: The time taken to travel from a woman's home to a healthcare facility.

Perceived quality of care: Indicates a woman's perception of the quality of care offered at the maternal healthcare facility.

1.8 RESEARCH DESIGN AND METHOD

A cross-sectional community-based survey was conducted to solicit and describe factors affecting the utilisation of maternal healthcare facilities in Ethiopia. Polit and Beck (2012:118-136) indicate that in this type of study, either the entire population or a subset thereof is selected, and from these, data are collected to help answer questions of interest to the researcher. The researcher thus used this design as it allowed her to determine the proportion of women who utilised ANC, skilled delivery, and PNC at maternal healthcare facilities in the five years prior to the study.

This was followed by identifying and describing factors that affect the utilisation of maternal healthcare facilities in Ethiopia, thereby exposing gaps in knowledge and providing information to strengthen maternal healthcare services in Ethiopia. The study took place in Jimma Zone Serbo woreda of Oromiya National Regional State, Ethiopia.

1.9 SCOPE AND LIMITATIONS

The study was limited to exploring women's utilisation of maternal healthcare facilities in Jimma Zone Serbo woreda of Oromiya National Regional State, Ethiopia. Ultimately, various factors influencing their use of these facilities were exposed in the study area. Other healthcare facilities in different settings could have provided an additional view of the factors that shape pregnancy, childbirth, and postnatal outcomes in Ethiopia as a country. Further, the source of data for this study was individual reports from

respondents, and information was not validated by any objective sources, such as healthcare facility cards.

The other limitation of this study was that the respondents' characteristics were not categorised according to those who were either pregnant or had given birth a year ago, two years ago, three years ago, etc. (over the five years prior to the study). Such characterisation might have illustrated unique findings to promote women's utilisation of maternal healthcare facilities.

Finally, recall bias was likely since the women were asked to recount events that transpired over the five years prior to the data being collected.

1.10 DISSERTATION STRUCTURE

The thesis is organised into six chapters.

Chapter 1 covers the introduction and background to the study, presents a statement of the problem, research purpose, research questions, the aim and objectives of the study. The chapter also presents the definitions of terms, as well as the scope of the study, the research design and method.

Chapter 2 contains a comprehensive literature review of the phenomenon under investigation.

Chapter 3 concentrates on the research methodology, including the study population, sample design and procedure, the data collection instrument, and the method of data analysis.

Chapter 4 focuses on data presentation, and a general description of the data, data analysis, and interpretation of results is offered.

Chapter 5 presents the discussion of the findings, while Chapter 6 covers the research summary, conclusion, recommendations, and limitations of the study.

1.11 CONCLUSION

In this chapter, the researcher presented an overview of the study. The researcher started the chapter with an introduction, then presented the research background and problem statement. These sections highlighted the extent of maternal and neonatal mortality in Ethiopia, largely attributed to an increase in unskilled birth attendance. The aim of the study, the significance of the study, and definitions of terms were further discussed. The research design, method, scope and limitations of the study were also mentioned. Finally, the structure of the dissertation was outlined. The next chapter presents the literature review on the phenomenon under investigation.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter, the researcher presents the literature review on the possible determinants and factors affecting maternal healthcare facility utilisation. The chapter commences by presenting the concept of maternal health, followed by maternal healthcare in the global, regional and Ethiopian contexts. In this regard, sufficient attention is given to existing research on maternal healthcare in Ethiopia. The chapter further outlines access and the utilisation of maternal healthcare facilities and factors affecting maternal healthcare facility utilisation.

2.2 MATERNAL HEALTH

The WHO (2010:8-9)defines maternal health as the physical wellbeing of a mother during pregnancy, childbirth and postpartum.It has emerged as a global priority mainly because of the rate of dying mothers in developing countries, reflecting a significant gap in the status of mothers' wellbeing between developed and developing countries (World Bank 2015).

Overall, regional disparities persist, with the MMR in developing countries being 14 times higher than in developed nations (WHO 2013). Ethiopia is one of the developing countries with an MMR among the highest in the world, recording 353 deaths per 100,000 live births in 2010, against the target of 267 deaths per 100,000 live births by 2015(WHO 2016a:19). Therefore, in Ethiopia, for every 1,000 live births, approximately three to four women died during pregnancy or childbirth, or within two months after childbirth (WHO 2016b:13). Consequently, in 2015, reproductive health disorders and complications were regarded as a leading cause of death among women – from a list of 25 causes (WHO 2016b:9). It is further noted that maternal deaths ranked first in a list of 39 and 64 leading causes of death in 2010 and 2015, respectively (WHO 2016b:9). The report highlighted that an Ethiopian woman was therefore at a significantly increased risk of dying compared to her counterparts in the developed world, where the risk was

estimated to be 1 in 23,700, and 1 in 22,100 live births in countries such as Greece and Poland, respectively (WHO 2016b:9).

2.3 MATERNAL HEALTHCARE

Maternal healthcare is the health service provided to mothers (WHO 2015:1-38). Thus, quality maternal health services are central to the achievement of Sustainable Development Goal (SDG) 3, as agreed on at the United Nations Sustainable Development Summit in 2015 (WHO 2015:1-38). At this summit, member states pledged to reach 17 SDGs or Global Goals by 2030 (WHO 2015:1-38). The SDGs build on the successes or failures of the MDGs. As stated, target 3.7 of SDG 3 calls for countries to reduce their MMR to less than 70 deaths per 100,000 live births (WHO 2015:1-38). A WHO report (2015) also notes that globally, the MMR fell by nearly 44% between 1990 and 2015, but it continued to be high in low-resource regions, specifically sub-Saharan Africa. Out of 302,000 maternal deaths in developing countries, the sub-Saharan Africa region recorded 201,000 at the turn of the MDG era (WHO 2015:4).

2.4 ACCESS AND UTILISATION OF MATERNAL HEALTHCARE FACILITIES

This section commences by discussing the proportion of women attending ANC, delivering their babies at healthcare facilities, and attending PNC services. Factors determining the utilisation of maternal healthcare facilities are also discussed.

2.4.1 Proportion of women attending antenatal care (ANC), delivering their babies at healthcare facilities, and attending postnatal care (PNC) services

Most maternal deaths could be prevented or substantially reduced if women would utilise maternal healthcare facilities and have skilled birth attendance (doctor, nurse and midwife) during childbirth. However, the estimation of births attended by skilled health personnel between 2012 and 2017 showed inequalities. For example, in 2012–2017, only 59% of births in the sub-Saharan Africa region, where maternal mortality is the highest, were attended to by skilled health personnel (WHO 2019). The situation is different in other north African regions such as Egypt, where over 99% of women utilised maternal healthcare facilities and were attended by skilled health personnel,

according to 2014 Egypt DHS (Dimbuene, Amo-Adjei, Amugsi, Mumah, Izugbara & Begu 2017:8).

2.4.1.1 Antenatal care (ANC) utilisation

The global pattern of maternal healthcare utilisation varies. In a longitudinal study conducted in China, it was found that the service utilisation rate increased from 79.24% in 2009 to 91.67% in 2016 (Zhao et al 2020). In 2012 and 2015, a Cambodian study illustrated that woman who had received ANC once during pregnancy comprised 1.7% and 1.3% of respondents, respectively. However, those who had attended four ANC visits comprised 64.3% and 91.7% of the respondents, respectively (Hwang & Park 2019). Another study conducted in Ghana reported that, of the 720 women who participated in the 2015 study, most (68.5%) women had three or more ANC visits during their previous pregnancies, whereas 14.7% had none (Nuamah et al 2019).

Similarly, in 2012 Ayele, Belayihun, Teji and Ayana (2019) conducted a study in Kombolcha, Ethiopia, among reproductive-aged women who gave birth in the five years before their survey. They reported that 86.1% of respondents attended ANC for their recent birth. Of these, 35.5% started attending ANC in their first trimester, 46.2% in their second trimester, and the remaining 18.3% in their third trimester. Of 426 mothers who received ANC for their most recent pregnancy, 263 (61.7%) had fewer than four ANC visits, while 163 (38.3%) attended four or more ANC visits (Ayele, Belayhunet al2019). In another study conducted in the West Shoa zone, Ethiopia, with women who had a baby under one year old in 2018, 89% of the mothers had at least one ANC visit during their last pregnancy, while 79% of mothers had fewer than four ANC visits during their last pregnancy (Mengistu, Beyene, Desta & Bayeta 2018).

2.4.1.2 Institutional delivery

According to literature, half of all deliveries occur outside the health facility and are attended by unskilled personnel in Ethiopia. For example, the 2019 EMDHS data confirmed that only 50% of babies were delivered by a skilled birth attendant in a healthcare facility in 2018 (CSA & ICF 2019:4). The 2019 EMDHS highlighted differences by residence; the situation was worse in rural areas with fewer institutional deliveries(CSA & ICF 2019). The survey results indicated that 72% of urban births were

assisted by a skilled birth attendant in a healthcare facility, compared to 43% of births in rural areas where healthcare facilities were not utilised for assisted labour and PNC (CSA & ICF 2019:5). Somali Region has the lowest percentage of births delivered by a skilled birth attendant (26%). In comparison, Addis Ababa has the highest percentage (96%) of births delivered by a skilled healthcare provider in a healthcare facility (CSA & ICF2019:14). A 2017 Bale zone study in Ethiopia – conducted with women who gave birth 24 months before the survey – revealed that from a total of 402 sampled mothers, 123 (31.8%) gave birth at healthcare facilities during their last pregnancy. However, the majority of respondents (264; 68.2%) delivered at home without the assistance of a skilled birth attendant (Ayele, Melkuet al2019).

The findings of a Nigerian study that analysed the 2005 National HIV/AIDS and Reproductive Health Survey corroborated the findings of studies conducted in Ethiopia – discussed above – showing that only 43.5% of deliveries were attended by skilled birth attendants (Babalola & Fatusi 2009). The researchers concluded that the utilisation of the service is affected by maternal socio-economic characteristics and healthcare access (Babalola & Fatusi 2009).

Some studies conducted elsewhere similarly found that a substantial proportion of women still deliver their babies at home. According to research conducted in Nepal in 2016, a higher proportion (47%) of marginalised women delivered at home than non-marginalised women (26%) (Devkota, Maskey, Pandey, Karki, Godwin, Gartoulla, Mehata & Aryal2020). On the contrary, another study conducted in India, using data from the 2015–2016 National Family Health Survey, showed that 81% of women who were married had institutional deliveries(Paul & Chouhan 2020).

2.4.1.3 Postnatal care (PNC) utilisation

According to the 2014–2015 Chad Demography and Health Survey, the proportion of women who received ‘adequate’ maternal healthcare services (namely the proportion of women who belong to the ‘highest’ category, defined by the combination of four or more ANC visits, facility delivery, and first PNC within two days of birth), was a mere 7% (Soojin& Sun-Young 2019). Similarly, the Nigerian National HIV/AIDS and Reproductive Health Survey (2005) reported that approximately 41.2% of women received PNC

(Babalola & Fatusi 2009). Another study in Ghana showed that 33.6% of women utilised PNC services in 2015 (Nuamah et al 2019).

In 2016, a community-based cross-sectional study was conducted in Wolaita among women who delivered in the 12 months preceding the survey; it reported the postnatal coverage of the Sodo Zuria district was 77.7% (Saol, Argaw & Facha 2021). Concerning types of services utilised during the postnatal visit, 167 (28.4%) respondents utilised family planning, nearly half (44.9%) received immunisation, 22.6% were tested and counselled for HIV, and 106 (18%) respondents were counselled on breastfeeding. The respondents gave different reasons for not attending PNC services; the most common reason being that respondents felt and appeared healthy (Saol et al 2021). Another community-based cross-sectional study in Debretabore reported that, in 2017, PNC service utilisation was 57.5% among its respondents (Wudineh, Nigusie, Gesese, Tesu & Beyene 2018).

It has also been determined in previous studies that the utilisation of maternal healthcare facilities is hindered by several demand and supply side barriers in developing countries, including Ethiopia (Kyei-Nimakoh, Carolan-Olah & McCann 2017:5-11). The main demand-side barriers identified were limited household resources or income; unavailability of a means of transportation; indirect transport costs; a lack of information on healthcare services; issues related to stigma, women's self-esteem and assertiveness; a lack of birth preparation; cultural beliefs and practices; and ignorance about necessary obstetric health services. On the supply side, the most significant barriers were the cost of services; the physical distance between healthcare facilities and service users' residence; quality of services, including long waiting times at health facilities, poor staff knowledge and skills, poor referral practices; and staff's interpersonal relationships or client-provider interactions (Kyei-Nimakoh et al 2017:5-13).

2.5 FACTORS DETERMINING MATERNAL HEALTHCARE FACILITY UTILISATION

A review of the literature suggests that the use of modern healthcare, such as maternal health services, can be influenced by women's socio-demographic characteristics,

cultural context, decision-making power, and the accessibility of these services. These factors are discussed next.

2.5.1 Socio-demographic characteristics

2.5.1.1 Socio-economic environment

A woman's chance of dying or becoming disabled during pregnancy and childbirth is closely connected to her social and economic status, the norms and values of her culture, and the geographic remoteness of her home (WHO 2008). Generally, the poorer and more marginalised a woman is, the greater her risk of death; hence, the inference that the MMR reflects disparities between developed and developing countries more clearly than any other measure of health (WHO 2008).

Between 1990 and 2010,a woman's lifetime risk of dying due to pregnancy or childbirth was 1 in 39 in sub-Saharan Africa, compared to 1 in 4,700 in industrialised countries (WHO, UNICEF, UNFPA & World Bank 2012:59). According to the WHO (2014), 99% of women in developing countries die from preventable causes related to pregnancy and childbirth. Moreover, a trend in maternal mortality between 1990 and 2010 illustrated that, among the women who died as a result of pregnancy or childbirth in developing countries, approximately 440 lived in sub-Saharan Africa, 228 in South Asia, and only six were from developed countries (WHO, UNICEF, UNFPA & World Bank 2012:59).

2.5.1.2 Religious affiliation

Studies conducted in developing countries also showed that maternal healthcare facility utilisation is affected by women's religion. This was explained by the fact that women's autonomy, gender relationships and social networks are influenced by religion (Nikose, Singh, Khan, Arora, Taywade, Gudhe & Gadge 2015:4-6). A study conducted in Bangladesh also reflected that Muslims appeared less likely to seek maternal healthcare services compared to Christians (Guimei 2017:6). Similarly, in Cameroon and Senegal religion was found to influence women's family planning decisions (Bakibinga, Mutombo & Mukiira 2015:192); this finding was also supported in Ethiopia. A possible explanation could be that the Muslim women who participated in research believe their naked bodies should only be seen by their husbands. As a result, they

prefer female traditional birth attendants over skilled healthcare providers (Kifle, Azale & Melsew 2017:1-11).

2.5.1.3 Maternal age

More Ethiopian women are married by the age of 18 compared to men, and women are likely to give birth to their first baby within 2.1 years after marriage (CSA & ICF 2017:4). The median age at first birth for women is thus 19.2 years, yet nearly 4 in 10 (38%) women give birth at age 18 (CSA & ICF 2017:4). Abdul (2012:11) also reports that, in northern Nigeria, girls are forced into marriage at young ages – from nine years old – and they are given to older men without their consent.

The teenage birth rate has recently been controlled at 12/1,000 through efforts to provide adolescents with sex education and enable them to make behavioural changes. Sex education is expected to continue in light of achieving the relevant SDG (Federal Democratic Republic of Ethiopia [FDRE] 2017). A study conducted by Raj and Boehmer (2013:536-551) reflected that a 10% reduction in child marriages could contribute to a 70% reduction in a country's MMR, and a 3% decrease in infant mortality rates. Moreover, high rates of child marriage are linked to lower use of family planning, higher fertility, unwanted pregnancies, and higher risk for complications during childbirth (i.e.delivery complications, fistula, low infant birth weight, and malnutrition). Maternal and infant mortality (early and inadequately spaced pregnancies among rural adolescent wives result in poor maternal and child health), limited educational advancement, and reduced economic earning potential were also reported (Raj & Boehmer 2013:536-551).

In Ethiopia, 13% of adolescent women aged 15–19 are already mothers or pregnant with their first child. Regionally, teenage pregnancy ranges from 3% in Addis Ababa to 23% in Afar (CSA & ICF 2017:3-14). However, teenage pregnancy decreases with increased education; 28% of young women with no education have begun childbearing, compared to 3% of young women with a higher than secondary level education(CSA & ICF 2017:3-14).

2.5.1.4 Parity

Some studies reported that multiparity was perceived as a significant contributor to home deliveries(Ebot 2015:1-9). However, and interestingly, parity is inversely related to women's level of family planning (Bakibinga et al 2015:192). Women with more than five deliveries were nearly four times more likely to experience an adverse outcome than women with one delivery (Asundep, Carson, Archer, Tameru, Agidi, Zhang & Jolly 2013:279-288). Similarly, women expecting their fourth or fifth child were 78% less likely to give birth at healthcare facilities than those giving birth to their first baby (Dansereau, Mcnellan, Gagnier, Desai, Haakensad, Johanns, Palmisano, Ríos-zertuche, Schaefer, Zuñiga-Brenes, Hernndez, Iriarte & Mokdad 2016:1-11).

Maternal age and parity analyses also show that maternal age is not associated with the use of all three maternal health services (Shiferaw, Spigt, Godefrooij, Melkamu & Tekie 2013). However, parity was found to have a significant effect on the use of the three maternal healthcare services; women who had only given birth once were more likely to use PNC services than those who had experienced five or more births (Shiferaw et al 2013:5-8).

2.5.1.5 Maternal education

The findings of studies conducted in Ethiopia suggested that women who could read and write and those whose husbands had attained a formal education were more likely to seek PNC (Alemayehu, Assefa & Adama 2014:8; Yinager & Hailu 2014:76). Similarly, individuals' level of education was a strong determinant of enrolment in the national health insurance scheme (NHIS). Those with less education were less likely to enrol at maternal healthcare facilities for skilled care during pregnancy, delivery, and in the postpartum period (Mensah 2010:9).

Women who had a formal education and were able to read and write were twice as likely to seek institutional deliveries compared to their counterparts. In addition, women who were able to read and write were 4.8 times more likely to seek ANC services than their counterparts (Dereje 2017:3). The author further indicates that women with formal education more frequently seek PNC than women without formal education (Dereje 2017:3).

It was also reported that women with knowledge of pregnancy complications and women who previously gave birth at a healthcare facility were more likely to seek PNC, compared to their counterparts (Dereje 2017:3).

2.5.1.6 Transportation access

Research conducted by Kifle et al (2017:1-11) confirmed that women in rural areas who live far from healthcare facilities did not comply with the WHO's ANC visit requirements due to transportation problems, scarcity of ambulances, and poor road infrastructure (Kifle et al 2017:1-11). In the same study, one woman shared that "We wanted to deliver at a health centre/hospital, but when we called the ambulance, it came very late,so we were then forced to give birth at home".

A study conducted in Ethiopia to determine why women choose to deliver at home reported that a lack of transportation was a primary contributor (Shiferaw et al 2013:5-8). A recent study from Maputo Province similarly found that the lack of money for transportation to healthcare facilities could cause a high number of maternal deaths and severe maternal morbidities (David, Machungo, Cavaliere, Fiosse & Sululu 2014:1-8). Moreover, having a vehicle in the household was associated with women giving birth in institutions twice as often as those without a vehicle (Feyissa & Genemo 2014:1-7).

2.5.1.7 Financial burden/income at the household level (occupation)

According to Shiferaw et al (2013:5-8), employed women are more likely to use skilled ANC services than unemployed women. Also, women from the wealthiest households are more likely to use skilled delivery attendants and PNC services than those from the poorest households (Shiferaw et al 2013:5-8). In support, Tarekegn et al(2014:1-13) agree household wealth status is significantly associated with the utilisation of all three maternal healthcare services. Women from a household with a higher wealth quintile are more likely to use all the maternal healthcare services available to them than women from poorer households (Arthur 2012:1-8).

2.5.2 Socio-cultural practices and women's decision-making power

Culture refers to values, beliefs and behaviours shared by members of a society that provide direction for people in terms of what is acceptable or unacceptable in given situations (Nayak 2016:63-64). A study conducted in Gambia reflected that the social and cultural factors affecting maternal healthcare among most African rural communities are multidimensional and interlinked (Lowe 2017:1-7). Such factors include an interplay of the following: (1) pregnant women's heavy workload, (2) division of labour within the household, (3) women's unfavourable position in the household and (4) limited access to and utilisation of healthcare.

Other studies revealed traditional practices that include a preference for birthing at home under the supervision of a traditional birth attendant (King & Winthrop 2015) were affecting healthcare facility utilisation. Garces (2012:1-11) confirms that most home births are attributed to socio-cultural behaviour, as many women were attended by family members or were unattended, especially in Zambia and Kenya.

The Constitution of the Federal Democratic Republic of Ethiopia (Article 35.4) place women's status in Ethiopian communities low (FMoH 2015). The family system is patriarchal, with dominance from men and the elderly. Decision-making in the household is therefore dominated by men (FMoH 2015). In Ethiopia, men made decisions about women's healthcare in 25% of households, whereas the women made decisions independently about their health in merely 13% of households (CSA & ICF 2011:12-28). The report noted that of the 13% of households where women could independently decide about their healthcare, about 62% of the partners jointly participated in such decisions (CSA & ICF 2011:12-28).

Women's autonomy in terms of healthcare spending was also found to have a significant association with the utilisation of ANC and skilled delivery attendance. A study conducted by Tarekegn et al (2014:1-13) determined that women who could decide on healthcare spending were more likely to use maternal healthcare services than women whose healthcare spending was controlled by other people. Husbands' approval to seek maternal healthcare and money for treatment were also found to negatively affect maternal health-seeking behaviour in a study conducted in Benin (Yar'zever & Said 2013:1-14). Autonomous women were more likely to use ANC and

seek institutional or skilled delivery attendance (Shiferaw et al 2013:5-8). Conversely, the gender disparity in land ownership impacts women's economic status and further perpetuates a high level of dependency on their husbands, leading to male dominance (Azuh, Fayomi & Ajayi 2015:105-117).

2.5.3 Availability/accessibility of services

Physical accessibility is one of the most important variables in health service utilisation. Several studies have identified that physical proximity to healthcare services plays an important role in service utilisation. To prevent maternal deaths, especially in rural areas of Ethiopia, medical care and societal engagement are required to reduce early marriages and early pregnancies. It should also be ensured that healthcare facilities are accessible and utilised (Kalasa & Jacobson 2012:10).

A recent qualitative study presented a participant who stated, "I do not want to go to a health facility for delivery because I do not feel comfortable sleeping on the delivery bed at the health centre" (Kifle et al 2017:1-11). However, some women argued that they benefitted from attending maternal healthcare services at healthcare facilities. These women said, "I have a healthy child because I attended ANC and delivered at the facility and received good care from the health service providers" (Kifle et al 2017:1-11).

2.5.4 Equipment, medication and supply

Amon, Almamy, Mustafa, Kassimu, Henry, Ahmed and James (2015:48) explored how institutional factors, such as the shortage of medical supplies, electricity interruptions, long waiting times, inaccessibility of transportation, and the distance to health facilities influenced maternal health-seeking behaviours. A similar study by Kifle et al(2017:1-11) mentioned the institutional factors from a midwife's viewpoint as follows: "It has been about four months since we finished the reagents that we used to test urine, blood." The midwife continued, "because of this, we could not give full maternal healthcare services which led women not to come to us".

Insufficient human resources, inadequate infrastructures and a shortage of equipment and medications have been identified as the main causes of structural inadequacies contributing to poor health service delivery (Baatiema, Sumah & Ganle 2016:5).

2.5.5 Quality of healthcare service

High-quality maternal healthcare, comprising ANC, delivery and PNC services, essentially promotes the mother's and the child's wellbeing and helps to prevent severe complications and illnesses, even death (Bahl & Daelmans 2015:1045-1049). As stated, poor quality maternal healthcare services have been recognised as a significant factor contributing to maternal and newborn deaths in most low and middle-income countries (WHO 2015:1-38).

Improving quality through refining structures and processes leads to a reduction in waste, delays, lower costs, higher market share, and a positive health facility image (Mathenge 2016:51). As a result, productivity and profitability improve (Kwabenaasare & Ibrahim 2017:1-29). However, healthcare service quality depends on service processes, and customer and service provider interactions (Mosadeghrad 2014:77-89). Healthcare professionals also differ based on experience, individual abilities, and personalities (Mosadeghrad 2014:77-89). Healthcare services are simultaneously produced and consumed, and cannot be stored for later consumption (Kwabenaasare & Ibrahim 2017:1-29). This makes quality control difficult because the customer cannot judge 'quality' before purchase and consumption (Mosadeghrad 2014:77-89). According to Mosadeghrad (2014:77-89), quality healthcare means providing patients with appropriate services in a technically competent manner, with good communication, shared decision-making and cultural sensitivity.

Overall, the above studies suggest that various socio-demographic, socio-cultural, economic, infrastructural and organisational factors interrelate to affect women's interest and motivation to use healthcare facilities. It was, therefore, important to investigate the impact of these interrelating factors in the highly populated region of Jimma.

2.6 CONCLUSION

Literature on factors affecting the utilisation of maternal healthcare facilities in Ethiopia was presented in this chapter. The chapter commenced by defining the concepts of maternal health, maternal healthcare, followed by the utilisation of maternal healthcare facilities. In this regard, the factors that affect access and the utilisation of maternal

healthcare facilities in different settings (including Ethiopia) were outlined, as depicted in various studies.

The chapter highlighted that all women should have access to skilled care during pregnancy and delivery, to manage complications and improve health outcomes as per the WHO's recommendation. Maternal education, income, and maternal age emerged as common factors affecting the use of maternal healthcare facilities in several developing countries. The next chapter discusses the methodology used to collect and analyse the data for this study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

In this chapter, the research design and methodology are described. A description of the research setting, research design, research methods, and ethical considerations is also provided. Moreover, the section on the research method gives a thorough description of the sample size, participant selection and the sampling techniques used to guide data collection. Data collection and analysis are also discussed in this chapter.

3.2 RESEARCH SETTING

Polit and Beck (2012:118-136) define 'research settings' as specific places where information is gathered. This study was conducted in Jimma Zone Serbo woreda of Oromiya National Regional State, Ethiopia.

3.3 RESEARCH DESIGN

According to Grove, Burns and Gray (2012:72-94), a research design aims to provide credible results. Polit and Beck (2012:118-136) further define a research design as the overall plan for addressing a research question, including specifications for enhancing the study's integrity. In this study, a descriptive, analytic cross-sectional research design was used to solicit and describe factors affecting the utilisation of maternal healthcare facilities in Ethiopia.

3.3.1 Descriptive design

The descriptive research design specifies how the phenomenon under study presents itself in various situations. Grove et al (2012:49) note that the purpose of descriptive research is to explore and describe phenomena in real-life situations. This type of research design is used to describe the opinions, feelings, attitudes and beliefs people

have of certain phenomena, and is applied mainly in social and health science research (Nayak & Singh 2015:63).

Based on the argument by Nayak and Singh (2015:63), descriptive research was used in this study to explore and describe factors affecting the utilisation of maternal healthcare facilities in the study area. Reynolds and Guest (2015:14) also suggest that descriptive studies are conducted to investigate a population's health service needs, experiences or behaviours to inform interventions.

3.3.2 Analytical cross-sectional study

According to Polit and Beck (2012:118-136), an entire population, or a subset thereof, is selected in this type of observational research. From these individuals, data are collected at a specific point in time to measure the association between an exposure and outcome, and help answer questions on prevalence. In this study, data were collected from women who were pregnant or had given birth to a baby in the five years before the study was conducted in Jimma Zone Serbo woreda of Oromiya National Regional State, Ethiopia.

3.3.3 Research approach

The researcher used a quantitative research approach. According to Creswell, Bates and Sheikh (2013:9-13), quantitative research is employed to test objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analysed using statistical procedures.

A quantitative method for data collection and analysis was useful to gain insights from sampled women who attended maternal healthcare facilities and the factors that affected their utilisation of such facilities in the study area. These women had first-hand experience of factors affecting the utilisation of maternal healthcare facilities in Jimma Zone Serbo woreda of Oromiya National Regional State, Ethiopia. They could thus yield rich data and provide answers to the research questions, leading to important recommendations.

3.4 RESEARCH METHODS

Research methods refer to ways of gathering information for a study (Bryman 2016:40). Research methods are further referred to as techniques used to structure a study (Polit & Beck 2012:743). These methods are employed to collect and analyse information relevant to the research question in a systematic fashion, as alluded to by Polit and Beck (2012:118-136) and the WHO (2014:1-25). Therefore, the quality of research depends on the research methods being used. Appropriate research methods guide researchers in selecting a sample and collecting and analysing data to reach valid and reliable results (Bryman 2016:40). The research methods employed in this study covered research aspects such as the population, sampling, sample size, data collection, data analysis, as well as ensuring validity and reliability in the ethical considerations.

3.4.1 Population

The population of a research study is defined as the total number of units (individuals, organisations, events, objects, or items) in which the researcher is interested and from which samples are drawn to answer the research questions (Mohamed, Shah, Jusoh, Bahru & Affairs 2016:889-907).The unit of analysis may be a person, group, organisation, country, object or any other entity about which researchers wish to draw scientific inferences. There are three types of populations in research, namely the general, target and accessible population.

A general population is a certain group of people who share the same characteristics or elements that are the focus of a research project (Grove et al2012:351). The general population of this study was all women of reproductive age, who were pregnant or had delivered babies in the five years prior to the research survey, residing in Jimma Zone Serbo woreda of Oromiya National Regional State, Ethiopia.

According to Polit and Beck (2012:744), a target population is the population as a whole in which a researcher takes an interest. This target population possesses all predetermined inclusion criteria, and the researcher can generalise the research findings from them. The target population in this study was all women who met the

sampling criteria and were residing in Jimma Zone Serbo woreda of Oromiya National Regional State, Ethiopia.

The accessible population refers to respondents drawn from the target population and accessed by the researcher to provide data for the study during the period of data collection (Polit & Beck 2012:307). In this study, the accessible population was women drawn from the target population. These women were accessed by the researcher to provide data for the study during the data collection period, as recommended by Polit and Beck (2012:307).

3.4.2 Sampling techniques

Sampling is the process of selecting study participants from whom data will be collected (Daniel 2015:2; Grove et al 2012:37). As it is often unrealistic to conduct a census (for various reasons), it is essential to draw a sample from the population.

To select respondents for this study, the researcher chose specific sampling techniques that were appropriate for the topic under investigation (Daniel 2015:2). There are generally two kinds of sampling techniques, namely probability sampling and non-probability sampling. Daniel (2015:5) opines that probability sampling is a sampling procedure where each element of the population has a known non-zero chance of being selected in a sample. Non-probability sampling is a technique where the researcher intentionally selects participants based on parameters that the researcher thinks are applicable (Daniel 2015:5; Grove et al 2012:281). Crossman (2014:38) argues that the probability sampling method is the best option for a research project that demands representativeness.

3.4.2.1 Sampling for this study

For this study, a sample of respondents was obtained through the probability sampling methods and procedures that were deemed to be appropriate. Among the probability sampling procedures, a simple random sampling method was used to obtain a sample for this study. The simple random sampling technique is a probability sampling method that gives people or objects an equal chance of being selected to participate in research (Crossman 2020:1). A simple random sampling technique has two known approaches

whose aim is to minimise any biases in the sampling process, namely the lottery method and the use of numbers. This study used the lottery method and systematic sampling to select households and respondents from the population.

3.4.2.2 Selecting the household and study respondents

For this study, a multi-stage sampling technique was used to identify the study subjects. From the eight Kebeles in the town, fourKebeleswere randomly selected using a lottery sampling method. The number of households living in the area (sampled Kebeles) was recorded as 68,902. The located sample size of women from the selected Kebeles was obtained using probability sampling. Therefore, from the four sampledKebeles, a total of 384 women who were eligible for the study were selected using a systematic sampling procedure.

If there was no eligible woman in a household, or if the woman was unable to take part in the research, a woman who was pregnant or had delivered a baby in the next immediate household was interviewed. For households with more than one eligible woman, researcher-administered interviews were conducted by selecting one woman using the lottery method (Birmeta, Dibaba & Woldeyohannes 2013:1-10). Two additional visits were made in case eligible respondents were unavailable at the time of data collection(Lamaro & Tadele 2017:1-8). Where a woman had two children under the age of five years, the most recent birth was considered (Birmeta et al 2013:1-10).

3.4.3 Eligibility criteria

Eligibility criteria are a list of characteristics that potential respondents from the target population should possess to be included in the study (Fellegi 2010:40-48). The eligibility criteria for the respondents in this study were: women of reproductive age; who had been pregnant, delivered a baby, or had a pregnancy terminated in the five years prior to data collection. Further, these women had to reside in Jimma Zone Serbo woreda of Oromiya National Regional State, Ethiopia, in the five years prior to the research survey.

3.4.3.1 Inclusion criteria

To qualify for inclusion in this study, the women should have met the following criteria:

- Women of reproductive age (15–49 years).
- Women who had been pregnant, delivered a baby, or had a pregnancy terminated beyond six months in the five years prior to data collection.
- Women who had been pregnant, delivered a baby or had a pregnancy terminated beyond six months and resided in the study area in the five years prior to data collection.

3.4.3.2 Exclusion criteria

The following exclusion criteria were applied in this study:

- Women who were not of reproductive age; that is, younger than 15 years and older than 49 years.
- Women who were pregnant, delivered babies or had a pregnancy terminated more than five years prior to data collection.
- Women who had been pregnant, delivered a baby or had a pregnancy terminated beyond six months, but did not reside in the study area in the five years prior to data collection.

3.4.4 The sample size

A sample is the subset of the population elements that are the most basic units about which data are collected (Polit & Beck 2012:118-136). It has been mentioned that studying the entire population is costly, complex, and time-consuming, especially when respondents are geographically widespread (Crossman 2014:17). As a result, researchers use samples as a way to gather data.

For this study, a sample consisted of a subset of women of childbearing age who were pregnant or had delivered babies in the five years prior to data collection. The sample was drawn from the study population through the defined sampling techniques.

Ultimately, the sample size was determined based on the single population proportion formula:

$$n = \frac{(z\ 2)\ (P)\ (q),}{d2}$$

Where:
n=desired sample size when the population is greater than 10,000
Z=standard normal deviation and the required confidence level
P=estimated characteristics of the target population
d=sampling error
q=1-p

Because no similar research has been conducted in the area, for this study, the researcher used a 95% confidence level and 5% margin of error:

p=0.5,
q=1-0.5=0.5,
Z= at 95% level of confidence Z=1.96
d=0.05

$$n\ \frac{(1.96)2\ (.5)\ (.5)}{(0.05)20.0025} = \frac{0.9604}{} \rightarrow 384$$

Sample size for this study = 384 (women of reproductive age who had either been pregnant, delivered a baby, or terminated a pregnancy in the five years prior to data collection, residing in the study area in the five years prior to data collection).

3.5 DATA COLLECTION AND PROCEDURE

3.5.1 Development and administration of a data collection tool

3.5.1.1 Developing a questionnaire

A questionnaire is a research tool with a list of questions or items to be responded to by the research respondents (Nayak & Singh 2015:87). Questionnaires can either be

completed by the respondents or administered by an interviewer (Jacobsen 2017:129). Since some of the research respondents might not be able to read and write, the researcher used an interviewer-administered questionnaire (interview schedule) to collect the quantitative data. Godwill (2015:83) argues interviewer-administered questionnaires are better for collecting complex information than self-administered ones, which can be taken as one of its strengths.

The questionnaire (Annexure G) was developed based on the standard EDHS survey questionnaire. However, it was adapted to suit the objectives of the current study following the researcher's engagement with existing literature. This interviewer-administered questionnaire had a list of questions to guide its administration with the women identified to provide information for this dissertation.

The questionnaire contained open and closed-ended questions on respondents' socio-demographic characteristics, ANC, skilled delivery of a baby, PNC, socio-economic factors, and health system factors. The English version of the list of questions was translated into Afan Oromo and Amharic to ensure the respondents understood the content (Annexure G). Once administered, the researcher checked each questionnaire for accuracy and completeness. All completed questionnaires were given identification numbers (Bekele, Yimam & Akele 2018:4-6).

3.5.1.2 Validity and reliability of the developed questionnaire

According to Van der Riet (2008:90), a study has external validity if the findings can be generalised beyond the confines of the research design and study settings. Polit and Beck (2012:236) add that validity is the approximate truth of an inference, and it is always a matter of degree, not an absolute. Validity is a property of inference, not of research design, but design elements profoundly affect the inferences that can be made.

There are four distinct types of validity: internal validity, external validity, constructs validity, and statistical conclusion validity. Internal validity refers to the research design's ability to rule out or offer implausible alternative explanations for the findings, or plausible rival hypotheses. External validity is concerned with the generalisability of the research findings. In the context of the research design and methodology, the term

‘construct validity’ relates to interpreting the basis of causal relationships. It refers to the congruence between the study’s results and the theoretical underpinnings guiding the research. Statistical conclusion validity refers to aspects of quantitative evaluation that affect the accuracy of the conclusions drawn from the results of a study (Polit & Beck 2012:236).

In this study, validity was assured through the following processes:

(i) Pre-testing the questionnaire: The questionnaire was adapted from a standard DHS survey questionnaire and was pre-tested.
(ii) Translating the questionnaire: The questionnaire was administered after translating it into two local languages (Amharic and Afan-Oromo) to suit the respondents’ language ability.
(iii) Sample size determination: An adequate sample size was determined and used for data collection.
(iv) Inclusion and exclusion criteria: Strong inclusion and exclusion criteria were used.
(v) Reducing bias: By randomly selecting the respondents from the study population and ensuring that the sample is representative of the study population, selection bias was prevented in this study.

To minimise information bias, the data collectors knew little about the respondents to prevent information bias in the study. By using rigorous inclusion and exclusion criteria, random sampling to select research subjects from the study population, and ensuring a sample of 384 individuals’ representative of the study population, selection bias was prevented in this study. Social desirability bias was minimised by being non-judgmental, while external validity was ensured by obtaining data from a primary source (the women directly).

Reliability is concerned with the consistency or stability of the score obtained from a measure or assessment over time and across settings or conditions (Polit & Beck 2012). If the measurement is reliable, the obtained score is less likely to be attributed to random factors and measurement error (Polit & Beck 2012:231-336). By using an adequate sample size and standard questionnaire, the researcher optimised the precision of the measurement instruments.

3.5.2 Respondents' recruitment

3.5.2.1 Obtaining consent for participation

In line with ethical requirements, the women who were chosen for the study had an opportunity to choose or refuse to participate in the research by signing the pre-prepared consent forms previously reviewed and cleared by the University of South Africa's (UNISA) Ethics Committee. Copies of the consent forms are annexed in this dissertation, as Annexures E and F.

Respondents' consent to participate in the study was obtained only after the researcher had disclosed relevant information about the research to the prospective respondents and explained:

- The purpose of the research and the expected duration of the subject's participation.
- Why they were invited to participate in the study.
- Whom to contact for answers to pertinent questions about the research and the research subjects' rights.
- That respondents were free to withdraw from the interview at any stage should they wish to.
- What would happen if they decided to withdraw from the research and how the withdrawal would be handled.

The respondents received a copy of the signed document. The signing of the consent form paved the way for the interview to be conducted.

3.5.2.2 Administration of the research tool and data collection

To improve understanding and information exchange, the data collection tool – questionnaire – was translated from English to two local languages. All cultural issues were taken into consideration when the data collection tool was adapted for use from English to the local languages, namely Afan Oromo and Amharic.

Data collection is a systematic way of gathering relevant information that helps the researcher answer the research question and meet the study's objectives (Maree 2016:45). According to Du Plooy-Cilliers, Davis and Bezuidenhout (2014:147), data collection is one of the crucial aspects of any research study. The research questions guide data collection.

Data were collected from 1 February to 30 March 2019. Four women, including the researcher, collected the data. The data collectors' highest qualification was a diploma in a health-related education field. The researcher provided one-day training on data collection for those who were involved in data collection. The questionnaire was then distributed to 384 respondents. The researcher closely supervised the data collection process. Moreover, in addition to recording responses in a notebook, an audio recording device was used to capture information during the entire data collection process. A response rate of 100% was obtained.

3.6 DATA ANALYSIS

Data analysis is the most important component of a study that gives logical meaning to the research. Descriptive statistics were applied to quantify factors affecting the utilisation of maternal healthcare facilities in the study area.The answers from the questionnaires were compiled, sorted, edited, classified and coded on a sheet and analysed using Statistical Program for Social Sciences (SPSS) version 25.0, in consultation with a statistician.

Bar charts, frequency tables and pie charts were used to present the respondents' demographic and socio-demographic background in Chapter 4. Frequencies and measures of variation were further used to describe the study population in relation to socio-demographic and other relevant variables. Responses to the open-ended questions were categorised into ideas that go together based on the type of answer and codes provided.

3.7 ETHICAL CONSIDERATIONS

According to Polit and Beck (2012:118-136), the Belmont Report presents four broad principles on which standards of ethical conduct in research are based. These are the

principles of beneficence, respect for persons (human dignity), confidentiality, non-maleficence, ethical clearance and scientific integrity.

3.7.1 Beneficence

People are treated in an ethical manner by respecting their decisions, protecting them from harm, and making efforts to secure their wellbeing. Such treatment falls under the principle of beneficence.

3.7.2 Respect for persons

Respect for persons incorporates at least two ethical convictions. First, individuals should be treated as autonomous agents, and second, persons with diminished authority are entitled to protection. Participants were asked to sign an informed consent form (Annexures E and F) to reflect their willingness to participate in this research.

3.7.3 Confidentiality

The principle of confidentiality was maintained as far as possible to protect the respondents' interests and identity, even if the respondents did not perceive any danger to themselves in terms of data disclosure. Throughout the inquiry, the researcher ensured that the individual respondent's identity was protected (Annexure D).

3.7.4 Non-maleficence

Researchers are responsible for protecting their participants from harm. The researcher ensured the respondents' protection from physical, psychological, financial, and social risks. Reproductive and sexual health-related issues are regarded as private matters, which can be embarrassing or taboo, so women do not like to talk about these matters with an unknown person, particularly a man. As a result, the researcher only worked with female data collectors.

3.7.5 Ethical clearance

Ethical clearance should be sought for all research in which human or animal subjects are involved as subjects of the research, prior to any research being undertaken. The researcher obtained ethical clearance and permission to conduct the study from the UNISA Department of Health Studies Research and Ethics Committee (Annexure A). Permission and approval to conduct the study were obtained from the Oromiya Health Bureau (Annexures B and C).

3.7.6 Scientific integrity

According to Winter (2014:30), honesty and adherence to the ethics accepted by the research community are at the heart of scientific integrity. The following measures were therefore taken to promote the scientific integrity of this study:

- An appropriate research design and methodology was employed, and all the designs and methods used were clearly documented.
- Qualified and experienced data collectors were employed.
- The findings of the study were reported genuinely based on the collected data.
- All references used in the study are acknowledged and listed in the reference list.

3.8 DISSEMINATION OF THE RESULTS

A completed examined report will be made available to the management of the study context and study respondents, where needed. The results will also be published with honesty in a peer-reviewed article and submitted to an accredited journal.

3.9 CONCLUSION

This chapter described the research design and methods that were used to conduct the study. A cross-sectional community-based, explorative and descriptive study design was used in this study, and the research procedures were described. The research method and quantitative methodology, including the population, sampling, sampling techniques, data collection, data analysis and ethical considerations were distinctly described. Scientific integrity and the dissemination of results were also briefly discussed. The following chapter presents, describes and discusses the findings of the study.

CHAPTER 4

ANALYSIS, PRESENTATION AND DESCRIPTION OF THE RESEARCH FINDINGS

4.1 INTRODUCTION

The previous chapter addressed the research design and methodology of the study. In this chapter, the researcher analyses, presents and describes the findings of the study. The discussion commences with the description of the respondents' socio-demographic details. The results on the proportion of women who utilised maternal healthcare facilities and factors associated with their utilisation of maternal healthcare facilities are also presented.

4.2 RESPONDENTS' SOCIO-DEMOGRAPHIC DETAILS

This section presents the respondents' demographic and socio-demographic information.

Table 4.1 Percentage distribution of respondents' ages (N=384)

Age group	Percentage (%)
35–49 years	20.6
25–34 years	49.8
15–24 years	29.6
Total (N=384)	**100.0**

Table 4.1 illustrates that, of the 384 respondents, 49.8% were in the age group 25–34, 29.6% were in the 15–24 age group, and 20.6% were between 35 and 49 years old. This suggests that peak fertility takes place in the 25–34 age groups.

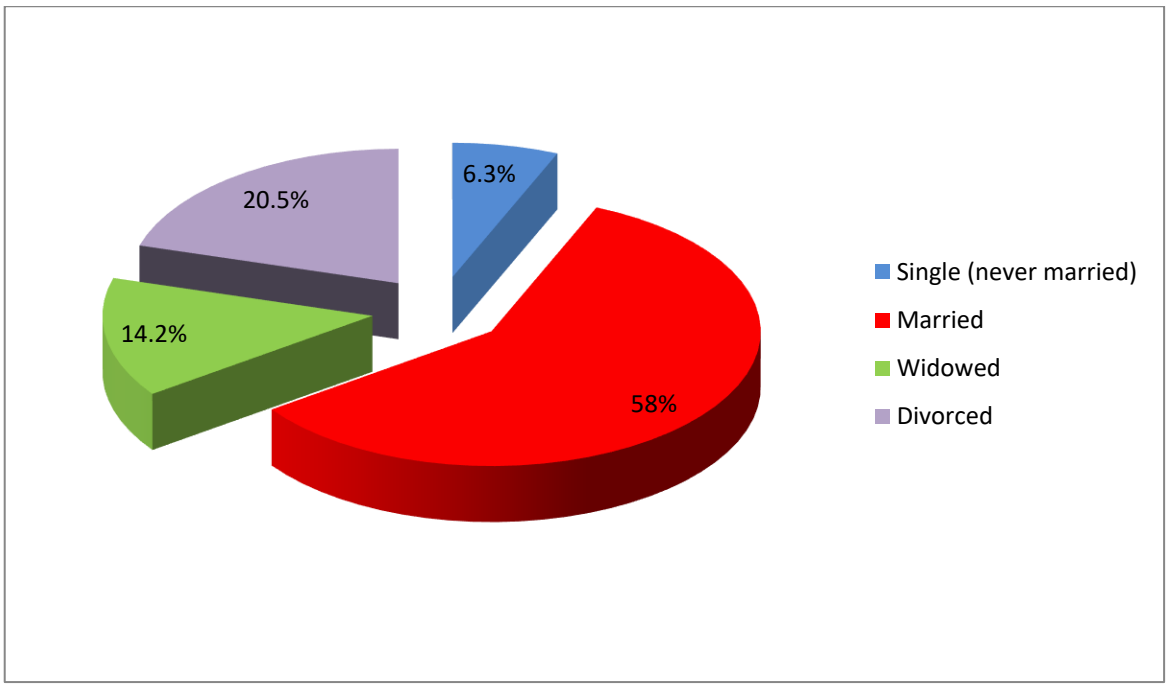


Figure 4.1 Percentage distribution of respondents' marital status (N=384)

Figure 4.1 shows the distribution of respondents' marital status. Married women or those who lived with partners constituted 58% of the respondents, and 20.5% were divorced. Moreover, of the respondents, 14.2% were widows, and 6.3% were single.

Table 4.2 Percentage distribution of respondents' level of education (N=384)

Level of education (formal level of education)	Percentage (%)
Never attnded	53.4
Primary school education	29.1
Secondary school education	17.5
Total (N=384)	**100.0**

The majority of respondents (53.4%) had no formal education. Those who had primary school education constituted 29.1% of the respondents, and 17.5% had secondary school education.

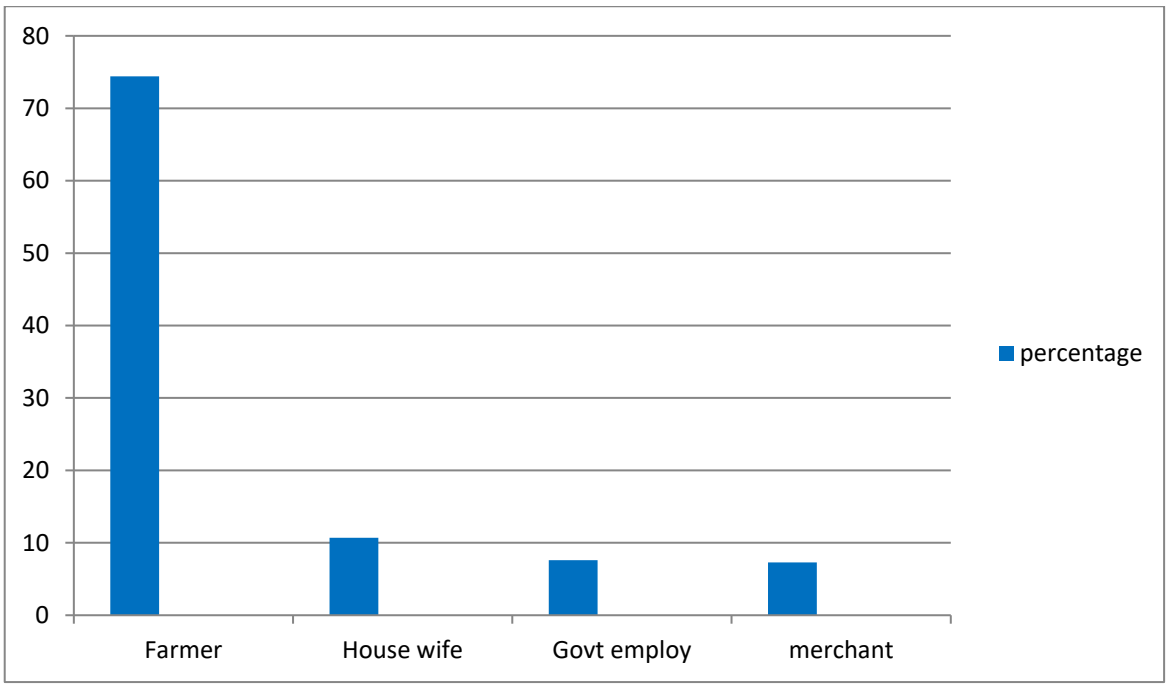


Figure 4.2 Percentage distribution of respondents by type of employment (N=384)

The majority of respondents (74%) were farmers while 11.2% were housewives. It was also determined that 6.8% of respondents were government employees, and 8% were merchants.

This study embraced the financial wealth index to determine respondents' living standards, using $89.3 per month as an average income in Ethiopia. Table 4.3 depicts the respondents' financial wealth index.

Table 4.3 Percentage distribution of respondents by financial wealth index (N=384)

Financial wealth index	Percentage (%)
More than $89.3 per month	12.1
Less than $89.3 per month	87.9
Total (N=384)	**100.0**

According to Table 4.3, 12.1% of respondents earned more than the average Ethiopian income of $89.3 per month. Conversely, 87.9% earned less than $89.3.

Respondents' age at the initiation of childbearing was examined, and the findings are reflected in Table 4.4.

Table 4.4 Percentage distribution of respondents by age at first pregnancy (N=384)

Age at first child	Percentage (%)
<25	66.6
>25	33.4
Total (N=384)	**100.0**

Table 4.4 illustrates that most of the respondents (66.6%) were first pregnantwhen they were younger than 25. The table further reflects that only 33.4% of respondents had their first babies when they were older than 25 years.

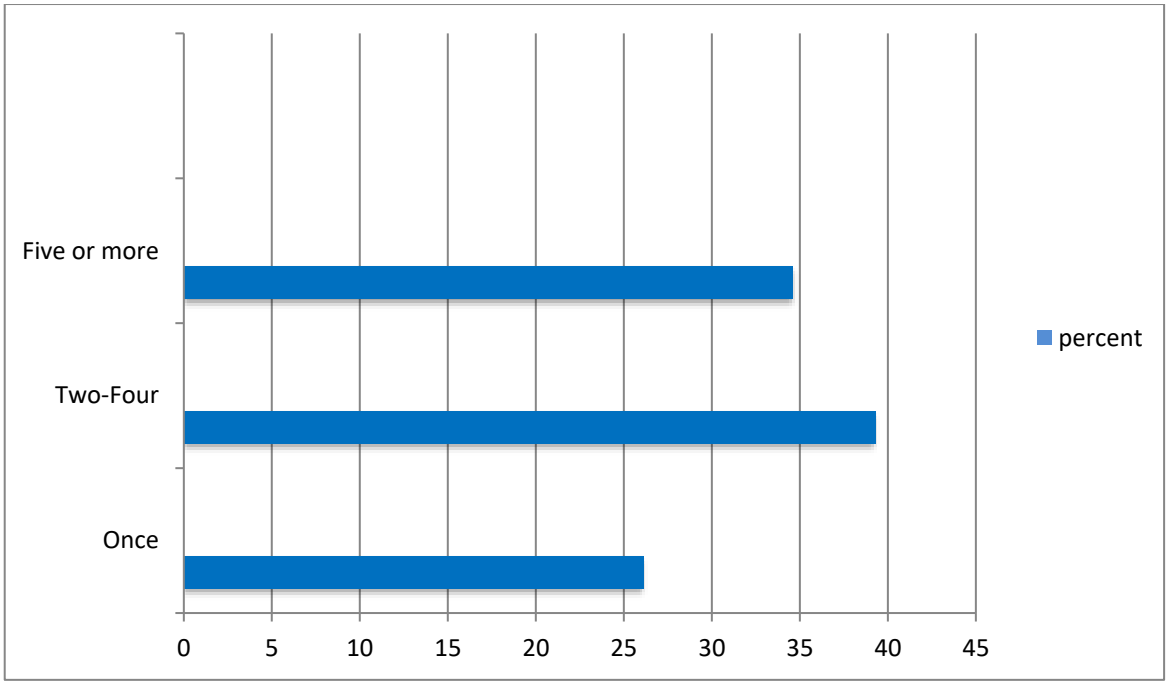


Figure 4.3 Percentage distribution of respondents by parity (total number of live births) (N=384)

Figure 4.3 shows that the majority of respondents (38.4%) had two to four children, 34.5% of the respondents had five or more children, and 27.1% had only one child.

The respondents' decision-making power was also investigated, and the findings are presented in Table 4.5.

Table 4.5 Extent of respondents' decision-making power regarding antenatal care (ANC), skilled delivery, and postnatal care (PNC) (N=384)

Decision-making on ANC attendance, skilled delivery, and PNC	Percentage (%)
Wife only	1.4
Husband only	17.5
Both (husband and wife)	81.1
Total (N=384)	**100.0**

Based on Table 4.5, 81.1% of respondents jointly decided on matters of ANC attendance, skilled delivery, and PNC. Only 1.4% of respondents unilaterally decided on matters of ANC, skilled delivery, and PNC. Lastly, 17.5% of the respondents' husbands or partners unilaterally decided on matters of their pregnancies, deliveries and PNC.

4.3 UTILISATION OF MATERNAL HEALTHCARE FACILITIES

This section presents the results on respondents' utilisation of maternal healthcare facilities. The utilisation of maternal healthcare facilities was observed in this study, in terms of attending and receiving ANC services, skilled deliveries, and PNC services. The researcher first examined the proportion of women who utilised maternal healthcare facilities. This was followed by investigating factors affecting their utilisation of maternal healthcare facilities in Jimma Zone Serbo woreda of Oromiya National Regional State, Ethiopia.

4.3.1 Proportion of women who utilised maternal healthcare facilities

The proportion of respondents who utilised maternal healthcare facilities in this study was limited to those receiving ANC services, skilled deliveries, and PNC services. The results are presented in Figure 4.4.

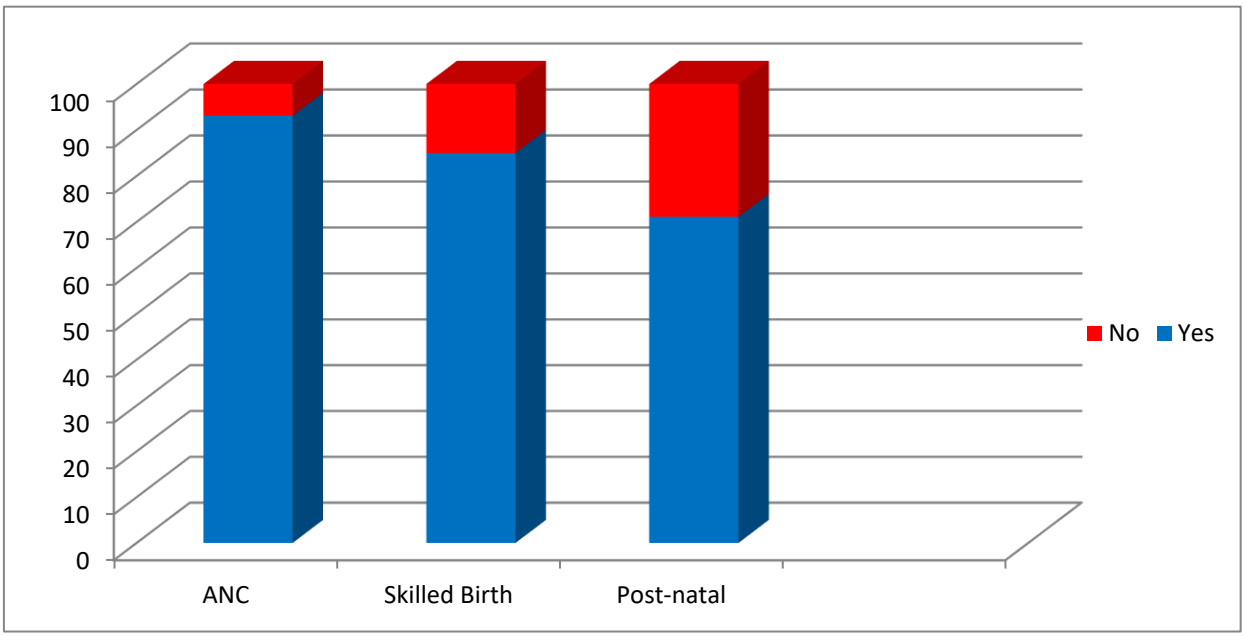


Figure 4.4 Percentage distribution of respondents according to the utilisation of maternal healthcare services (N=384)

According to Figure 4.4, the majority of respondents (93.1%) had received ANC. About 85% of respondents delivered their babies in a healthcare facility, and 71.1% had received PNC services.

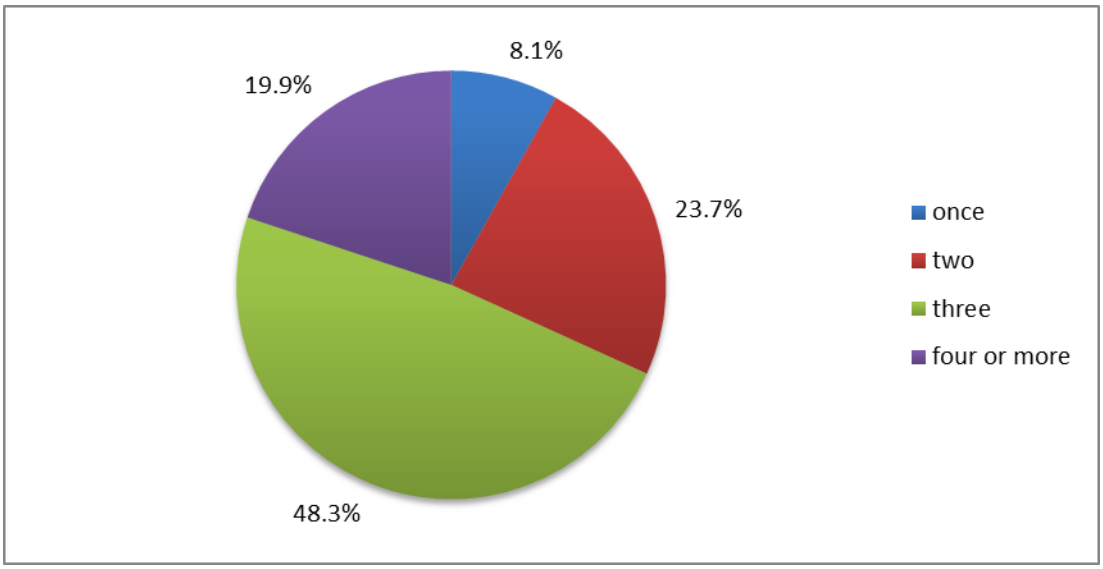


Figure 4.5 Percentage distribution of respondents and frequency of antenatal care (ANC) visits (N=384)

Figure 4.5 illustrates that 48.3% of the respondents had three ANC visits. They were followed by 23.7% who attended ANC twice. Those who had four or more ANC visits

constituted 19.9% of the respondents, while 8.1% of the respondents had one ANC visit.

Table 4.6 Percentage distribution of respondents and timing of first antenatal care (ANC) visit (N=384)

Timing of first ANC visit	Percentage (%)
1–3 month	56.6
4–6 month	34.7
7–9 month	8.7
Total (N=384)	**100.0**

Table 4.7 shows that 56.6% of the respondents initiated the first ANC visit in the first three months of their pregnancy. The study further found that 34.7% of respondents received ANC for the first time when they were four to six months pregnant, while only 8.7% started receiving ANC for the first time between months seven and nine of their pregnancy.

4.3.2 Factors associated with maternal healthcare facility utilisation

This section reports on factors associated with the utilisation of maternal healthcare facilities. The focus was placed on three components of maternal healthcare services during the survey, namely ANC, skilled delivery, and PNC. The factors referred to were investigated in respect of the quality of care at the service delivery point and the socio-economic factors associated with the utilisation of maternal healthcare facilities. The quality of ANC was specifically investigated because it (ANC) is an entry into maternal healthcare facilities and a determinant of women's likelihood of utilising other components of maternal healthcare services.

4.3.2.1 Quality of care at maternal healthcare facilities

The quality of ANC was measured through indicators such as waiting times to receive ANC; health education received during ANC visits; lack of privacy during ANC; healthcare workers' behaviour; and how respondents felt about or experienced the ANC as a service.

The waiting time to receive ANC was measured using different rating scales, ranging from ‘short’, ‘average’, to a ‘long time’, as illustrated in Table 4.7. Health education was measured by the responses categorised under ‘yes’, ‘no’ and ‘I do not know’. Lack of privacy was determined by ‘yes’ and ‘no’ answers. The healthcare workers’ attitudes and the respondents’ feelings or experiences with the services were assessed through responses reflecting ‘very good’, ‘good’, ‘fair’ and ‘bad’ as well as ‘good’, ‘satisfactory’ and ‘poor,’ respectively. Table 4.7 reflects these responses.

Table 4.7 Percentage distribution of responses by the quality of antenatal care (ANC) service provision (N=384)

Quality of antenatal care service provision	Percentage (%)
(a) Waiting time to get ANC	
Short	39.2
Average	54.1
Long time	6.7
(b) Health education during ANC	
Yes	60.5
No	38.1
I don’t know	1.4
(c) Lack of privacy during ANC	
Yes	88.8
No	11.2
(d) Behaviour/attitude of health workers	
Very good	11.5
Good	65.0
Fair	20.7
Bad	2.8
(e) Feeling (experience) of ANC as a service	
Good	56.6
Satisfactory	31.4
Poor	12.0
Total (N=384)	**100.0**

Table 4.7 illustrates that most respondents (54.1%) regarded the waiting time to receive ANC as average. Moreover, 39.2% of the respondents ranked the waiting time as short, while 6.7% thought the waiting time were too long to receive ANC services.

One of the services provided to women during the ANC visit was health education. It emerged from the findings that 60.5% of the women received health education during

their ANC visits. Conversely, 38.1% of the respondents did not receive the service, and 1.4% did not know whether they received health education.

The study reported that 88.8% of respondents confirmed a lack of privacy during ANC visits; only 11.2% reported that they enjoyed privacy during their ANC visits. Based on this finding, the majority of women felt that their right to privacy was being violated.

The behaviour and/or attitude of the healthcare workers were also examined. In this regard, the majority (65%) of respondents reported that healthcare workers' behaviour and/or attitude was good, 20.7% indicated that it was fair, 11.5% said it was very good, and 2.8% reported that it was bad.

Out of all 384 respondents, 56.6% indicated that the quality of ANC services was good. Almost a third (31.4%) reported that the services were satisfactory, and 12% stated that the ANC services were poor.

4.3.2.2 Socio-economic factors associated with the utilisation of maternal healthcare facilities

The association between the respondents' socio-economic factors and utilisation of ANC, skilled delivery, and PNC was examined. The focus was on the women's educational status, occupational status, marital status, average monthly income, and decision-making power.

(a) Factor associated with antenatal care (ANC) utilisation

Table 4.8 Antenatal care (ANC) utilisation and respondents' level of education (N=384)

Level of education	Utilisation of ANC	
	Yes (%)	No (%)
Never attended	80.0	20.0
Primary schooleducation	86.2	13.8
Secondary school education	95.9	4.1

According to Table 4.8, 80% of the respondents who attended ANC did not have any formal education (refer to Table 4.2). Of those who had primary education (refer to Table 4.2), 86.2% attended ANC, and 95.9% of those who had secondary education and higher attended ANC (refer to Table 4.2).

Table 4.9 Antenatal care (ANC) utilisation and respondents' occupational status (N=384)

Occupational status	Utilisation of ANC	
	Yes (%)	No (%)
Housewife	64.4	35.6
Government employee	93.8	6.2
Farmer/merchant	86.4	13.6

Table 4.9 should be read in conjunction with Figure 4.2. Table 4.9 shows that among the women employed by the government, 93.8% attended ANC services. It was also determined that 64.4% of respondents who were housewives attended ANC services. Moreover, 86.4% of respondents who were farmers/merchants attended ANC services.

Table 4.10 Antenatal care (ANC) utilisation and respondents' marital status (N=384)

Marital status	Utilisation of ANC	
	Yes (%)	No (%)
Married	84.4	15.6
Not married	88.2	11.8

Table 4.10 should be read in conjunction with Figure 4.1.Table 4.10 shows that of the unmarried respondents, 88.2% attended ANC services. Of those who were married, 84.4% attended ANC services.

Table 4.11 Antenatal care (ANC) utilisation and respondents' average monthly income (N=384)

Average monthly income of the family	Utilisation of ANC	
	Yes (%)	No (%)
More than $89.3	78.4	21.6
Less than $89.3	85.4	14.5

Table 4.11 should be read in conjunction with Table 4.3. As illustrated in Table 4.11, 78.4% of the respondents with a monthly income of more than $89.3 utilised ANC services, and 85.4% of those with a monthly income less than $89.3 utilised ANC services.

Table 4.12 Antenatal care (ANC) utilisation and respondents' decision-making power (N=384)

Decision-making and autonomy of women	Utilisation of ANC	
	Yes (%)	No (%)
Wife only	100.0	0.0
Both (husband and wife)	83.0	17.0
Husband only	90.5	9.5

Table 4.12 should be read in conjunction with Table 4.5. Table 4.12 reflects that of those respondents who had joint decision-making power (husband and wife) regarding maternal healthcare utilisation, 83% received ANC services. Conversely, of those women who adhered to their husband's decision-making power, 90.5% utilised ANC services. Lastly, 100% of respondents who had autonomous decision-making power attended ANC service, and they accounted for 1.4% of the sample.

(b) Factors associated with skilled delivery utilisation

Factors associated with skilled delivery utilisation were examined. These are presented in the subsequent tables.

Table 4.13 Utilisation of skilled delivery and respondents' education level (N=384)

Women's level of education	Utilisation of delivery	
	Yes (%)	No (%)
Never attend	80.0	20.0
Primary school education	86.2	13.8
Secondary school education	95.9	4.1

Table 4.13 should be read in conjunction with Table 4.2. According to Table 4.13, of the respondents with a secondary level education and higher, 95.9% utilised skilled delivery services, compared to 86.2% of women with primary level education. Of those respondents without any formal school education, 80% utilised skilled delivery services.

Table 4.14 Utilisation of skilled delivery and respondents' occupational status (N=384)

Occupational status	Utilisation of skilled delivery	
	Yes (%)	No (%)
Housewife	64.4	35.6
Government employee	93.8	6.2
Farmer/merchant	86.4	13.6

Table 4.14 should be read in conjunction with Figure 4.2. Table 4.14 shows that among the women employed by the government, 93.8% utilised skilled delivery services. Of those respondents who were farmers or merchants, 86.4% utilised skilled delivery services. Lastly, only 64.4% of the respondents who were attended to by skilled birth attendants during delivery were housewives.

Table 4.15 Utilisation of skilled delivery and respondents' marital status (N=384)

Marital status	Utilisation of delivery	
	Yes (%)	No (%)
Married	84.4	15.6
Not married	88.2	11.8

Table 4.15 should be read in conjunction with Figure 4.1. Table 4.15 reflects that, among the respondents who were not married, 88.2% utilised skilled delivery services. Moreover, 84.4% of respondents who were married utilised skilled delivery services.

Table 4.16 Utilisation of skilled delivery and respondents' average monthly income (N=384)

Average monthly income of the family	Utilisation of delivery	
	Yes (%)	No (%)
More than $89.3	78.4	21.6
Less than $89.3	85.4	14.5

Table 4.16 should be read in conjunction with Table 4.3. Table 4.16 shows that 78.4% of the respondents with a monthly income of more than $89.3 utilised skilled delivery services. Also, 85.4% of those with a monthly income less than $89.3 utilised skilled delivery services.

Table 4.17 Utilisation of skilled delivery and respondents' decision-making autonomy (N=384)

Women's decision-making and autonomy	Utilisation of skilled delivery	
	Yes (%)	No (%)
Wife only	100.0	0.0
Both (husband and wife)	83.0	17.0
Husband	90.5	9.5

Table 4.17 should be read in conjunction with Table 4.5. Table 4.17 explains that of those respondents who had joint decision-making power (husband and wife) regarding maternal healthcare utilisation, 83% utilised skilled delivery services. Conversely, of the women who solicited their husband's approval, 90.5% utilised skilled delivery services. Lastly, 100% of respondents who had autonomous decision-making power utilised skilled delivery services, and they accounted for 1.4% of the sample.

(c) Factor associated with postnatal care (PNC) utilisation

The associationbetween respondents' socio-economic characteristics and their utilisation of PNC services are reflected using tables in the following sections.

Table 4.18 Utilisation of postnatal care (PNC) and respondents' level of education (N=384)

Level of education (formal level of education)	Utilisation of PNC	
	Yes (%)	No (%)
Never attend	80.0	20.0
Primary school education	86.2	13.8
Secondary school education	95.9	4.1

Table 4.18 should be read in conjunction with Table 4.2. According to Table 4.18, 95.9% of respondents with a secondary school education received PNC services, compared to 86.2% of respondents with a primary school level of education. Moreover, 80% of respondents who were unable to read and write or had no formal education received PNC services.

Table 4.19 Utilisation of postnatal care (PNC) and respondents' occupational status (N=384)

Occupational status	Utilisation of PNC	
	Yes (%)	No (%)
Housewife	64.4	35.6
Government employee	93.8	6.2
Farmer/merchant	86.4	13.6

Table 4.19 should be read in conjunction with Figure 4.2. Table 4.19 shows that among those respondents employed by the government, 93.8% utilised PNC services, while 86.4% of farmers/merchants utilised PNC services. Only 64.4% of women who were housewives utilised PNC services.

Table 4.20 Utilisation of postnatal care (PNC) and respondents' marital status (N=384)

Marital status	Utilisation of PNC	
	Yes (%)	No (%)
Married	84.4	15.6
Not married	88.2	11.8

Table 4.20 should be read in conjunction with Figure 4.1. Table 4.20 shows that most unmarried respondents utilised PNC services (88.2%), and 84.4% of the married respondents utilised PNC.

Table 4.21 Utilisation of postnatal care (PNC) and respondents' average monthly income (N=384)

Average monthly income	Utilisation of PNC	
	Yes (%)	No (%)
More than $89.3	78.4	16 (21.6)
Less than $89.3	85.4	56 (14.5)

Table 4.21 should be read in conjunction with Table 4.3. Table 4.21 reveals that 78.4% of the respondents with a monthly income of more than $89.3 utilised PNC services, and 85.4% of those with a monthly income less than $89.3 utilised PNC services.

Table 4.22 Utilisation of postnatal care (PNC) and respondents' decision-making autonomy in (N=384)

Women's decision-making and autonomy of women	Utilisation of PNC	
	Yes (%)	No (%)
Wife only	100.0	0.0
Both (husband and wife)	83.0	17.0
Husband	83.0	17.0

Table 4.22 should be read in conjunction with Table 4.5. Table 4.22 explains that of those respondents who had joint decision-making power (husband and wife) regarding maternal healthcare utilisation, 83% utilised PNC services. Moreover, of those respondents who adhered to their husband's decision-making authority, 83.0% utilised PNC services. Lastly, 100% of respondents who had autonomous decision-making power utilised PNC services, and they accounted for 1.4% of the sample (see Table 4.5).

4.4 CONCLUSION

This chapter contained the analysis, presentation and description of the research findings. The researcher started the chapter with an introduction, respondents' demographic and socio-demographic details.

The analysis established that most respondents were in the age group 25–34. The findings related to the respondents' utilisation of maternal healthcare facilities reflected that, as far as the proportion of women who utilised maternal healthcare facilities is concerned, more women utilised ANC services than those who delivered their babies in a healthcare facility and attended PNC, respectively. This demonstrates that most women utilised ANC; however, utilisation declined at delivery and postnatal facilities. Moreover, the analysis established that less than a fifth of all the respondents who attended ANC attended the four ANC sessions in line with WHO recommendations. The results further indicated that a lack of privacy during ANC affected the quality of care at the facility level, and socio-economic factors such as level of education, occupation, income, and decision-making power influenced respondents' utilisation of ANC services.

It was determined that the respondents' level of education, occupation, income, and decision-making power were significantly associated with their utilisation of maternal healthcare facilities for skilled delivery. However, with regard to average monthly income per category of women, respondents with lower incomes were more inclined to utilise skilled delivery services compared to those who earned a higher income.

Factors influencing PNC attendance at a healthcare facility painted a similar picture as respondents' attendance at healthcare facilities for ANC and skilled delivery services, except in decision-making power and women's autonomy. Respondents were more inclined to make their own decisions with regard to attending PNC at a maternal healthcare facility.

The next chapter presents the discussion of the findings.

CHAPTER 5

DISCUSSION, CONCLUSION AND RECOMMENDATIONS OF FINDINGS

5.1 INTRODUCTION

This chapter discusses the research findings, overall conclusion and recommendation related to factors affecting women's utilisation of maternal healthcare facilities in Ethiopia.Evidence from previous studies is also examined and compared with the findings of this study.

The previous chapter primarily focused on the collection and analysis of the data. The current chapter intends to objectively broaden the study's practical implications and significance by presenting discussions and conclusions based on the findings.

5.2 UTILISATION OF MATERNAL HEALTHCARE FACILITIES

5.2.1 Proportion of women who utilised maternal healthcare facilities

The study revealed that of the 384 respondents, the majority were in the age group 25–34 years, constituting 49.8% of the sample. The utilisation of ANC, skilled delivery and PNC was 93.1%, 85% and 71.1%, respectively. The lower coverage for delivery and PNC has often been attributed to the unpredictability in the onset of labour and the difficulty of travelling, particularly for long distances during labour, delivery, and even within a few days after delivery.

ANC services provide opportunities for health workers to promote a specific place to deliver or give women information on the status of their pregnancy. This information, in turn, often informs their decisions on where to deliver. The risk assessment during ANC may also explicitly recommend a place of delivery. Under normal circumstances, the WHO recommends that a pregnant woman without any complications should attend at least four ANC visits to gain sufficient information on her own health and that of her unborn baby (WHO 2013). Moreover, early bookings for ANC are important as it allows

health workers to detect potential problems early, and corrective measures can be taken immediately to alleviate these challenges for the benefit of the mother and the foetus.

In this study, 93.1% of respondents attended ANC services at least once. The study further reflected a progressive decline from those who attended ANC to those who received skilled delivery and PNC, respectively. It would have been expected that women who attended ANC would also deliver at a healthcare facility and attend health facilities to receive PNC services. This proportion of respondents who attended ANC services at least once (93.1%) is higher than the national estimate of 74% (CSA & ICF 2019:19). The EMDHS also reported that 20% of their respondents who delivered over the five years before data collection had four or more ANC visits. This proportion is lower compared to the national level of 43% (CSA & ICF 2019:19).

Another study conducted in Ethiopia also presented that about 86.1% of respondents attended ANC in their recent pregnancies in 2017 (Ayele, Melkuet al 2019). Of these, 35.5% started attending ANC in their first trimester, 46.2% in their second trimester, and the remaining 18.3% in their third trimester (Ayele, Melkuet al 2019). Moreover, a study in Lucknow, India, found that 77% of study participants were registered for ANC (Deepak, Jauhari & Dhungana 2018:77-81). ANC-registered participants who undertook more than three ANC visits were low (15.3%) and only one-third of these women had their first ANC visit during their first trimester (Deepak et al 2018:77-81).

This study determined that 85% of respondents delivered in maternal healthcare facility. The CSA and ICF (2019:19) results show that among the total live births in the five years preceding their survey, 50% were delivered by a skilled attendant, and 48% were delivered in a health facility. The respondents' main reasons for not delivering in a healthcare facility were the long distance to the health facility, poor services in the health facility, the negative attitude of health workers, and the availability of traditional birth attendants in their place of residence, whom they thought were competent. A similar study conducted in 2019 illustrated that the proportion of Ethiopian women who received skilled delivery care for their most recent birth was 30.8%, while 29.7% of births were assisted by a skilled healthcare provider at a health facility (Tesfaye, Chojenta, Smith & Loxton 2019:10).

This study's findings also illustrated that 71.1% of respondents had PNC follow-up visits. The findings of the CSA and ICF (2019:19) reflect that the proportion of women who received a postnatal check-up within two days after delivery was higher in urban areas (48%) than in rural areas (29%), with the lowest in Somali (10%), and the highest in Addis Ababa (74%). They also reported PNC attendance increases with women's education and household wealth (CSA & ICF 2019:19). The findings of a study conducted in Nigeria illustrated that 74% of respondents in urban settings utilised PNC services, while 61.2% of those in rural settings did likewise (Igboanusi, Sabitu, Gobir, Nmadu & Joshua 2019:113-116).

5.2.2 Factors that affect the utilisation of maternal health facilities in Jimma Zone Serbo woreda of Oromiya National Regional State, Ethiopia

It should be noted that the main focus of the study was to examine factors that affect the utilisation of maternal healthcare facilities in Ethiopia, with reference to the quality of care as well as women's socio-economic characteristics. As stated, in this study, maternal healthcare facilities refer to ANC services, skilled deliveries, and PNC services. In this regard, factors associated with the utilisation of ANC are discussed first, followed by a discussion on the factors associated with skilled delivery service utilisation, and lastly, factors associated with PNC services.

5.2.2.1 Factors affecting utilisation of antenatal care (ANC)

The study identified several factors that influence the utilisation of maternal healthcare facilities in Ethiopia. These included the quality of ANC, women's educational status, occupation, average monthly income, and women's decision-making power and autonomy. This study established that a lack of privacy during ANC was of vital importance in the utilisation of maternal healthcare facilities in Jimma Zone Serbo woreda of Oromiya National Regional State, Ethiopia. Inadequate privacy was also found to be a barrier and a factor to accessing and utilising maternal healthcare services in a study on pregnant adolescents' experiences of ANC in Zambia (Bwalya, Sitali, Baboo & Zulu 2018).

A study conducted in South Africa on reasons for late presentation for ANC (Jinga, Mongwenyana, Moolla, Malete & Onoya 2019:2) identified poor patient-provider

relationships and a lack of privacy for ANC clients as factors that can have far-reaching effects on women's utilisation of maternal healthcare services.

This study found that women's level of education was associated with their utilisation of ANC services. Therefore, educational level had a strong and independent positive impact on the use of ANC services in Ethiopia. The justification might be that educated women have achieved better autonomy at home to make decisions, have more opportunities to learn about pregnancies and various complications, and have the opportunity to communicate freely with other family members on issues related to pregnancy and women's health in general (Shayesteh, Fahimeh, Masoumeh & Farshad 2015:544-557). This finding corroborates systematic reviews conducted in sub-Saharan African countries such as Nigeria, Ghana, Ethiopia, Niger, Benin, Kenya, Zimbabwe, South Africa, Zambia, Tanzania, DRC and Rwanda between 2008 and 2018. A significant relationship was reported between maternal education and the overall uptake of ANC services in several of these countries (Ijeoma, Ifeyinwa, Obumneme & Chigozie 2019:4). Subsequently, poor education was a determinant of poor ANC attendance in the systematic reviews conducted by Ijeoma et al (2019:4).

In this study, housewives and homemakers were less likely to seek ANC services than women involved in petty trade and day-labour work. These results are similar to those of a study conducted by Shiferaw et al (2013:5-8), where women who were employed were more likely to use skilled ANC services than unemployed women. In support, Ijeoma et al (2019:4) also found that employed women and those who had a working status were more likely to use ANC services than those who were unemployed/not working in the sub-Saharan African countries referred to in the previous paragraph.

A significant association between a household's wealth and utilisation of ANC services at least once before giving birth was noted in this study. Better utilisation of maternal healthcare facilities could be associated with the accessibility and affordability of transportation among women in the wealthiest category, who were more likely to attend ANC than women in the lowest economic category. This result was consistent with studies conducted in Ethiopia and Nepal (Singh, Kumar & Pranjali 2014:1-29; Birmeta et al 2013:1-10). In support, Roro, Hassen, Lemma and Gebreyesus (2014:1-7) agree that women from the wealthiest households were more likely to use skilled delivery attendants and PNC services than those from the poorest households. A study

conducted in eastern Ethiopia also highlighted that women who had been married to merchants were more likely to use maternal healthcare facilities than those married to farmers (Desalew, Bekele, Kedir & Desalegn 2014).

This study revealed that women who had equal autonomy in the household were more likely to seek ANC services than their counterparts. This finding is consistent with those of previous studies in Ethiopia, which reflected women's autonomy in making an informed decision on healthcare spending had a significant association with their utilisation of ANC services and skilled delivery attendants – autonomous women were more likely to use ANC and delivery attendants (Shiferaw et al 2013:5-8). Husbands' or partners' approval of ANC services was also significantly related to ANC attendance (Yar'zever & Said 2013:1-14). Irrespective of a husband's background characteristics such as religion, educational background and income, it is expected that having a husband who approves of ANC services significantly increases the likelihood that a woman would attend ANC visits (Yar'zever & Said 2013:1-14). Therefore, efforts to improve husband's or partner's attitudes would likely increase women's utilisation of maternal healthcare facilities.

Finally, the perception of women who were satisfied with healthcare services contributed to their likelihood of seeking the services in the future. This is in line with the findings of the study by Onasoga, Olayinka, Alade and Egbuniwe (2015:10-15), which state that the healthcare provider's attitude and women's previous experience related to the care they received influenced their utilisation of maternal healthcare facilities.

5.2.2.2 Factors associated with skilled delivery services

In exploring respondents' utilisation of maternal healthcare facilities, the socio-economic factors that influence their use of such services were considered. These factors include education, family income, autonomy, occupation and healthcare satisfaction rate.

A relationship was established between the women's educational level and their utilisation of healthcare facilities during delivery. The women's level of education was highly correlated with the places they gave birth to their babies. Women who were able to read and write were more likely to deliver in healthcare facilities compared to those who were uneducated or had lower literacy levels. This finding was consistent with

other studies conducted in Ethiopia (Tsegay, Aregay, Kalayu, Alemayehu & Yohannes 2017:1-8; Kifle et al 2017:1-11). A study conducted in Afghanistan illustrated that women who had a secondary and higher educational level were more likely to employ skilled birth attendants (SBAs) than those with no education (Sharma, Hamajima & Reyer 2016:1-16). In addition, a study in India found that the education level of women and their husbands remained a strong predictor of maternal health service utilisation, both in terms of ANC and SBAs (Roy, Sahoo & Sarangi 2017:138-144).

The current study determined that women from wealthy households are more likely to be attended by skilled delivery personnel. The findings showed that households with an average monthly income greater than $89.3 were more likely to seek skilled delivery services compared to families with a monthly income below $89.3. Thus, women's wealth status was found to be a strong predictor of healthcare facility utilisation. This is consistent with findings from a study by Kawakatsu, Sugishita, Oruenjo, Wakhule, Kibosia and Honda (2014:265), which states that women in the wealthiest categories were more likely to deliver their babies at healthcare facilities than their counterparts in the poor and poorest categories of wealth. Households on a limited budget could have difficulty paying user fees and therefore tend to be less likely to use a healthcare facility for delivery (Acharya 2010:15-26). In addition, women of low economic status are known to have lower rates of maternal health-seeking behaviour (Oluwasola, Aduragbemi &Charles 2017:6).

Women's autonomy, coupled with their occupation, influences decisions about where a baby would be delivered. Women who have decision-making power in their households are more likely to deliver their babies in healthcare facilities than those who rely on their husband's approval on health issues, including where to deliver their babies. This finding concurs with a study conducted by Khan, Khan and Suleman (2017:221-225), which demonstrated that female autonomy allowed women to develop greater confidence and capabilities to make decisions regarding their own health (Khanet al 2017:221-225). Moreover, an Ethiopian study reported that women's decision-making power could significantly affect their ability to seek healthcare and/or even delay accessing and receiving the services where they are readily available (Mulat, Kassaw & Aychiluhim 2015:8). When resources are controlled by others, women might not have the freedom to use the services whenever needed.

Finally, this study found that a woman's perception of the quality of a service being provided is another factor that affects skilled delivery service utilisation. This finding is consistent with findings by Ayele, Melku et al (2019),who conducted their study in Ethiopia and suggest that women who are satisfied with healthcare services are more likely to seek the services in future.

5.2.2.3 Factors associated with postnatal care (PNC)

The third socio-economic aspect is PNC utilisation. The associated factors that affect PNC are occupation, family income, autonomy, and healthcare satisfaction rate.

Women's occupational status is among the most common factors affecting the utilisation of PNC services. This study determined that farmers/merchants were more likely to use PNC services compared to housewives. The findings are consistent with those ofRamezani, Tehrani, Hajizaden, Simbar and Farzadafra (2016:544-557), who claim employed women more frequently receive PNC compared with housewives. These women are also more likely to receive timely prenatal care services.

A family's economic status has a positive and significant influence on women's use of PNC services. An average monthly income greater than $89.3 meant women were more likely to seek PNC services compared to families with a monthly income below $89.3. This finding supports those of a study conducted in Nigeria, claiming mothers from poor households utilised fewer PNC services than their wealthy counterparts (Igboanusiet al 2019:113-116). Similarly, a study from Ethiopia depicted that the household's wealth index had a linear relation with PNC utilisation (Mulat et al2015:8).

As to the final decision-maker on PNC service utilisation, mothers who engaged in decision-making with their partners were more likely to use the services than those whose healthcare decisions were made by others. This evidence is in line with a similar study conducted in Ethiopia (Workineh & Hailu 2014:169-176), which demonstrated that women's decision-making power has a positive effect on their use of PNC services. Another study from Ethiopia illustrated that a woman's independent decision to use PNC services was significantly associated with PNC service utilisation (Alemayehu et al 2014:8). This finding can be related to women's autonomy to take action at any time in terms of health-related issues.

Finally, women who were satisfied with PNC services were more likely to seek the services. The attitude of the healthcare providers and previous experience with such care ultimately influenced their utilisation of PNC services (Onasoga et al 2015:10-15).

5.3 CONCLUSION

The study examined factors affecting the utilisation of maternal healthcare facilities in Ethiopia. The researcher determined what proportion of women attended ANC, skilled delivery and PNC in healthcare facilities among recently delivered women – in the five years prior to data collection.

The findings revealed that demographic, socio-cultural and socio-economic factors significantly affect women's utilisation of maternal healthcare facilities in Ethiopia. Women's education, occupation and autonomy were socio-cultural and economic factors affecting their utilisation of maternal healthcare facilities in Ethiopia. Moreover, maternal satisfaction featured as both a key socio-cultural and a demographic factor. It appears these factors are determinants of women's utilisation of three levels of maternal healthcare services in Ethiopia, including ANC, skilled delivery, and PNC. These influences are thus regarded as important predictors of maternal healthcare facility utilisation in Ethiopia.

As mentioned, the researcher determined what proportion of women attended ANC, skilled delivery and PNC in healthcare facilities among recently delivered women. The findings revealed that 93.1%, 85% and 71.1% of the respondents utilised ANC, skilled delivery and PNC services, respectively. The researcher anticipates that educating and empowering women, increasing their awareness about the danger signs of pregnancy, involving men in decisions around maternal healthcare, and promoting community mobilisation can enhance women's utilisation of maternal healthcare facilities. The study's findings informed recommendations to facilitate the utilisation of maternal healthcare facilities in Ethiopia and subsequently improve maternal health outcomes.

5.4 STRENGTHS OF THE STUDY

Every study has unique strengths and limitations. The strength of this study is that it covered half the Kebeles in the Serbo Town in Ethiopia. The study also exposed the factors that affect maternal healthcare facility utilisation. The findings could be useful for policymakers and healthcare managers to develop necessary interventions to promote women's education and facilitate job opportunities for them. It would also be important to create information and awareness programmes for women and their families about the importance of maternal healthcare facilities.

5.5 RECOMMENDATIONS

Interventions should be developed to promote optimal maternal healthcare facility utilisation. Women should also be informed about the study's findings through mass media (such as the radio) and planned health education sessions in the local clinics and hospitals. Moreover, the government and the Ethiopia Ministry of Health should target the underlying socio-cultural, socio-economic, and demographic variables linked to maternal healthcare services at the individual, household, community, and state levels.

In light of the above conclusions, the researcher recommends that efforts should be made by the Ethiopia Ministry of Health to provide increased access to education for girls and women. Women should also have greater access to employment opportunities, since employment was found to have a significantly positive impact on women's utilisation of maternal healthcare facilities. In the same vein, women should be empowered in Ethiopia to make decisions, as autonomous beings, in matters that affect them. In that way, the gaps that have been identified in the poor utilisation of maternal healthcare facilities in Ethiopia can be bridged.

5.5.1 Recommendations for the Ethiopia Ministry of Health

- Healthcare education should be provided during pregnancy, labour and after delivery.
- Conduct an audit of all healthcare facilities to assess how existing health system infrastructure and practices impact privacy and confidentiality. The audit should ensure that all service users, especially women and girls living in poverty, can participate in its design and implementation.

5.5.2 Recommendation for women

Women who fall pregnant should be encouraged to attend healthcare facilities and accept the advice given by healthcare workers. They should be made aware that the utilisation of healthcare facilities during pregnancy, labour and the postnatal period is of paramount importance.

5.6 CONTRIBUTIONS OF THE STUDY

The study provided important recommendations that could be useful to the government and the Ethiopia Ministry of Health to inform healthcare policy development to afford women better access to healthcare facilities.

At the service level, the government and local non-governmental organisationscan use the data to improve maternal health through prevention programmes and address the underlying social determinants that could have a profound impact on women's health and wellbeing. This decreases their overall vulnerability to any complications that may arise.

In this study, education was found to have a meaningful impact on respondents' use of maternal healthcare facilities. This suggests that focused educational opportunities for women may significantly increase the proportion of women who utilise maternal healthcare facilities.

To recap, the objectives of the study were to:

- Determine the proportion of women who attended ANC, skilled delivery and PNC at maternal healthcare facilities over the five years prior to data collection.
- Determine what factors affect the utilisation of maternal healthcare facilities in the study area.

The researcher is of the view that the study's objectives have been met.

5.7 OVERALL CONCLUSION

With this intricate picture of healthcare facility utilisation and health-seeking behaviour in Ethiopia, a more coordinated effort is imperative to design health promotion campaigns through inter-sectoral collaboration, focusing on vulnerable segments of the population. Emphasis should be placed on reorienting health systems in support of women of childbearing age. It is critical to support women's health especially during pregnancy; delivery and postnatallyto ensure vibrant future generations.

REFERENCE LIST

Abdul, NM. 2012. Health consequence of child marriage in Africa. *BioMed Central,* 12:11.

Acharya, DR. 2010. Women's autonomy in household decision-making: A demographic study in Nepal*. Reproductive Health,* 7(1):15-26.

Adhikari, R. 2016.Effect of women's autonomy on maternal health service utilization in Nepal, A cross sectional study. *BMC Women's Health.*16(26):1-7.

Alemayehu, H, Assefa, M & Adama, Y. 2014. Prevalence and factors associated with post-natal care utilization in Abi-Adi Town, Tigray, Ethiopia: A cross-sectional study. *International Journal of Pharmaceutical and Biological Sciences Fundamentals,*8(01):8.

Amon, E, Almamy, M, Mustafa, N, Kassimu, T, Henry, V, Ahmed, H & James, F. 2015. Access to institutional delivery care and reason for home delivery in three districts of Tanzania. *International Journal for Equity in Health,*13:48.

Arthur, E. 2012. Wealth and antenatal care use: Implications for maternal healthcare utilisation in Ghana*. Health Economics Review,* 2(1):1-8.

Asundep, NN, Carson, M, Archer, N, Tameru, M, Agidi, N, Zhang, Q & Jolly, B. 2013. Determinants of access to antenatal care and birth outcomes in Kumasi, Ghana. *Journal of Epidemiology and Global Health,* 3(4):279-288.

Ayele, DZ, Belayihun, B, Teji, K & Ayana, DA. 2019. *Factors affecting utilization of maternal healthcare services in Kombolcha District, Eastern Hararghe Zone, Oromia Regional State, Eastern Ethiopia*. Hindawi Publishing Corporation.

Ayele, GS, Melku, AT & Belda,S. 2019. Utilization of skilled birth attendant at birth and associated factors among women who gave birth in the last 24 months preceding the survey in Gura Dhamole Woreda, Bale zone, southeast Ethiopia. *BMC Public Health,* 19:1501.

Azuh, D, Fayomi, O & Ajayi, L. 2015. Socio-cultural factors of gender roles in women's healthcare utilization in southwest Nigeria. *Open Journal of Social Sciences,* 03(04):105-117.

Baatiema, L, Sumah, T & Ganle, M. 2016. Community health workers in Ghana: The need for greater policy attention. *British Medical Journal Global Health,* 1(4):5.

Babalola, S& Fatusi, A. 2009.Determinants of use of maternal health services in Nigeria – looking beyond individual and household factors. *BMC Pregnancy and Childbirth,*9:43. Available from: http://www.biomedcentral.com/1471-2393/9/43(Accessed on 08/07/2021).

Bahl, R & Daelmans, B. 2015. *Quality of care for pregnant women and new borns the WHO vision:*1045-1049.

Bakibinga, P, Mutombo, N & Mukiira, C. 2015. The influence of religion and ethnicity on family planning approval : A case for women in rural western Kenya. *Journal for Religion and Health,* 55:192.

Bekele, I, Yimam, I & Akele, G. 2018. Adherence to infection prevention and factor among nurses in Jimma University Medical Center. *Immunome Research,* 14(2):4-6.

Birmeta, K, Dibaba, Y & Woldeyohannes, D. 2013. Determinants of maternal healthcare utilization in Holeta town, central Ethiopia. *BioMed Centeral Health Service Research,* 13(256):1-10.

Bryman, A. 2016. *Socialresearch method*. 5th edition. United Kingdom: Oxford University Press.

Bwalya,BC, Sitali,D, Baboo,KS & Zulu,JM. 2018.Experience of antenatal care among pregnant adolescents at Kanyama and Matero clinics in Lusaka district, Zambia. *BMC,*15:124.

Central Statistical Agency (CSA) [Ethiopia] and ICF. 2011. *Ethiopia demography and health survey*. Addis Ababa, Ethiopia, and Rockville, Maryland, USA. CSA and ICF.

Central Statistical Agency (CSA) [Ethiopia] and ICF. 2014. *Ethiopia mini demography and health survey.* Addis Ababa, Ethiopia, and Rockville, Maryland, USA: CSA and ICF.

Central Statistical Agency (CSA) [Ethiopia] and ICF. 2016. *Ethiopian demographic and health survey.* Addis Ababa, Ethiopia, and Rockville, Maryland, USA: CSA and ICF.

Central Statistical Agency (CSA) [Ethiopia] and ICF. 2017. *Ethiopian demographic and health survey.* Addis Ababa, Ethiopia, and Rockville, Maryland, USA: CSA and ICF.

Central Statistical Agency (CSA) [Ethiopia] and ICF. 2019. *Ethiopian mini demographic and health survey* [EMDHS]*.* Addis Ababa, Ethiopia, and Rockville, Maryland, USA: CSA and ICF.

Creswell, KM, Bates, DW & Sheikh, A. 2013. Ten key considerations for the successful implementation and adoption of large-scale health information technology*. Journal of the American Medical Informatics Association,* 20(E1):9-13.

Crossman, RHS. 2014. *Plato today*. Routledge Library, Plato.

Crossman, A. 2020. Understanding Purposive Sampling. An Overview of the Method and Its Applications.Available from:https://www.thoughtco.com/purposive-sampling(Accessed on 08/06/2021).

Dansereau, E, Mcnellan, CR, Gagnier, MC, Desai, SS, Haakensad, A, Johanns, CK, Palmisano, EB, Ríos-zertuche, D, Schaefer, A, Zuñiga-Brenes, P, Hernndez, B, Iriarte, E & Mokdad, AH. 2016. Coverage and timing of antenatal care among poor women in 6 Mesoamerican countries.*BioMed Center Pregnancy and Childbirth,* 16(1):1-11.

Daniel, L. 2015. *Sampling: the foundation of good research inpublic health research methods*. London: SAGE:1-42.

David, E, Machungo, Z, Cavaliere, M, Fiosse, N & Sululu, M. 2014. Maternal near miss and maternal deaths in Mozambique: A cross-sectional region-wide study of 635 consecutive cases assisted in health facilities of Maputo Province. *BioMed CentralPregnancy and Childbirth,*14(401):1-8.

Deepak, C, Jauhari, N & Dhungana, H. 2018. A study on utilization of maternal health service and factors influencing the utilization in urban slum of Lucknow. *International Journal of Medicine and Public Health,* 8(2):77-81.

Dereje, H. 2017. Assessment of client satisfaction in labor and delivery service at a maternity referral hospital in Ethiopia.*Pan Africa Medical Journal,* 17(76):3.

Desalew, ZA, Bekele, B, Kedir, T & Desalegn, AA. 2014. *Factors affecting utilization of maternal healthcare services in Kombolcha District, Eastern Hararghe Zone, Oromiya Regional State, Eastern Ethiopia*. Hindawi Publishing Corporation.

Devkota,B, Maskey, J, Pandey,AR, Karki, D, Godwin, P, Gartoulla,P, Mehata,S & Aryal,KK.2020.Determinant of home delivery in Nepal-A disaggregated analysis of marginalized and non-marginalized women from the 2016 Nepal Demography and Health Survey. *PlosOne,* 15(1):e0228440.

Dheresa, M & Daraje, G. 2021. A 12-year neonatal mortality rate and its predictors in Eastern Ethiopia. *SAGE Journals*. Available from:https://doi.org/10.1177/2333794X211025407. (Accessed on 12/08/2021).

Dimbuene, ZT, Amo-Adjei, IJ, Amugsi, D, Mumah, J, Izugbara, CO & Begu, D. 2017. Women's education and utilization of maternal health services in Africa, a multi-country and socioeconomic status analysis. *Journal of Biosocial Science*. 50(6):725-748

Du Plooy-Cilliers, F, Davis, C & Bezuidenhout, R. 2014. *Research matters*. 2nd edition. Cape Town: Juta.

Ebot, JO. 2015. Girl power: The relationship between women's autonomy and children's immunization coverage in Ethiopia. *Journal of Health, Population and Nutrition,* 33(1):1-9.

Federal Democratic Republic of Ethiopia (FDRE). 2017. *Ethiopia 2017 voluntary national review on SDGs*.Ministry of Health: Addis Ababa, Ethiopia.

Federal Ministry of Health (FMoH), Ethiopia. 2015. *Health Sector Transformation Plan2015/16.* Ministry of Health: Addis Ababa, Ethiopia.

Fellegi, I. 2010. Survey methods and practices.*Statistics Canada,* 12(587):40-48.

Feyissa, TR & Genemo, GA. 2014. Determinants of institutional delivery among childbearing age women in western Ethiopia: Unmatched case control study. *BioMed Center,* 9(5):1-7.

Garces, AE. 2012. Action research as a meta-methodology in the management field*. SAGE Journals,* 19:1-11.

Gillet, P, Lange, D, Godin, M, Devos, D & Moens, G. 2014. Syntesis caring for mothers and newborn after uncomplicated delivery. Nigeria. *BioMed Central,*8(6):1-16.

Godwill, EA. 2015. *Fundamentals of research methodology: a holistic guide for research completion, management, validation and ethics*. United States: Nova Science Publishers.

Grove, S, Burns, N & Gray, J. 2012. *The practice of nursing research: Appraisal synthesis and generation of evidence*. 7th edition. St Louis, Missouri: Saunders.

Guimei, MK. 2017. Determinants of poor utilization of antenatal care services among recently delivered women in Rwanda: A population-based study.BioMed Center Pregnancy and Childbirth.*The American Journal of Maternal/Child Nursing,* 42(6):6.

Hwang,WJU & Park,YMI.2019.Factors influencing the accessability of maternal health service in Cambodia*. International Journal of Enviromental Research and Public Health,* 16:4.

Igboanusi, CJ-C, Sabitu, K, Gobir, AA, Nmadu, AG & Joshua, IA. 2019. Factors affecting the utilization of postnatal care services in primary healthcare facilities in urban and rural settlements in Kaduna State, North-western Nigeria. *American Journal of Public Health Research,* 7(3):113-116*.*

Ijeoma, NO-A, Ifeyinwa, CA, Obumneme, BE & Chigozie, JU. 2019. Determinants of antenatal care utilisation in sub-Saharan Africa: A systematic review. *British Medical Journal Open,* 20(9):4.

Jacobsen, KH. 2017. *Introduction to health research methods*. 2nd edition. Navigate.

Jinga, N, Mongwenyana, C, Moolla, A, Malete, G&Onoya, D. 2019. Reasons for Late Presentation for antenatal Care, Healthcare Providers' Perspective. *BMC Health Service,* 19, Article No. 1016. Available from: https://doi.org/10.1186/s12913-019-4855-x ((Accessed on 16/04/2021).

Kalasa, B & Jacobson, M. 2012. *Evaluation of UNFPA support to maternal health mid-term evaluation of the maternal health thematic fund country report: Ethiopia.* Ethiopia Country Office.

Kawakatsu, Y, Sugishita, B, Oruenjo, W, Wakhule, S, Kibosia, W & Honda, Y. 2014. Determinants of health facility utilization for childbirth in rural western Kenya, cross-sectional study.*BioMed Center Pregnancy Childbirth,* 14:265.

Khan, N, Khan, S & Sulema, K. 2017. Factors affecting utilization of maternal and child health services: District Swat KPK Pakistan. *International Journal of Innovative Research and Development,* 2(8):221-225.

Kifle, D, Azale, G & Melsew, M*.* 2017. Maternal healthcare service seeking behaviors and associated factors among women in rural Haramaya District, Eastern Ethiopia: A triangulated community-based cross-sectional study.*Reproductive Health,* 14(1):1-11.

King, EM & Winthrop, R. 2015*. Today challenges for girls education.*Brooking Institution:Massachusetts.

Kwabenaasare, F & Ibrahim, M. 2017*.* Assessing the quality service delivery of health insurance scheme in Ghana.*The Case of the National Health Insurance Scheme (NHIS),* 7(5):1-29.

Kyei-Nimakoh, M, Carolan-Olah, M& McCann, TV. 2017. Barriers to obstetric care at health facilities in sub-Saharan Africa – a systematic review protocol *Open Access,* 4:5-13.

Lamaro, T &Tadele, N. 2017. Family planning service utilization and its associated factors among married women in Benchi-Maji Zone, Southwest, Ethiopia: Community-based cross-sectional study.*Clinics in Mother and ChildHealth,* 14(1):1–8.

Lowe, M. 2017. Social and cultural barriers to husbands' involvement in maternal health in rural Gambia. *PanAfrican Medical Journal,* 27(255):1-7.

Mathenge, KF. 2016. Analysis of public procurement planning practices on provision of quality healthcare services at Nakuru Level V Hospital, Kenya.*Journal of Investment and Management,* 5(5):51.

Maree, K. 2016*. First stapes in research.* 2nd edition. Pretora: Van Schaik.

Mekonnen,Y & Mekonnen, A. 2002*. Utilization of maternal health care services in Ethiopia*. Calverton, Maryland, USA: ORC Macro.

Mengistu, MM, Beyene, T, Desta, OH &Bayeta, AB. 2018. *Maternal health service utilization and associated factors among mothers with children under one year in Ambo District, West Shoa Zone, Central Ethiopia*. Research Square. Cambridge University Press.

Mensah, HF. 2010. General, target and accessible population: Demystifying the concept for effective sampling. *The Qualitative Report,* 22(6):9.

Mohamed, A, Shah, M, Jusoh, L, Bahru, M & Affairs, N. 2016. Introduction: Literature review. *Hindawi,* 4(1):889-907.

Mosadeghrad, AM. 2014. Factors influencing healthcare service quality.*International Journal of Health Policy and Management,* 3(2):77-89.

Mulat, G, Kassaw, T&Aychiluhim, M. 2015. Antenatal care service utilization and its associated factors among mothers who gave live birth in the past one year in Womberma Woreda, North-West Ethiopia. *EpidemiologyOpen Access,*2(1):8.

Mustafa, M, Jeffree, A & Husain, J. 2016. Maternal health and mortality in developing countries.Challenges of achieving millennium development goals.*Journal of Dental and Medical Sciences,* 15(8):112-117.

Nayak, BK. 2016. How to enhance the skills of scientific writing. *Journal of Clinical Ophthalmology and Research,* 4(2):63-64.

Nayak, JK &Singh, P. 2015.*Fundamentals of research methodology, problems and prospects*.1st edition.New Delhi: SSDN Publishers and Distributers.

Nikose, S, Singh, A, Khan, M, Arora, N, Taywade, M, Gudhe, M & Gadge, N. 2015. Women's healthcare prevalence of osteoporosis in female population in rural central India [By Calcaneal Ultrasound].*Journal Women'sHealthcare,* 4(5):4-6.

Nuamah, GB, Agyei-Baffour, P, Mensah, KA, Boateng, D, Quansah, DY, Dobin, D& Addai-Donkor, K. 2019. Access and utilization of maternal healthcare in a rural district in the forest belt of Ghana. *BMC Pregnancy and Childbirth,* 19:6.

Oluwasola, E, Aduragbemi, OB-T & Charles, AA. 2017. Factors influencing utilization of maternal health service by adolescent mother in low- and middle-income countries: A Systematic Review.*BMC Pregnancy and Childbirth,* 17(1):6.

Onah,H, Ikeako,L & Iloabachie,G. 2006.Factors associated with the use of maternity services in Enugu, South Eastern Nigeria. *Social Science & Medicine* 63(7):1870–1878.

Onasoga, A, Olayinka, OT, Alade, OA & Egbuniwe, MC. 2015. Awareness and barriers to utilization of maternal healthcare services among reproductive women in Amassoma community, Bayelsa State*. International Journal of Nursing and Midwife,* 6(1):10-15.

Paul, P& Chouhan, P. 2020. Socio-demographic factors influencing utilization of maternal health care services in India. *Clinical Epidemiology and Global Health,*8(3): 666-670

Polit, DF & Beck, CT. 2012. *Nursing research: Generating and assessing evidence for nursing practice.* 9th edition. Philadelphia: Lippincott, Williams & Wilkins.

Raj, A & Boehmer, U. 2013*.* Girl child marriage and its association with national rate of HIV, maternal health and infant mortality across 97 countries. *SAGE Journals,*19(4):536-551.

Ramezani, M, Tehrani, F, Hajizaden, N, Simbarand, M & Farzadafra, M*.* 2016. Factors influencing the use of prenatal care: A systematic review.*Journal of Midwifery and Reproductive Health,* 4(1):544-557.

Reynolds, HW & Guest,G. 2015. *Public health research methods*.SAGE research methods. Avilble from https://dx.doi.org/10.4135/9781483398839(Accessed on 18/03/2021).

Roro, M, Hassen, A, Lemma, N & Gebreyesus, N. 2014. Why do women not deliver in health facilities: A qualitative study of the community perspectives in south central Ethiopia.*BioMed Central Research Note,* 7(556):1-7.

Roy, S, Sahoo, A & Sarangi, L. 2017. Factors affecting utilization of maternal healthcare service in urban area of Bhubnaneswar, India. *Journal of Pharmacy Practice and Community Medicine,* 3(3):138-144.

Saol, T, Argaw, Z &Facha, W. 2021.Postnatal care utilization and associated factors among mothers who delivered in the last twelve months in Sodo Zuria District of Wolaita Zone, Southern Ethiopia: A community-based cross-sectional study.*OpenAccess,*11(5):383.

Sarmento, DR. 2014. Traditional birth attendance (TBA) in a health system. What are the roles, benefits and challenges: A case study of incorporated TBA in Timor-Leste. *Asia Pacific Family Medicine,* 13(1):1-9.

Sharma, S, Hamajima, M & Reyer, D. 2016. Measuring what works: An impact evaluation of women's groups on maternal health uptake in rural Nepal. *PLoS ONE,* 11(5):1-16.

Shayesteh, H, Fahimeh, RT, Masoumeh, S & Farshad, F. 2015. Factors influencing the use of prenatal care: A systematic review. *Journal of Midwife and Reproductive Health,* 4(1):544-557.

Shiferaw, S, Spigt, M, Godefrooij, K, Melkamu, M & Tekie, A. 2013. Why do women prefer home births in Ethiopia? *BMC Pregnancy and Childbirth,* 13(5):5-8.

Shija, AE, Msovela, J&Mboera, LEG. 2011. Maternal health in fifty years of Tanzania independence: Challenges and opportunities of reducing maternal mortality. *Tanzania Journal of Health Research*, 13 (5 Suppl 1:52-64).

Singh, A, Kumar, A & Pranjali, P. 2014. Utilization of maternal healthcare among adolescent mothers in urban India. Evidence from DLHS-3. *PeerJournal, 2*(e592):1-29.

Soojin, K& Sun-Young, K. 2019.Exploring factors associated with maternal health care utilization in Chad.Global Journal of Health Science 1(1):e31.

Tarekegn, SM, Lieberman, LS & Giedraitis, V. 2014. Determinants of maternal health service utilization in Ethiopia: Analysis of the 2011 Ethiopian demographic and health survey. *BMC Pregnancy and Childbirth,* 14(1):1-13.

Tesfaye,G, Chojenta, C, Smith, R & Loxton, D. 2019. Predisposing, enabling and need factors associated with skilled delivery care utilization among reproductive-aged women in Kersa district, eastern Ethiopia. *Reproductive Health,* 28(4):10.

Tessema, GA, Laurence, CO, Melaku, YA, Misganaw, A, Woldie,SA, Hiruye, A, Amare, AT, Lakew, Y, Zeleke, BM & Deribew, A. 2017. Trends and causes of maternal mortality

in Ethiopia during 1990-2013: Findings from the Global Burden of Diseases study. *BMC Public Health*:1.

Tsegay, R, Aregay, M, Kalayu, B, Alemayehu, D & Yohannes, M. 2017. Determinant factors of home delivery among women in Northern Ethiopia: A case control study. *BioMed Central Public Health,* 17(1):1-8.

United Nations Development Programme [UNDP].2018. Annual Report.

Utz, B, Siddiqui, M, Adegoke, N & Broek, M. 2013. Definitions and roles of a skilled birth attendant: A mapping exercise from four South-Asian countries. *PubMed Central,* 92:1063-1069.

Van der Riet, M. 2008.*Participatory research and philosophy of social science: Beyond moral imperatives*. University of Kwazulu-Natal, South Africa: SAGE.

WHO see World Health Organization.

WHO, UNICEF, UNFPA & World Bank. 2012. *Trend in maternal mortality: 1990-2010.59*. Geneva: WHO, UNICEF, UNFPA & World Bank.

World Health Organization. 2008. *Closing the gap in a generation. Health equity through action on the social determinants.* Geneva: WHO.

World Health Organization. 2010. *Health situation.* Geneva: WHO (Gtp Ii).

World Health Organization. 2013. *Health statistics and health information systems.*Geneva: WHO.

World Health Organization. 2014. *Framework for country action across sectors for health and health equity*. Geneva: WHO.

World Health Organization. 2015. *Trends in maternal mortality: 1990 to 2015: Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division, Organization*. Geneva: WHO.

World Health Organization. 2016a.*The global strategy for women's, children's and adolescents' health (2016-2030).*United Nations, Geneva: WHO.

World Health Organization. 2016b. *The global strategy for women's, children's and adolescents' health (2016-2030).* United Nations. Geneva: WHO.

World Health Organization. 2018. *Maternal mortality fact sheet*. Available from:http://www.who.int/news-room/fact-sheets/ detail/maternal-mortality(Accessed on 12/08/2021).

World Health Organization. 2019*. Worldhealth statistics. Monitoring halth for the SDGs.* Geneva: WHO.

World Health Organization. 2020. *Global health observatory, Explore a world of health data*.Geneva: WHO.

Winter, JD. 2014. Defining scientific integrity. *Philosophy and Public Policy Quarterly,* 32(3/4):29-35.

Workineh,YG & Hailu, DA. 2014. Factors affecting utilization of postnatal care service in Jabitena district, Amhara region, Ethiopia. *Science Journal of Public Health,* 2(3):169-176.

WorldBank. 2015. *Better health in Africa: Experience and lessons learned.* Washington, DC: World Bank.

Wudineh, KG, Nigusie, AA, Gesese, SS, Tesu, AA&Beyene, FY. 2018.Postnatal care service utilization and associated factors among women who gave birth in Debretabour town, North West Ethiopia: A community-based cross-sectional study. *BMC Pregnancy and Childbirth,* 18:508.

Yar'zever, IS & Said, I. 2013. Knowledge and barriers in utilization of maternal healthcare service in Kano State, Northern Nigeria. *European Journal of Biology and Medical Science Research,* 1(1):1-14.

Yinager, GW & Hailu, DA. 2014. Factors affecting utilization of postnatal care service in Abitena district, Amhara region, Ethiopia. *Science Journal of Public Health,* 2(3):76.

Yoseph,M, Abebe,SM, Mekonnen,FA, Sisay,A & Gonete,KA.2020.Institutional delivery service utilization and its determinant factors among women who gave birth in the past 24 month in Southern Ethiopia. *BMC Health Service Research,* 20:265.

Zhao, P, Han, X, You, L, Zhao, Y, Yang, L& Liu, Y. 2020. Maternal health services utilization and maternal mortality in China: a longitudinal study from 2009 to 2016. *BMC Pregnancy and Childbirth,* 20:220.

ANNEXURES

ANNEXURE A: ETHICAL CLEARANCE FROM THE DEPARTMENT OF HEALTH STUDIES, UNISA

UNISA university of south africa

RESEARCH ETHICS COMMITTEE: DEPARTMENT OF HEALTH STUDIES
REC-012714-039 (NHERC)

11 October 2017

Dear Dr Melat Benti Maruta

Decision: Ethics Approval

HSHDC/720/2017

Dr Melat Benti Maruta
Student 6198-166-4

Supervisor: Dr RM Mmusi Phetoe
Qualification: D Litt et Phil
Joint Supervisor: -

Name: Dr Melat Benti Maruta

Proposal: Factors affecting utilization on maternal health care facilities in Ethiopia

Qualification: **MPCHS94**

Thank you for the application for research ethics approval from the Research Ethics Committee: Department of Health Studies, for the above mentioned research. Final approval is granted from 11 October 2017 to 11 October 2019.

The application was reviewed in compliance with the Unisa Policy on Research Ethics by the Research Ethics Committee: Department of Health Studies on 6 September 2017.

The proposed research may now commence with the proviso that:

1) *The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*

2) *Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the Research Ethics Review Committee, Department of Health Studies. An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.*

RECEIVED
2017 -10- 24
Executive Dean
College of Human Sciences

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

3) *The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.*

4) *[Stipulate any reporting requirements if applicable].*

Note:

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

Kind regards,

Prof L.A. Lacock

Prof JE Maritz
CHAIRPERSON
maritje@unisa.ac.za

Prof MM Moleki
ACADEMIC CHAIRPERSON
molekmm@unisa.ac.za

Prof A Philipps
DEAN COLLEGE OF HUMAN SCIENCES

ANNEXURE B:REQUEST FOR PERMISSION TO CONDUCT RESEARCH

To: Jimma Zone Health Office

Dear Sir/Madam

I am a Master's student of the University of South Africa, Department of Health Studies in the College of Human Sciences. I request your permission to gain access to the Women's and Health professional as for me to fulfil Master's degree requirement on maternal health related research. The study will not be intrusive or invasive. Neither will any of the participants be harmed.

I will comply with ethical requirement throughout the research and confidentiality and privacy will be maintained as participants' identity will not be divulged nor identified.

I hope you will consider my request for permission to enter the research site and gain access to participants favorably.

Yours sincerely

Dr Maruta, Melat Benti

ANNEXURE C:PERMISSION GRANTED FROM OROMIYA HEALTH BUREAU HEALTH OFFICE TO CONDUCT THE STUDY

BIIROO EEGUMSA FAYYA OROMIYAA

OROMIA HEALTH BUREAU
የኦሮሚያ ጤና ጥበቃ ቢሮ

Lakk /Ref No/ቁጥር BEFO/HBTSH/1-8/142
Guyyaa /Date/ቀን 5/4/2010

Wajjira E/Fayyaa Bulchinsa Magaala Sabbataa tiif
Sabbataa
Wajjira E/Fayyaa Bulchinsa Magaala Jimma tiif
Jimma

Dhimmi: Xalayya Deggersa Kennuu Ilaala.

Akkuma beekamu Biiroon Keenya Ogeyyii, dhabbile akkasumas namoota qorannoo fi Gamaggama jalqabaa fi Xumuraa(baseline and Endline Evaluation) geggessuuf propozaala dhiyeffatan propoozaala isaanii madaaluun akkasumas iddoo biratti ilaalchisani fudhatama argatan (approved) dhiyeffatan, propoozaala isaanii ilaaluudhaan waraqa deggersa ni kenna. Haaluma kanaan mata duree **"To examine factors affecting utilization of maternal health care facilities in Ethiopia."** jedhuun irratti Dr Meelat Bantii Maruutaa qorannoo hojjechuudhaaf **Godina Jimmaa(Aanaa Sarboo)** propoozaala isaani koree "**Health Research Ethical Review Committee**" Biiroo keenyatti dhiyeffatani jiru.

Haaluma kanaan koreen "**Health Research Ethical Review Committee**" Biiroo keenya piropoozaali kana ilaaluun mirkanesse qorannoon kun akka geggeeffamuu murtesse jira. Kanaafuu, hojji qorannoo kana irratti deggersa barbaachisa akka gootaniifii gaafachaa; Dr Meelat Bantii Maruutaa qorannoon kun qacceffamee eerga xumuramee booda firii isaa koppii tokko **BEFO** tiif akka galii godhan galagalcha xalayaa kanaan isaan beeksifna. Anis, Dr Meelat Bantii Maruutaa wayitti qorannoon kun qaaceffame xumuramu firii isaa koppii tokko BEFO tiif galii gochuuf mallattoo kootiin ni mirkanessa.

Nagaa Wajjin

Birhaanuu Qanaatee(Bsc , MPHE)
Qindessaa Qorannoo fi Qo'annoo Fayyaa BEFO

Maqaa; Shifarraa Ayyaalaa tiif
Mallattoo _____
Bilbila; 0936832463
G/G
Dr Meelat Bantii Maruutaa tiif
B/J

Tel: 0113-69-01-17/0113-69-01-19/0113-69-01-30 Fax 0113-71-72-88/0113-71-72-27
P. O. Box. 24341 E-mail: ohbhead@telecom.net.et ADDIS ABABA/FINFINE-ETHIOPIA

ANNEXURE D: CONFIDENTIALITY AGREEMENT

TITLE OF THE PROJECT: FACTORS AFFECTING UTILISATION OF MATERNAL HEALTHCARE FACILITIES IN ETHIOPIA

Principal investigator: Dr Maruta, Melat Benti

Supervisor: ProfRM Mmusi-Phetoe

Introduction: Maternal health refers to the "health of women during pregnancy, childbirth and the postpartum period. While motherhood is often a positive and fulfilling experience, for too many women it is associated with suffering, ill-health and even death". At the Millennium Summit in 2000, representatives of most countries agreed to reach eight Millennium Development Goals (MDGs) by 2015, among which were goals 5 on maternal mortality by three-quarters. These goals have not been met in low-resource regions, especially in Sub-Saharan Africa where the maternal mortality ratio declined by 45% between 1990 and 2015 (WHO 2015).

Purpose: To examine factors affecting utilization of maternal healthcare facilities in Ethiopia.

Procedure and participation: The method of the research is cross-sectional study. The main instrument used for data collection was the structured questionnaire. Data analysis will be performed using SPSS version 24.0.

Confidentiality: To establish secured safeguards of the confidentiality of research data, the principal investigator used codes during data collection period instead of using names. No person shall access the data except the PI and the supervisor. The use of information for any purpose other than that to which participants consented is unethical to the participants. The information you provide is not disclosed in the way it identified your personal characteristics and privacy. After the research defense and final work is approved by the department of health studies, the original data questionnaire will be burned in secure manner.

Benefit: The research does not have a short term financial, healthcare and capacity building benefit to the research participant as an individual or as a group but in the long run it will help the concerned organization and policy-makers to have a policy consideration and direction and formulation of strategy and design of maternal and newborn health programs based on the recommendations and the findings. Moreover, the research work will help as a base line data for other researches in the field.

Risk: The proposed research does not have any physical harm, social discrimination, psychological trauma and economic loss.

Freedom to withdraw: If you want to participant in the study, you have full right to withdraw from the study any time you wish. This would have no effect at all on your health benefit from the health facility moreover nobody will enforce you to explain the reason of withdrawal.

Ethical approval: The protocol of the study was submitted to the Higher Degrees Committee in the Department of Health Studies, College of Human Sciences and the committee have granted a written approval letter for the ethical soundness of the study.

Person to contact: The participant has the right to ask information that is not clear about the research context and content before and or during the research work. You can contact the principal investigator.

Dr Maruta, Melat Benti: +251936832463

ANNEXURE E: INFORMED CONSENT FORM FOR PREGNANT MOTHER AGED 18 YEARS AND ABOVE

My name is Dr Melat Benti; I am a medical doctor working at Minilik II Referral Hospital. I am conducting research for my master's degree. The aim of this study is to find out factor that affect utilization of maternal healthcare facility. The findings from this study provide useful insights regarding the impacts of culturally rooted obstacles and challenges that affect community health in general and the health and security of women in particular.

The results will be used to determine areas necessary to improve the situation of maternal health especially in the most remote rural Women's. There is no risk in sharing your information and you need not attach your name, surname, address or telephone number.

To participate in the study you will be required to respond to the questionnaire that will be provided to you by the researcher. If you do not understand feel free to ask and clarification will be made and questions will be answered to you by the language of your choice.

Participation is totally voluntary; you are under no obligation to participate in the study. You have the right to opt not to take part in the study without any penalties.

Researcher: Dr Melat Benti
Phone no-0936832463

I confirm that I have received and understand all the information regarding the study. It was also explained to me that my participation is voluntary and that I may refuse to participate or give consent to the study without any penalty.

Name: _____
Signature: _____
Date: _____

ANNEXURE F: INFORMED CONSENT FORM FOR PREGNANT MOTHER AGED YOUNGER THAN 18YEARS

My name is Dr Melat Benti; I am a medical doctor working at Minilik II Referral Hospital. I am conducting a research project to determine factor affecting maternal healthcare utilization. The study also includes for women <18 year of age. I want to get your permission to have interview with the women under your supervision and also from the women.

If you assent; the interview will be conducted with integrity. The privacy of the women will be assured. The information will be kept confidential. The name will not appear and responses will not be linked to identifiers. No harm and you are entitled to:

- The right to be informed
- The right to refuse
- If you agree to be interviewed, give honest answers
- Withdraw even if you have signed this consent form

Verbal consent

Guardian name: _____

Signature: _____

Witness

Name: _____

Signature: _____

Date: _____

ANNEXURE G: QUESTIONNAIRE ON FACTORS AFFECTING UTILIZATION OF MATERNAL HEALTHCARE FACILITIES.

Instruction to investigator: please use pencils and circle the code where applicable and write the answers in legible handwriting in the spaces provided for responses.

I. FILTER QUESTIONS

(1) Have any women in your household given birth in the last five years?

(2) If yes, may I speak with her/them / continue interviewing?

(3) If No, thank and stop interviewing

II. DEMOGRAPHIC QUESTIONS

INTERVIEWER VISITS			
Household no_____	How long have you been living in this town	1	2
House no_____		<1yr	>1yr

	1visit	2visit	3visit	FINAL VISIT
Date	_____	_____	_____	_____
INTERVIEWER'S NAME	_____	_____	_____	_____
RESULT*	_____	_____	_____	_____

RESULT CODES: 1 Completed 2 Not at home 3 Postpone

4 Refuse 5 Parity 6Incapacitated

7 OTHER (specify) _____

	Afan Oromo	**Amharic**	**Other**	YES NO
LANGUAGE OF	1	2	3	

INTERVIEW				
NATIVE LANGUAGE OF RESPONDENT	1	2	3	TRANS-LATOR 1 2 USED?

	Name	**Date**	**Sign**	Time of start of interview _____ Time of end of interview_____
Interviewer				
Supervisor				

Part1: Questionnaire on socio-demographic characteristics

It has been found that it is necessary to understand the socio-demographic history as to their contribution to attending ANC during pregnancy, choice of place of delivery and PNC. Therefore, I would like to ask you some questions in this respect.

Questionnaire on identification of the respondents

1 Present maternal age: _____Years

2 What is the highest level of schooling you have ever attended?

1. Never attended
2. Only read and write
3. Primary school
4. Secondary school
5. Tertiary (Certificate-Degree)
6 Other, specify_____

3. What is your occupation?

1. Housewife
2. Farmers
3. Maid
4. Civil servant
5. Merchant
6. Student

7. Other, specify_____

4. What is your marital status?
   1. Married
   2. Divorced(separated)
   3. Widowed,
   4. Never married(single)

5 What is the average family income per months?
   1. < ₵89.3
   2. ≥ ₵89.3

6 How many children do you have?
   1. One
   2. Two
   3. Three
   4. Four
   5. More than four

7 Age of mother at first pregnancy _____

Part2: Questionnaire on ANC

1. What are the benefits of ANC?
   1. Maternal health
   2. Child health
   3. Both
   4. Don't know
   5. Other, specify _____

2. Did you go to health institution for ANC checkup while you were pregnant?
   1. Yes
   2. No (skip to Q.7-36)

3. If yes, at what gestational age did you go
    1. 1-3 months
    2. 4-6 months
    3. 7-9 months
    4. Don’t know

4 If yes, what was the total number of visits?
    1. Once
    2. Two
    3. Three
    4. Four and more

5 Were the health workers respectful?
    1. Yes
    2. No

6 How long was the time you spent in waiting to get ANC services?
    1. Short (<30 min)
    2. Fair (30-60 min)
    3. Long (>60min)

7 Do you think that waiting time was a problem while you were attending ANC?
    1. Yes always
    2. No
    3. Don’t know

8 If you attended ANC, was health education given during each visit?
    1. Yes
    2. Not
    3. Don’t know

9 If health education was given, on what topic?

		Yes	No
1.	ANC- ---	1	2
2.	F/P--------	1	2
3.	Babycare-	1	2
4.	Breastfeeding….	1	2
5.	Don't remember-…	1	2
6.	Other, specify_____		

10 Did you think that lack of privacy was problem at ANC?

1. Yes
2. No
3. Don't know

11 What is your feeling about the quality of ANC given?

1. Good
2. Satisfactory
3. Poor

12 Do you have confidence on the service provided at that health institution?

1. Yes
2. No
3. Don't know

13 How do you rank the behavior of health workers providing ANC services?

1. Very Good
2. Good
3. Fair
4. Bad

14 How do you feel about the distance from your home to the nearest health institution?

1. Very close (<5-km)
2. Average (5-25-km)
3. Too far (>25-km)

15 How long does it take to travel from your home to the nearest health institution?
In _____ hours

16 What health services did you receive when you visited the health institution during your pregnancy? (multiple responses)

1. Physical examination (including weight, blood pressure, heart rate)
2. Gynecological examination
3. Ultrasound
4. HIV/STD testing
5. Blood tests
6. Nutritional supplements
7. Tetanus vaccine

17 Did you ever pay for ANC?

1. Yes
2. No (skip to Q35)

18 If yes, how do you feel about the payment for ANC?

1. Unaffordable
2. Fair
3. Very small

19 How much on average did you pay for ANC service per visit? _____Birr

20 If you did not attend ANC? Why not? (Multiple response) **(Don't read the choices)

	Yes	No
1. No or little knowledge about ANC clinics----------	1	2
2. Afraid because of Young age	1	2
3. Being in a state of good health-	1	2
4. Too busy to attend ANC clinics-	1	2
5. Bad attitude of Medical Personnel	1	2
6. Expenses for ANC clinics are Unaffordable ----------	1	2
7. ANC clinic too far from my home----------	1	2

8. Waiting time is too long at ANC ---------- 1 2
9. Attending to TBA---------- 1 2
10. Husband disapproval ----- ----- 1 2
11. Poor quality of the services---- 1 2
12. Because of Taboo-------- ---- 1 2
13. ANC attendance is useless -- 1 2
14. Other, specify_____

Part 3: Questions on the choices of delivery and assistances during delivery

1 Where did you deliver your last baby?

1. Hospital
2. Health center
3. Health Post
4. Home
5. Other, specify----------

2 Why did you want to deliver your baby in that particular place? (If in a health institution)

1. Close to where I live
2. High quality services
3. Good approach of health workers
4. Little expenses to deliver in this particular institution
5. Other, specify_____

3 If you delivered at home. Why? (More than one answer is possible)

1. Expenses for delivery at health institution is unaffordable
    1. Yes
    2. No
2. Dislike behaviours of health workers at health institution
    1. Yes
    2. No
3. Wish to deliver at home where relatives are nearby

1. Yes
2. No

4. More trust on TBAs/relatives than health workers a t health institution
   1. Yes
   2. No
5. Other, specify _____

4 If you delivered at home who assisted you during delivery?
1. Health workers
2. TBA
3. Close relatives/friends
4. Neighbours
5. No one
6. Other, specify_____

5 Which health institution do you prefer?
1. Governmental (skip Q6)
2. Non-Governmental

6 If you did not use a government health institution, what was the primary reason?
1. Service not satisfactory
2. Long waiting periods
3. Doctors are not available
4. Medicines are not available
5. Long distance
6. Treatment is costly

7 Which mode of transport do you use to go to the government primary health clinic?
1. Walking
2. Ambulance
3. Public transportation
4. Own car
5. Animals

8 How satisfied were you with the care you received from the skilled birth attendant?

1. Completely satisfied
2. Partially satisfied
3. Neither satisfied nor dissatisfied
4. Dissatisfied

9 How many times did you visit the clinic after delivery?

1. 1 to 2 visits
2. More than 2 visits

10 What health services did you receive when you visited the clinic after your delivery? (multiple responses)

1. Physical examination
2. Counseling on breastfeeding
3. Contraceptives
4. Blood test for anemia
5. Nutritional supplements
6. Information on warning signs of problems

11 Overall, how satisfied were you with the maternal health services you received?

1. Completely satisfied
2. Partially satisfied
3. Dissatisfied

QUESTIONNAIRES (AFAN OROMO LANGUAGES)

Waraqaa hubannoo fi hayyama hirmaataa

Seensa

Akkam bultan/ooltan?

Maqaan kiyya_____ yoo ja'amu, hojiin kiyya barataa Yuniversiitii South Afrikatti, MPH" baracha jiru, Dr Melat Bantiif ragaa guuraa dha. Isinis qorannoo kanaaf waan filamtaniif, haala qoranichaa waaniin isiniif ibsuuf akka na dhageefattan kabajaan isin gaafadha. Matadureen Barmatiile Hawwaasa Hawwan Ulfa Qabaniifii Da'anirratti miidhaa Qamaa, Sammuu fi Du'atiif sababa isaa, AanaaSerboo, Jimmaa,ltoophiyaa yoo ta'u, kaayyoon ammo rakkoo fayyaa qaamaafi Du'atii Hawwanii tajaajila barbaachisuu fi kan argachutti jiran ilaala.

Qo'annichimanaa manatti deemuunkan gaggeeffamu ta'a. Hawwanumuriida'umsamanasanakeessa jiranqo'annicha keessatti hirmaatu. Kunisdaqiiqaa 20-45 fudhachuu danda'a. Qo'annicha keessatti kallattiin hirmaachuun faayidaan argamsiisu hin jiru. Haata'u malee namni qo'annoo kana abbummaan gaggeessu bu'aa qo'annichaa namoota Imaammata baasaniif dhiheessuun, isaan immoo imaammatasirrii qopheessuuf akkaisaan gargaaru ilaaluun ni danda'ama.Maqaan keessaniifiodeefannoon maalumaa keessan ibsu danda'an Waraqaagaaffileekanairratti akka hin bareeffamneisiniif mirkaneessa. Odeeffannoon isin kennitan iccitiin qo'annichaaf malee dhimma biraa kamiifuu akkahin oolle isin hubachiisuun barbaada.

Qo'annoo kana keessattihirmaachuun kee fedhairratti kanhundaa'edha. Gaaffii deebisuu hinbarbaanne ykn deebisuuufsiif hin mijanne kamilleedeebisuu dhiisuu nidandeessa. Jidduutti addaan kutuuyoo barbaaddes ni dandeessa. yoo wantisiif ifa hin taane jiraate odeeffannoogahaa siifkennuufqophiidha.

Teesssoo: Dhimma koree dhaabbii naaanusa qorannoo ilaaluu (NHERC) telefoonaa: +27124293111/+27124294150

Nama qo'annicha gaggeessu: Dr Melat Benti: Tele +251936832463

Ibsa hayyama fedhii

Kayyoon qorannoo kana Midhaa qaamaa, Sammuufi Du'atii Hawwanii fi tajaajila isaaniii ilaalchisee ibsa kenname irraa hubanoo argadheera. Carraan gaafii gaafachuulee naaf kennamee deebii argachuudhaan sirritti naa galeera. Kanaafuu qorannoo kana irratti fedhiin hirmaachhufi murteeseera. Akka naa galetti, yeroo barbaadetti, dhiisuu akkaan danda'u fuuldurallee humaa rakkoo akka narraan hingeesinne hubadheera.

Malattoo hirmaataa---------- Guyyaa/----------/----------/--------

Malattoo raga guraa---------- Guyyaa/----------/----------/--------

Part I: Ittiin Beekumsa Abbaa Worraa (AW)tiifHawwan Ulfafi Dahanii Jirani

Gaafii takka takkaan eegaluu dura, fuula kana F1-F13guuti (eddo duwwaa jirtu deebii kennameen guuti)			**Gara dabri**
FS01	Guyyaa gaafii	Guyyaa ☐☐ Baatii ☐☐ Woggaa ☐☐☐☐	
FS02	Sa'aa eegallii	☐☐☐☐	
FS03	Sa'aa xumuraa	☐☐☐☐	
FS04	Koodii (KD) AW	☐☐☐☐☐☐☐	
FS05	Maqaa gaafataa	_____	
FS06	Deebii kennaa	Haadha Mana……..……1 Guddiftuu.....…….....2	
FS07	Ganda/aradaa	Maqaa _____ Koodii ☐☐	
FS08	Lakk manaa	☐☐☐☐☐☐☐	
FS09	Lak miseensa AW	☐☐	
FS10	Hawwan Da'iima Wagga shanii gadii Qaban ni jiruu?	Ee……..…..1 Lakki……..……...….2	AW itti aanutti
FS11	Yeroo Meqaaf Iddoo Kana Turtan	Wagga Tokko Gadii……....1 Wagga Tokko Olii……..……...2	AW itti aanutti
FS12	Afan Dhaloota Debii Kannaa?	Afaan Oromo……...1 Amariffaa..……..……..……...2 Kan Biroo.....3	
FS13	Deebiin gaafii lak, FS10 yoo "ee" ta'e, Isaan Dubisu Ni Dandeenya?	Ee……1 Lakki……..……..……...2	AW itti aanutti
FS14	Deebiin gaafii lak FS11 yoo "ee" ta'e, Da'imman Wagga shani gadii meeqat jira?	Tokko…….....1 Lama……..…..2 Sadii..……...3 Afur……..……..……..….4	
FS15	Rakkoo deebii kennaan walqabate	Guyyoota fi sa'aalee beelamaa; 1._____ 2._____ 3._____ Deebii kennaan hinjiru…..……...1 Deebii didan…….……..…2 Cinaan deebi'e…….……..……......3 Deebii kennaan hin danda'u...……..….4	
FS16	Koodii ragaan itti galu	☐☐☐☐☐☐☐	

Deebiin gaafii FS10“lakki”yoo ta’e, Galatoomjadhuu mana itti aanutti dabri. Hawwan umuriin Da'umsaf ga’an jiraanaan, Gaafii Gaafachuu itti fufa.

KoodiAradaalee Aanoota Godina Jimma fi Adda Naannoo FinfinneeSamuudaan hammataman			
Aradaa Aanaa serbo	**Koodii**	**Aradaa Aanaa Sebata**	**Koodii**
	01		05
	02		06
	03		07
	04		08

Part II: Odeefannoo Haala Hawaasummaatiifi kanBiroo Haadha Ulfa fi kan Deesse ilaalu-SDM (deebii itti mari)

KD AW: _____ KD Hadhaa: _____

Lakk	**Gaafii**	**Filannoo fi deebii**	**Dabri**
SDM201	Umurii Hadha Mana	Umurii woggaan barreesi ☐☐	
SDM202	Barumsa hangam takka baratte?	Hinbarane……..1 Kutaa 1-4.....2 Kutaa 5-8……..3 Sadarkaa 2ffaa……..4 Qophaayina…..……5 College/University...……...6 KBRAI……..88	
SDM203	Hojiin kee maali; jechuun amma hojii akkamii hojjata?	Hoj. mootumaa…….....1 Hoj. Mit-mootuma…….....2 Kan dhuunfaa……..…..3 Qoteebulaa……..……..…….4 Haadha manaa…….....5 Daladala.....6 Barataa.....7 Hojjatu Mana.....8 KBRAI…….....88	
SDM204	Haal fuudhaafi heerumaa kee akkami?	Heerumte……..…..……..…..1 Hinerumine……..……..……..2 Hiikamte……..…..…….....3 Irraa du’e……..…….....4 Gargar jiran…….....……..……..…5 KBRAI……..…..…….....88	
SDM205	Sabni kee maali?	Oromo……..……...……..…….....1 Amhara……,,…….……..…….....2 Gurage……..……..……..…….3 Somale…….....……4 KBRAI…….……..……..……..…88	
SDM206	Amantiin kee maal?	Islaama……..…..……1 Ortodoksii.....……..……..……2 Katoolikii.....……..……..……..….3 Pirotestantii.....4 Waqeeffata.....5 KBRAI……...……..……..……..88	

Lakk	Gaafii	Filannoo fi deebii	Dabri
SDM207	Galiin Kee Giddu Galeessa Ji'atti Meeqa?	Qr. 2,500 oli.....1 Qr. 2,501 Hanga 7,000.....2 Qr. 7,000 Gadii.....3	
SDM208	Miseensa Insuransii Fayyaati	Ee.....1 Miti..... Gara Gafii.210 Dabri.....2 HNBK……..…..…….……99 KBRAI……...…..……88	
SDM209	Itti fayadama Jirta	Ee.....1 Miti.....2 HNBK……..……..……...99 KBRAI……..……88	
SDM210	Ilmaan Meeqa Qabdan?	Tokko.....1 Lama.....2 Sadii.....3 Afur.....4 Shan.....5 Afurii oli.....6	
SDM211	Da'umsa Duraa yeroo Deeysu, umuriin kee meeqa ture?	Umurii woggaan barreesi ☐☐	
SDM212	Da'umsa Dhumaa yeroo Deeysu, umuriin kee meeqa ture?	Umurii woggaan barreesi ☐☐	
SDM213	Yeroo meeqa garatti qabatte, jechuunn ji'a 7 dura ka sirraa bahe yoo jiraate isaa dabaleeti?	Ka garatti qabatte hunda ka irraa bahe dabalii barreessi ☐☐	
SDM214	Ijoole meeqa deesse (ji'a 7 booda kan du'ee dhalate dabalatee)?	Kan dhalate hunda ka du'ee bahe woliin barressi ☐☐	
SDM215	Ijooleen dhiiraa lubbuun jiran meeqa?	Ijoolee dhiiraa lubbuun jiran hunda barressi ☐☐	
SDM216	Ijooleen dubartii lubbuun jiran meeqa?	Ijoolee dubartii lubbuun jiran hunda barreessi ☐☐	
SDM217	Waliigaltti, ijooleen mana kana jiran meeqa?	Ijoolee mana kana jiraatan hunda barreessi ☐☐	
SDM218	Ijoolleen Du'anii Dhalatan Meeqa?	Ijoolee Du'ani Dhalatan hunda barreessi ☐☐	
SDM219	Ulfa Meqaatu Sirra Bahe?	Ulfa Siirra bahe hunda bareessi ☐☐	
SDM220	Lak ijooleen mana kanaan ala jiran meeqa?	Ijoolee mana kana jiraatan hunda barreessi ☐☐	
SDM221	Lak ijooleen mana kana jiran meeqa?	Ijoolee mana kana jiraatan hunda barreessi ☐☐	
SDM222	Daa'imni kun eessatti dhalate?	Mana……..…….....1 Dhaabbata fayyaa……...……2 HNBK…….…....99 KBRAI……...……..88	

Lakk	Gaafii	Filannoo fi deebii	Dabri
SDM223	Daa'imni kun akkamiini dhalate?	Nagahumaan uumamaan(SVD)……1	
		Garaa baqasaniit (CS)……2	
		HNBK……99	
		KBRAI……..……88	

Hiikkaa: KBRAI-Kabiroo Ibsi, HNBK-Hinbeeku; AW-Abbaa worraa; KD-Koodii'

SVD=Uumaan jechun, dubartiin takka ciinimfatee qaama hormaataa uumatiin rakkoo tokko malee yoo furamtuu (deessu) jechuudhaa

CS=Baqasaan furamuun ammo, rakkoo irraa kan ka'e, dubartiin takka gara baqasanii ilmoo keessaa yoo baasan jechuudha

Part III: Gaafii Abbaa Warra ykn Dhiira Mana Tajaajilu ilaalu (deebii itti mari)

Lakk	Gaafii	Filannoo fi deebii	Dabri
SDF224	Abbaa mana umuriin isaa meeqa?	Umurii woggaan barreessi ☐☐	
SDF225	Barumsa hangam takka barate?	Hinbarane……..……1 Kutaa 1-4…….……2 Kutaa 5-8…….……3 Sadarkaa 2ffaa……..……4 Qophaayina……..…5 Kolleejii/Yuniversiitii……6 KBRAI……..……..88	
SDF226	Hojiin abbaa mana maal?	Hoj mootumaa……....1 Hoj Mit-mootuma……..……....2 Kan dhuunfaa……..……3 Qotee bulaa…….……..4 KBRAI…….…….....88	
SDF227	Sabni abbaa mana maal?	Oromo……..…1 Amhara……...……..…2 Gurage…..…….……...3 Somale……..……...4 KBRAI……..……..88	
SDF228	Amantiin abbaa Mana maal?	Islaama…….……...…1 Ortodoksii.....……2 Katoolikii.....……..…3 Pirotestantii.....4 Waqeeffata.....5 KBRAI……...……88	

Part IV: Dhima Firummaa Haadha Manaatiif Abbaa Worraa ilaalu-CCS (deebii itti mari)

Lakk	Gaafilee	Filannoo fi deebii	Dabri
CCS229	Abbaa worraa kee woliin firumaa qabduu?	Ee……..…1	
		Lakki…….……2	
		HNBK…….…….....99	
CCS230	Deebiin gaafii lakk 229 yoo ee ta'e, firumaan keessan akkam?	Ilmaan adderaa/eessumaa/adaadaa….....1	
		Durbii (ilmaan haboo)…….....2	
		HNBK……..……..……...99	
		KBRAI……..…….....88	

Part V: Haala Hawaasumaa fi Qabeenya Abbaa Worraa ilaalchisee-SES

Lakk	Gaafiilee	Filannoo fi deebii	Dabri
SES231	Gosa manaa	Man dachiiniifi gidaarri simiintoon tole….....…..…….....1 Bulukeeta ……..……..….....2 Mukaafi horofa……..……..3 Muka qofa ……..……..……..4	
SES232	Alawaadaan manatti aanee jiraa?	Ee……..……1 Lakki……..……2	
SES233	Lafa qonnaa yoo qabaatte, qinddii meeqa?	Hinqabu...……1 Qaba, qinddii ……...2	
SES234	Diboota yoo qabaatte, lakkofsaan meeqa?	Hinqabu……...……....1 Qaba, diboota/dibicha……....2	
SES235	Sa'a yoo qabaate, laakofsaan meeqa?	Hinqabu……..……1 Qaba, sa'a/sa'oota……...……2	
SES236	Manni Ifaa qabaa?	Ee……..1 Lakki…….……..…….....2	
SES237	Bishaan eessaa woraabattu?	Eddoo banaa irraa…….....1 Eddoo cufaa irraa.……....2	
SES238	Mana fincaanii ka akkam qabdu?	Lakk Dirretti fayyadamina……....1 Ee, boolla ijaarsa hinqabne……..……..2 Ee, boolla ijaarsa qabu…….....3 Ee, ka tubbo qilleensa baasu qabu……...4 Ee, ka bishaaniin deemu……....5	
SES239	Galiin woggatti waa gurgurtee argatu ka alaa sii dhufu woliin meeqa ta'a?	Hanga siif himan barreessi	

Lakk	Gaafiilee	Filannoo fi deebii	Dabri
SES240	Galii baatitti argatu kanaan maatii kee tajaajilu danda'uu kee akkamitti madaalta?	Ni ulfaata……..…1 Hin ulfaatu……..…..2	

Part VI: Gaafii Hordoffii fi Kunuunsa Dahuumsa Dura(ANC)(Deebii itti mari)KD AW:_____;
KD Hadha Mana:_____

Fayyya Hordoffi fi Kunuunsa Dahuumsa Dura laalchisee gaafii armaan gaditti ibsaman kaniin si gaafachuu barbaada

Lakk	Gaafii	Filannoo fi deebii	Dabri
DSQ241	Bayinni Namoota Mana Kana Keessa Galuu Meeqa?	Namoota Mana Kana Keessa Galana jiran hunda barreessi ☐☐	
DSQ242	Yeroo amma Ulfahuuf Karoora Ni Qabda?	Ee.....1 Miti.....2	
DQS243	Tajaajila Hordoffii fi Kunuunsa Dahuma Dura Essattiin Argadha Jattanii Yaadu?	Dhabata Fayya.....1 Ogeetti Aadaa.....2 Hiriyyaa/Shariika.....3 Bakka Bu'oota fayya Hawasa.....4 KNBIR.....88	
DQS244	Iddoo Tajaajial Hordoffii fi Kunuunsa Dahumsa Dura Itti Argamu Essa Dhageessan?	Dhabata Fayya.....1 Radiyo/TV.....2 Dessiistu Aadaa.....3 Hiriyyaa/Shariika.....4 Bakka Bu'oota fayya Hawasa.....5 Waldiya Dubartoota.....6 KNBIR.....88	
DQS245	Bu'a Tajaajial Hordoffii fi Kunuunsa Dahumsa Dura maal?	Fayya Hadhaa.....1 Fayya Da'imaa.....2 Lamanuu.....3 Hin Beeku.....99 KNBIR.....88	
DQS246	Yeroo Ulfa Qabdu Tajaajial Hordoffii fi Kunuunsa Dahumsa Duraaf of ilalchisuuf dhabata fayya demtanii ni beektu?	Ee.....1 Mitii (Gara Gafii.247 Dabri).....2	
DQS247	Eeye Yoo Ta'e, yeroo ulfa ji'a meqaa kessatti Demte?	Tokko.....1 Lama.....2 Sadii.....,…….....3 Hin Beeku.....99	
DQS248	Eeye yoo ta'e, Waligala yeroo Maqaaf Dadebite?	Ji'a 1-3.....1 Ji'a 4-6.....2 Ji'a 7-9.....3 Afuri fi isaa ol.....4	
DQS249	Ogeeyyiin Fayya Isiin Kabaju?	Ee.....1 Miti.....2	

Lakk	Gaafii	Filannoo fi deebii	Dabri
DQS250	Tajaajial Hordoffii fi Kunuunsa Dahuma Dura Argachuuf hangam turtu?	Muraasa.....1 Giddu Galeessa.....2 Yeroo Dheraa.....3	
DQS251	Turtiin Tajaajial Hordoffii fi Kunuunsa Dahuma Dura Argachuuf turamu rakko Qaba?	Ee.....1 Miti.....2 Hin Beeku.....99	
DQS252	Sababni Ijoon Tajaajial Hordoffii fi Kunuunsa Dahuma Dura Argachuu si kakaase maali?	Rakkoo Fayyaa.....1 Hordoffii Tartiiban Jalqabuuf……...2 Kan Bira……88	
DQS253	Yoo Tajaajial Hordoffii fi Kunuunsa Dahuma Dura hordafa turte, Barnoota Fayyaa Marsa Demtu Hunda Siif Kennani?	Ee.....1 Miti.....2 Hin Beeku.....99	
DQS254	Yoo Barnootni Fayya siif Kanname, Mata Duree Kam Irratti?	Kunuunsa fi Hordoff Dhuma Dura.....1 Karoora Matii.....2 Kunuunsa Da'immanii.....3 Harma Hosisu.....4 Hin Yadadhu.....99 Kan bira.....88	
DQS255	Yeroo Tajaajial Hordoffii fi Kunuunsa Dahuma Dura Hordoftan mirga Dhunfaa kessan ni Kabajama?	Ee.....1 Miti.....2 Hin Beeku.....99	
DQS256	Haalli Qulqullina Tajaajial Hordoffii fi Kunuunsa Dahuma Dura itti Kanamu Maal Sitti Fakkaata?	Garii.....1 Qubsa.....2 Dadhabaa.....3	
DQS257	Tajaajila Dhabiileen Fayya Kanna Jiran irratti Amanta Gutuu Qabda?	Ee.....1 Miti.....2 Hin Beeku.....99	
DQS258	Amala Ogeeyyi Fayyaa Tajaajial Hordoffii fi Kunuunsa Dahumsa Dura kanan akkamitti saderkeessita?	Bayyee Garii.....1 Garii.....2 Humaa Hin Jedhu.....3 Garii Miti.....4	
DQS259	Fageenya mana kessanii fi Dhabbata fayya isiniif Dhiho Giddu Jiru Akkamitti Madaalta?	Bayye Dhihoo.....1 Giddu Galeessa.....2 Bayyee Fagoodha.....3	
DQS260	Dhabata Fayyaa isinittii Dhihoo Dhaquuf Sa'a Meeqa Fudhata?	Sa'a fi Daqiqaan Barreesi ☐☐	
DQS261	Yeroo Tajaajial Hordoffii fi Kunuunsa Dahuma Dura argachuu Barbadan Essa Demtu?	Hospitaala.....1 Bufata Fayyaa.....2 Kella Fayyaa.....3 Kan Bira Ibsi……99	
DQS262	Dhabata Fayya itti Tajaajilamta Maliif Filatanii Demtan?(Debii tokko ol fudhachun ni Dandahama)	Natti Dhihoo Waan Tahef.....1 Tajajilli Bilisan Waan Tahef.....2 Tajajili OgesotaGarii Wan Ta'ef……..3 Yeroon Waan Nu Tajajilaniif.....4 Tajajila Qulqulu Waan Kananif……...5 Kan Bira Ibsi……88	

Lakk	Gaafii	Filannoo fi deebii	Dabri
DQS263	Yeroo Ulfa of ilaalchisuuf Dhabata Fayya Demtan Tajaajila Fayyaa maal Faa Argatan? (Debiin tokkoo ol ni dandahama)	Qoronoo Qamaa(Ulfatina, Dhibaa Dhigaa Dhohanna Onne).....1 Qoranna Gadameessa.....2 Altrasawindii.....3 Qoranna HIV/STD.....4 Qoranna Dhigaa.....5 Qoranna A Hanqina Nyataa.....6 Talalii Ahaam Danqer.....7	
DQS264	Yeroo Ulfaa Malattoon Adda isiin irratti ni Mulata?	Ee.....1 Miti (Gara Gaafi.266 Dabrii).....2	
DQS265	Yeroo Mallatton Adda isiin irratti Mulate Dhibee fayya isiin Qunameef Tajaajila foyaha ta'e argachuuf Rifarii Gara Hospitala Lammafaykn ol-aana ni Deemtu?	Ee.....1 Mitii.....2	
DQS266	Malattoon Adda dhibee Busaa ni beektu?	Ee yeroo hunda.....1 Miti (Gara Gaafi.268 Dabrii).....2	
DQS267	Malattoon Adda dhibee Busaa Maali?ibsi		
DQS268	Yeroo Tajaajial Hordoffii fi Kunuunsa Dahuma Dura Argachuuf Demtan lilmo Harka kessan irra dhibe Aham Danqar ittisu waranamtani jirtu?	Ee.....1 Mitii(Gara Gaafi.271 Dabrii).....2	
DQS269	Ee Yoo ta'e, Yeroo Meqaaf Lilmoo Kana Waranamtan?	Yeroo tokko.....1 Yeroo Lama.....2 Yeroo Sadii.....3 Yeroo Afur.....4	
DQS270	Kardi/Waraqa Talallii Lilmoo Aham Danqar itti Galmawe ni Qabda?Eeyye yoo ta'e, Mee nutti agarsiisu ni dandessa?	Ee Ilale.....1 Hin Ilaalle.....2 Kardiin/Waraqan Hin jirtu.....3	
DQS271	Yeroo Tajaajial Hordoffii fi Kunuunsa Dahumsa duratiif demtan Hunda Dhibba Dhigaa ni Ilalamtu?	Ee yeroo hunda.....1 Miti.....2 Hin Beeku.....99	
DQS272	Qorannon Busaa yeroo Tajaajial Hordoffii fi Kunuunsa Dahumsa duratiif Demte Siif Godhama	Ee yeroo hunda.....1 Miti.....2 Hin Beeku.....99	
QQS273	Yeroo Tajaajial Hordoffii fi Kunuunsa Dahumsa duratiif demtan Hunda Ulfina Kee ni Ilalamtu?	Ee yeroo hunda.....1 Miti.....2 Hin Beeku.....99	
DQS274	Qorannon Laboratorii yeroo Tajaajial Hordoffii fi Kunuunsa Dahumsa duratiif Demte Siif Godhama? (diiga, fincaan, sagara)	Ee yeroo hunda.....1 Miti.....2 Hin Beeku.....99	
DQS275	Qorannon Qaama yeroo Tajaajial Hordoffii fi Kunuunsa Dahumsa duratiif Demte Siif Godhama	Ee yeroo hunda.....1 Miti.....2 Hin Beeku.....99	
DQS276	Dherinnii Kee yeroo Tajaajial Hordoffii fi Kunuunsa Dahumsa duratiif Demte Siif Tilmamama?	Ee yeroo hunda.....1 Miti.....2 Hin Beeku.....99	

Lakk	Gaafii	Filannoo fi deebii	Dabri
DQS277	Tajaajial Hordoffii fi Kunuunsa Dahumsa dura argachuuf Kafaltani ni beektu?	Ee yeroo hunda.....1 Miti (Gara Gaafi.279 Dabrii).....2	
DQS278	Ee yoo Ta'e, Kafalti Tajaajial Hordoffii fi Kunuunsa Dahumsa duratiif Kafalte Akkamitti Ilaalta?	Bayye Qaalii.....1 Giddu Geleess.....2 Bayyee Xiqaadha.....3	
DQS279	Giddu Galeessaan yeroo Tajaajial Hordoffii fi Kunuunsa Dahumsa duratiif deemtu hangam takka kafalta?	Qarshiin Haa Ibsamu ☐☐☐☐	
DQS280	Tajaajial Hordoffii fi Kunuunsa Dahumsa dura kan hin Hordofne Sababa Hubannoo Dhabutiin?	Ee.....1 Mitii.....2	
DQS281	Tajaajial Hordoffii fi Kunuunsa Dahumsa dura kan hin Hordofne Sababa Umrii Dargagumma Keessa Waniin Jiruuf (Salfachuun)?	Ee.....1 Mitii.....2	
DQS282	Tajaajial Hordoffii fi Kunuunsa Dahumsa dura kan hin Hordofne Sababa Waniin Fayyaa Gutuu Qabuuf?	Ee.....1 Mitii.....2	
DQS283	Tajaajial Hordoffii fi Kunuunsa Dahumsa dura kan hin Hordofne Sababa Hojiin Waan Natti Bayyatuuf?	Ee.....1 Mitii.....2	
DQS284	Tajaajial Hordoffii fi Kunuunsa Dahumsa dura kan hin Hordofne Sababa Ilaalcha Garii Ogeeyyiin Fayya Waan Hinqabnef?	Ee.....1 Mitii.....2	
DQS285	Tajaajial Hordoffii fi Kunuunsa Dahumsa dura kan hin Hordofne Sababa Kafaltiin Nama Kafalchiisan Kafalu Waniin Hin dandeenyeef?	Ee.....1 Mitii.....2	
DQS286	Tajaajial Hordoffii fi Kunuunsa Dahumsa dura kan hin Hordofne Sababa Dhabanni fayya tajajila kana kannu mana keenya irra Fagoo Waan Ta'eef?	Ee.....1 Mitii.....2	
DQS287	Tajaajial Hordoffii fi Kunuunsa Dahumsa dura kan hin Hordofne Sababa Tajaajila Kan argachuuf waan bayyee Nama tursiisaniif?	Ee.....1 Mitii.....2	
DQS288	Tajaajial Hordoffii fi Kunuunsa Dahumsa dura kan hin Hordofne Sababa Dessistuu Aadaa Bira Waniin Dhaquuf?	Ee.....1 Mitii.....2	
DQS289	Tajaajial Hordoffii fi Kunuunsa Dahumsa dura kan hin Hordofne Sababa Abbaan Warra Waan Naaf Hin Hayyamneef?	Ee.....1 Mitii.....2	

Lakk	Gaafii	Filannoo fi deebii	Dabri
DQS290	Tajaajial Hordoffii fi Kunuunsa Dahumsa dura kan hin Hordofne Sababa Tajaajilli Kannamu Qulqullina waan hin Qabneef?	Ee.....1 Mitii.....2	
DQS291	Tajaajial Hordoffii fi Kunuunsa Dahumsa dura kan hin Hordofne Sababa Barmaatiilee Adda addaatiin?	Ee.....1 Mitii.....2	
DQS292	Tajaajial Hordoffii fi Kunuunsa Dahumsa dura kan hin Hordofne Sababa Tajaajial Hordoffii fi Kunuunsa Dahumsa dura bu'a waan hin Qabneef	Ee.....1 Mitii.....2 KBHIB…….....88	

Hubannoo:Deebiin gaafii kutaa VI keessaa yoo xiqaate tokko “Ee” taanaan, gaafii kutaa VII itti fufa. Yoo deebin hundaatuu “Lakki” ta’e, Galatoomfadhuutii, karaa mana itti aanuu dabri

Part VII:**Gaafiileen armaan gaditti si gaafadhuu kuniin Hubannoo, Dhukubbii, Mudanno, fi Rakkoo Fayya Dahuumsa waliin walqabatanii yeroo Ulfaa sitti mulattan si gafachuufi**

KD AW:_____ KD Hadha Mana:_____

Lakk	Gaafiilee gadifageenyaa	Filannoo fi deebii	Dabri
DPQ293	Dubareen Ulfaa fayya Qabdu Tajaajial Hordoffii fi Kunuunsa Dahumsa dura Hordofuu ni Qabdi?	Ee.....1 Mitii(Gara Gafii 295 Debri).....2	
DPQ294	Ee yoo ta'e, Ji'a Ulfaa kam irra egaltee Tajaajial Hordoffii fi Kunuunsa Dahumsa dura Hordofu Qabdi?	Ji'a 1-3.....1 Ji'a 4-6.....2 Ji'a 7-9.....3	
DPQ295	Mallattoo cimaa Ulfaan Walqabatee dhufu ni beekta?	Ee.....1 Mitii(Gara Gafii 297Debri).....2	
DPQ296	Ee yoo Ta'e, Muraasa iassan naaf Himtaa? (debisa tokko ol ibsuun ni dadda'ama)	Haqqisa/ Debisa.....1 Hanqina Dhiigaa.....2 Iita Miilaa.....3 Dhukubbii Mataa.....4 Nafnii Saala Dhiiguu.....5 Dhibba Dhiigaa.....6 Qabamuu/Wareeramu.....7 Ulfi kara Maleen ta'uu.....8 Dahuumsi nama irra turuu/Gufachiisuu…..9 Hobbatiin Nama keessa Turu...,.....10 KNBIR.....88	
DPQ297	Yeroo Dahuumsa dabree Muxannoo rakko fayyaa ni Qabda?	Ee .....1 Miti.....2 Hin Yadadhu.....99	
DPQ298	Malattoon fayya cimaan yeroo Ulfaa namudachuu danda'a jettee ni yaada?	Ee.....1 Mitii.....2	

Lakk	Gaafiilee gadifageenyaa	Filannoo fi deebii	Dabri
DPQ299	Ilaalchi Abba Manaa/Michuu Keetii Tajaajial Hordoffii fi Kunuunsa Dahumsa dura walqabatee Qabu Maali?	Gaarii.....1 Hamaa.....2 Hin beeku.....99	

Part IX: Haala filannoo iddo dahuumsa fi degersa yeroo dahuumsaa hadhaaf godhamu, -MSU (Deebii itti mari)

Lakk	Gaafii	Filannoo fi deebii	G Dabri
MSU300	Ilmoo Kee kan booda eessatti Deesse?	Hospitaala .....1 Bufata Fayya .....2 Kella fayya.....3 Mana.....4 Kan Bira ibsi……..88	
MSU302	Dhabiileen Fayya Kafaltii Ol Anaa Waan nama kafalchiisaniif?	Ee.....1 Mitii.....2	
MSU303	Amalli Ogeessa fayya Dhabilee fayya keessa Garii Waan Hin Ta'iniif?	Ee.....1 Mitii.....2	
MSU304	Namaata kiyya biratti dhihaadhe Waan dahuu barbadeef?	Ee.....1 Mitii.....2	
MSU306	Yoo Manatti Deesse Enyuutu yeroo Dahuumsa irratti Si Gargaara?	Ogeessa Fayyaa.....1 Deesistuu Aadaa.....2 Shariika/Michuu.....3 Ollaa.....4 Namuu.....5 Kan bira ibsi.....88	
MSU307	Yoo kan dhabbiile fayyatti Deesse Dhabilee Fayya Kamittii Dahuuf Filata?	Kan Motumma.....1 Kan Motumma Kan Hin Tahiin.....2	
MSU308	Yoo Kan motummattii hin fayadamne sababnii isaa kan duraa maalifi?	Tajaajilli isaa Quubsa Waan Hin Tahiniif.....1 Waan Nama Tursiisaniif.....2 Hakimni Waan Hin jirreef.....3 Qoricha Waan Hin Qabneef.....4 Fagoo Waan Taheef.....5 Yaallii isaanii Qaalii Waan ta'ef.....6	
MSU310	Yeroo Mana Yaala Demtan Giddu Galeessaan ogoossa fayya argachuuf sa'a meeqa isinitti fudhata?	Daqiiqa 30' gadi.....1 Daqiiqa 30 hanga sa'a 1.....2 Sa'a 1 hanga sa'a 1:30.....3 Sa'a 1:30 hanga sa'a 2.....4 Sa'a 2 oli.....5	
MSU311	Yeroo Dahuumsa Eenyuutun hordoffiin siif Godhamaa ture?	Haakima.....1 Nursii.....2 Nersii Deessistuu.....3 Ekisteenshinii Fayyaa.....4	
MSU312	Yeroo tajajila Deessistuu Aadaa irra argateen wal-bira qabdee Madaaltu Hangam takka irra gamadde?	Itti Qufeera.....1 Muraasa itti Qufeera.....2 Ittii hin Qufne, ittiis Hin Mufane.....3 Itti Hin Quufne.....4	

Lakk	Gaafii	Filannoo fi deebii	G Dabri
MSU313	Yeroo Dahuumsa Muxannoo Fayya Wal-xaxaa ta'e ni qabdaa?	Ee.....1 Mitii (Gara Gafii. 317 Debri).....2	
MSU314	Dhabbileen fayyaa jalqaba kunuunsa Dhiee arifachiisa Fayya Wal-xaxaa ni Qabu?	Ee..... (Gara Gafii. 316 Debri).....1 Mitii 2	
MSU315	Tajaajila Dhibee Ariifachiisa Kanaaf Gara Dhabiile Ol Aanuutti isiin Dabarsu?	Ee.....(Gara Gafii. 317 Debri).....1 Mitii 2	
MSU317	Tajaajila yaala Dahuumsa Booda Siif Godhanii Jiruu?	Ee.....1 Mitii (Skip to Q.319).....2	
MSU318	Dahuumsa Booda Yeroo Meeqaaf Dhaabata fayyattii Dadebite?	Yeroo 1 fi 2.....1 Yeroo Lamaa Ol.....2	
MSU321	Gara Hospitaala Ol Annattii Referii/si Dabarsanii Ni Beektu?	Ee.....1 Mitii 2	
MSU322	Walumagalatti, iddoo Tajaajila Fayyaa Maatii Itti fudhatte irrattii Hangan Takka itti Quufte?	Bayye itti Qufeera.....1 Muraasa ittii Qufeera.....2 Itti Hin Quufne.....3	

Yaada qabaattu asitti barressi_____

Xumurre

Galatoomaa. Hojii kana qulqulleefachuufi namni tokko dhufuu waan danda'uuf, deegarsa wolfakkaataa akka gootaniif isin gaafadha.

Sa'aa gaafiifi deebiin xumurame_____

GALATOOMAA!!!

ANNEXURE H: LANGUAGE EDITING CERTIFICATE

Between the lines editing

Leatitia Romero
Professional Copy Editor and Proofreader
(BA HONS)

Cell: 083 236 4536
leatitiaromero@gmail.com
www.betweenthelinesediting.co.za

31 August 2021

To whom it may concern:

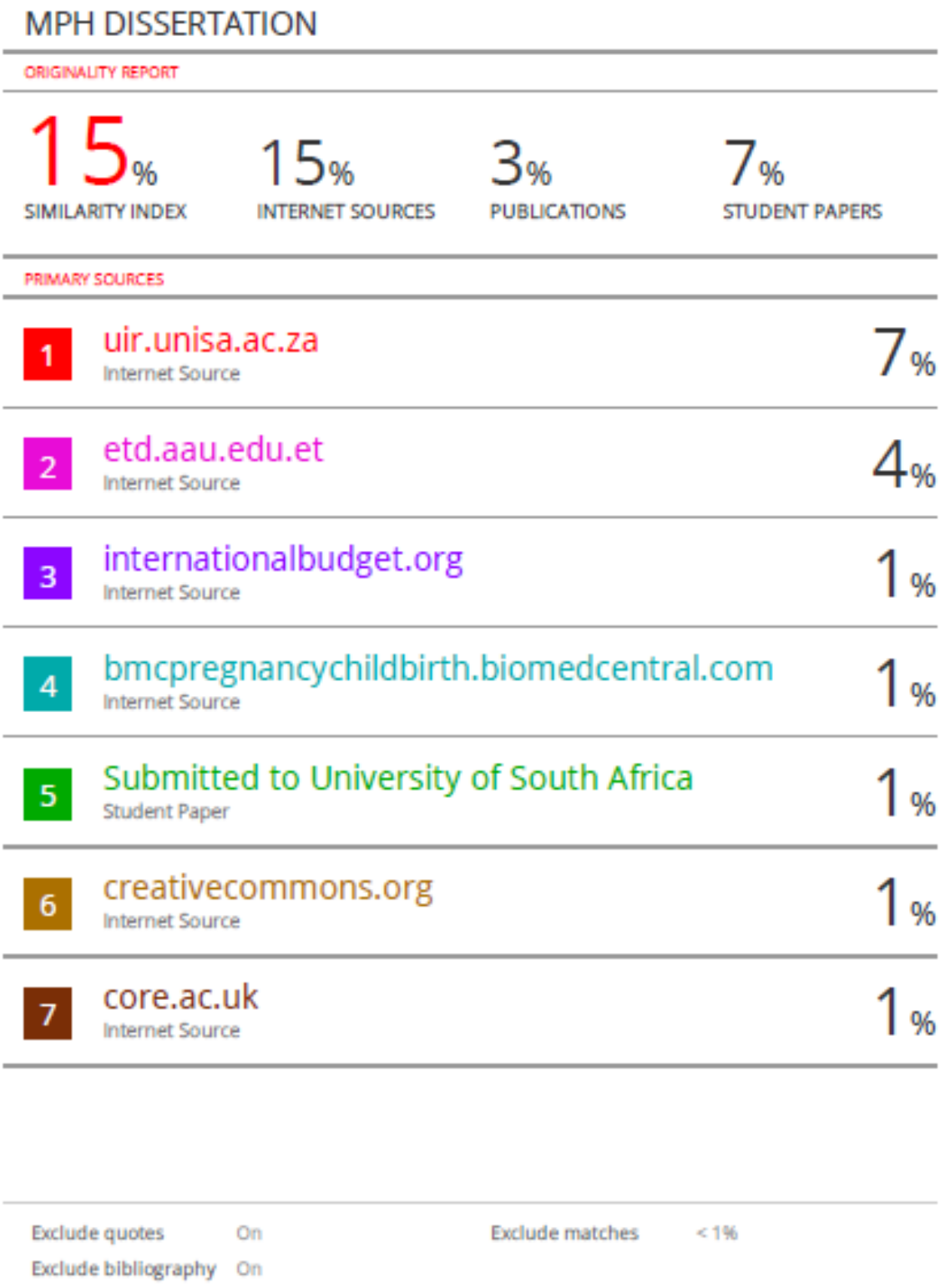
I hereby confirm that I edited the dissertation entitled: "FACTORS AFFECTING UTILISATION OF MATERNAL HEALTHCARE FACILITIES IN ETHIOPIA". Any amendments introduced by the author hereafter are not covered by this confirmation. The author ultimately decided whether to accept or decline any recommendations made by the editor, and it remains the author's responsibility at all times to confirm the accuracy and originality of the completed work. The author is responsible for ensuring the accuracy of the references and its consistency based on the department's style guidelines.

Leatitia Romero

Affiliations

PEG: Professional Editors Group (ROM001) – Accredited Text Editor
SATI: South African Translators' Institute (1003002)
REASA: Research Ethics Committee Association of Southern Africa (104)

ANNEXURE I: TURNITIN ORIGINALITY REPORT



MPH DISSERTATION

ORIGINALITY REPORT

15%	15%	3%	7%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	uir.unisa.ac.za Internet Source	7%
2	etd.aau.edu.et Internet Source	4%
3	internationalbudget.org Internet Source	1%
4	bmcpregnancychildbirth.biomedcentral.com Internet Source	1%
5	Submitted to University of South Africa Student Paper	1%
6	creativecommons.org Internet Source	1%
7	core.ac.uk Internet Source	1%

Exclude quotes	On	Exclude matches	< 1%
Exclude bibliography	On		