CONTEXTUALISING A FRAMEWORK FOR POSTNATAL CARE IN ETHIOPIA

By

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DECLARATION

I declare that, **CONTEXTUALISING A FRAMEWORK FOR POSTNATAL CARE IN ETHIOPIA,** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

June 5 2020

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SIGNITURE DATE

ELIAS TEFERI BALA

DEDICATION

This work is dedicated to my wife (Hiwot Tefera) and children Fenet, Meti, and Atinaol who were supportive and compassionate throughout the writing of this research. Thank you very much for your encouragement and always being on my side.

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ABSTRACT

Postnatal care is among the major recommended interventions to reduce maternal deaths globally. During this period, health professionals can diagnose postpartum problems and potential complications to ensure prompt treatment or interventions.

The purpose of this study was to assess, adapt, and contextualise Chelagat's framework for improving postnatal care that was developed within the Kenyan context, for implementation in Ethiopia.

Sequential mixed-methods research, that involved a quantitative and qualitative cross-sectional study design, was conducted over three phases. In the first phase of the study, the applicability of Chelagat's framework for implementation in Ethiopia, as well as the challenges and opportunities for the implementation of the framework, was assessed and described. The second phase of the study concentrated on the adaptation and contextualisation of Chelagat's framework as well as the development of an action plan for the implementation of the adapted and contextualised framework within Ethiopia. The third phase was the validation of both the contextualised framework and an action plan for the implementation of the contextualised framework within the Ethiopian context.

The findings revealed that the framework from Chelagat is applicable for the improvement of postnatal care in the Ethiopian context. It was indicated that a lack of physical resources, infrastructure problems, cultural concerns, inadequate capacity

building, inaccessibility of health services, unavailability of guidelines, lack of communication with healthcare users, and poor monitoring and evaluation were challenges that can impact the implementation of the contextualised framework. These identified aspects were addressed and incorporated in the contextualised framework and action plan. The health sector transformation plan, good health system governance, as well as good political will by the Ethiopian government, were opportunities identified which could contribute to the implementation of the contextualised framework.

A validated contextualised framework and action plan to facilitate the implementation thereof were developed using the inputs from respondents during Phase 1, a thorough literature review, as well as the three-round Delphi technique. Actions/methods to address the abovementioned challenges were included in the action plan for the facilitation of the implementation of the contextualised framework.

The contextualised framework, accompanied by the action plan to facilitate implementation, will be shared with the Ethiopian Federal Ministry of Health and other concerned organisations working on postnatal care services to enhance implementation in the Ethiopian context.

Follow-up studies to assess the limitations of the framework and action plan can be conducted to adapt and improve the framework. Further studies on possible challenges associated with the implementation can enhance the success of the framework. Studies that assess the impact (the Systems Model), such as the possible reduction in maternal and neonatal morbidity and mortality after the implementation of the contextualised framework, are also recommended.

Keywords: Contextualised framework, action plan for implementation, improved postnatal care

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ABBREVIATIONS

AAP	American Academy of Pediatrics
AGREE II	Appraisal Of Guidelines For Research & Evaluation
AMREF	African Medical and Research Foundation
BCG	Bacillus-Calmette-Guerin
CASTLE	Candida and Staphylococcus Transmission Longitudinal Evaluation
CDC	Centers for Disease Control
CHERG	Child Health Epidemiology Reference Group
CPD	Continuing Professional Development
CPGAE	Clinical Practice Guideline Application Evaluation
CRNNS	College of Registered Nurses of Nova Scotia
CSA	Centre for Statistical Agency
DPT	Diphtheria –Pertusis –Tetanus
DRH	Division of Reproductive Health
EBF	Exclusive Breast Feeding
EDHS	Ethiopian Demographic Health Survey
ETB	Ethiopian Birr
EPI	Expanded Program on Immunisation
FDRE	Federal Democratic Republic of Ethiopia
FMOH	Federal Ministry of Health
FP	Family Planning
GRADE	Grades of Recommendation Assessment, Development and Evaluation
HEW	Health Extension Workers
HIV	Human Immunodeficiency Virus
HSDP	Health Sector Development Programs
ICF	Inner City Fund
ICM	International Confederation of Midwives
IPPF	International Planned Parenthood Federation
KDHS	Kenya Demographic and Health Survey
KoS, MoH	Kingdom of Swaziland, Ministry of Health
LMIC	Low- And Middle-Income Countries
MDG	Millennium Development Goal

MOPHS	Ministry of Public Health and Sanitation
NCAPD	National Coordinating Agency for Population and Development
NGOs	Non-governmental organisations
NICE	National Institute for Health and Care Excellence
OPV	Oral Polio Vaccine
PHCU	Primary Health Care Units
PNC	Postnatal Care
PPH	Postpartum Haemorrhage
SPSS	Statistical Package for the Social Sciences
TT	Tetanus Toxoid
UN	United Nations
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNISA	University of South Africa
USAID	United States Agency for International Development.
WB	World Bank
WHO	World Health Organization

CHAPTER 1
OVERVIEW OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND

Ethiopia is a low-income country, and in 2017 the total population was 94 352 000 (Central Statistical Agency [CSA] Ethiopia 2017:Online). The health status of Ethiopia is among the worst globally, even compared to those of other Sub-Saharan African countries (United Nations Population Fund [UNDP] 2018:5). According to the Ethiopian Demographic and Health Survey (EHDS), maternal mortality is very high, averaging between 273 and 551 per 100 000 live births over the last 15 years (CSA, EDHS 2016:252).

Most maternal deaths occur during the 48 hours after delivery, and these first two days following delivery are critical for monitoring complications arising from the delivery (CSA, EDHS 2016:139). This large proportion of maternal deaths that occur during the first 48 hours after delivery are mostly preventable if women receive optimal postnatal care (Aryal, Dariang & Cullen 2013:1; Kingdom of Swaziland [KoS], Ministry of Health [MoH] 2011:9). Unfortunately, currently only 17% of women receive postnatal care during this crucial time frame (CSA, EDHS 2016:139).

Maternal morbidity and mortality can be significantly prevented or reduced if women, their families, and the community recognise obstetric danger signs and promptly seek healthcare services during labour, delivery, and most definitely during the postpartum period (KoS, MoH 2011:6). Postnatal care is among the major recommended interventions that can reduce maternal deaths globally; during this period, health professionals can diagnose postpartum problems and potential complications to ensure prompt treatment or interventions (WHO 2014:3-5). Therefore, accessible postnatal care can improve the maternal and neonatal mortality and morbidity rate in any country (Adhikari, Yadav, Timilshina, Ojha, Gaire & Ghimire 2016:14-19; Senfuka 2012:Online).

The lowest level of care in the Ethiopian health system is a primary healthcare unit (PHCU), comprising of one health centre and five satellite health posts. Health centres are staffed with a health professional team that includes nurses and midwives, but also other health professionals like health officers who have the skills to provide quality postnatal care at PHCU and district level. A health centre provides comprehensive primary health care which includes promotive, preventive, curative, and rehabilitative services. In an attempt to reduce maternal mortality in the country, health extension workers, presumed low-level health professionals, underwent a one-year training programme to enable them to provide care to pregnant mothers through pregnancy, birth and the postnatal period (Fetene, Linnander, Fekadu, Alemu, Omer, Canavan, et al. 2016:5).

1.2 STATEMENT OF THE RESEARCH PROBLEM

Despite the goals set by the United Nations (UN) to reduce maternal mortality by three-quarters from 1990–2015, and the sustainable development goals to reduce maternal mortality in Ethiopia to 199 per 100 000 live births, the rates in Sub-Saharan Africa, including Ethiopia, is still unacceptably high (Federal Democratic Republic of Ethiopia 2017:46; World Health Organization, UNICEF, UNFPA, The World Bank & 2015:16). The maternal mortality rate remained stagnant over the last 18 years in Ethiopia as it averaged between 412 and 871 per 100 000 live births (CSA, EDHS 2016:252).

The first hours, days and weeks after childbirth are a critically dangerous time for both the mother and newborn baby (WHO 2014:1; EDHS 2016:140). However, if quality postnatal care can be provided during this time (WHO 2014:3-5) the maternal mortality and morbidity rate can be improved as many mothers die due to missed opportunities for preventive early diagnosis or treatment during the postnatal period (Dlamini 2016:78-80). Appropriate, quality and timely postnatal care during the first hours and days following birth is critical to promote healthy household practices, such as exclusive breastfeeding, which is key to the health and survival of the newborn baby (WHO 2014:3-4; Singh, Padmadas, Mishra, Pallikadavath, Johnson & Matthews 2012:2).

Despite the advantages of postnatal care, it is generally the most neglected maternal and child health service in most developing countries (WHO & UNICEF 2013:16; Sultana & Shaikh 2015:645), including Ethiopia. The majority of mothers in developing countries do not receive postnatal services from competent health professionals such as midwives, nurses, health officers and others who have the competency to render these services (Somefun & Ibisomi 2016:21). The same cannot be said of mothers in developed countries where many women receive quality postnatal care (UN 2013:29; Yesuf & Calderon-Margalit 2013:6-8). In developing countries such as Ethiopia, the importance of care and support after birth is less recognised. Moreover, approximately only one-third of women in Sub-Saharan Africa give birth in health facilities, and only 13% receive postnatal care within two days after delivery. It has even been reported that women who give birth at a health facility do not receive essential postnatal care services (USAID 2011:60).

Challenges to access postnatal care in many communities throughout Africa include (Gessesse 2015:100-110): (1) the almost universally recognised 40 day period of rest at home after childbirth that allow mothers and babies only indoors for the first month (Gessesse 2015:101-102; DiBari, Yu, Chao & Lu 2014:2); (2) misconceptions about the importance of postnatal care; (3) the lack of awareness of postnatal care and its benefits; (4) cost of health services; (5) transport costs; (6) accessibility; and the (7) distances to health facilities (Gabrysch & Cambell 2009:8; Tesfahun, Worku, Mazengiya & Kifle 2014:2344; Ajaegbu 2013:1-7). It has also been reported that the attitudes of healthcare providers are a barrier to postnatal care utilisation in many countries (Mannava, Durrant, Fisher, Chersich & Luchters 2015:1-5; Akum 2013:1-5).

In Ethiopia, despite the efforts made to decrease maternal mortality by increasing maternal healthcare utilisation (including postnatal care) through different strategies, such as health sector reforms, increasing the number of trained health professionals and health facilities, there was no significant reduction in maternal mortality or an increase in postnatal care utilisation (CSA EDHS, 2016:139, 252). Hence, adapting and contextualising a framework developed to improve postnatal care in Kenya (Chelagat 2015), a similar Sub-Saharan Africa country, was deemed a possible intervention to improve postnatal care in the Ethiopian context.

1.3 RESEARCH PURPOSE

The purpose of this study was to assess, adapt, and contextualise Chelagat's framework for improving postnatal care, developed within the Kenyan context, for possible adaptation and implementation in Ethiopia.

1.3.1 Research objectives

The objectives of the study were to:

1. Assess Chelagat's developed framework for applicability within the Ethiopian context.
2. Identify possible challenges for the implementation of the framework in the Ethiopian context.
3. Identify opportunities for the implementation of the framework in the Ethiopian context.
4. Develop the contextualised framework.
5. Develop an action plan to facilitate the implementation of the contextualised framework.
6. Validate the contextualised framework and action plan for implementation.

1.4 RESEARCH QUESTIONS/HYPOTHESES

The central research question was: "Can Chelagat's framework for improving postnatal care utilisation in Kenya be contextualised and adopted or adapted for implementation in the Ethiopian context?"

1.4.1 Specific research questions

- Is the framework – developed to improve postnatal care in Kenya (Chelagat 2015) – applicable within the Ethiopian context?
- What challenges and opportunities will impact the implementation of the framework?

- What action plan should be in place to facilitate the implementation of the framework?

1.5 THEORETICAL FOUNDATIONS OF THE STUDY

This study utilised Chelagat's (2015) framework for improving postnatal care in Kenya (Figure 1.2), which was developed using the Systems Model (refer to Figure 1.1). The Systems Model, as illustrated in Figure 1.1, theorises that the provision of health services can be divided into five related components, namely inputs, processes, outputs, outcomes, and impact (Omaswa, Bainga, Mwebesa & Burnham 1994:32-34).

The framework by Chelagat (2015) was developed by extensively analysing factors that influence the utilisation of postnatal care services. It therefore included all the relevant stakeholders in postnatal care in Kenya. Chelagat adopted the Systems Model because of the relevance of its components to the improvement of postnatal care in the Kenyan context. The components will be equally relevant within the Ethiopian context.

As described in Figure 1.1, **Inputs**, which are one of the components of the requirements for the provision of services, refer to all resources that are needed in implementing the different activities associated with postnatal care delivery. **Inputs** include human, material, physical, fiscal and managerial resources relevant to postnatal care delivery (refer to Figure1.1).

Processes were represented by the identification of activities and strategies available in health facilities and are believed to improve postnatal care provision (Omaswa, et al. 1994:32-34).

Outcomes are the intended successes to be achieved from a study (Frechtling 2007:21-22). The outcome, in this specific study, is the adapted and contextualised and validated framework, as well as the validated action plan to facilitate the implementation of the framework, that is expected to improve postnatal care in Ethiopia.

The **impact** is described as the long-term effect/behavioural change of the outcome and, in most cases, is observed for 7-10 years (Frechtling 2007:21-22). In this study, the **impact** would be a reduction in maternal and neonatal morbidity and mortality, which is outside of the scope of the current study as the long-term effect would only be measurable at a later stage.

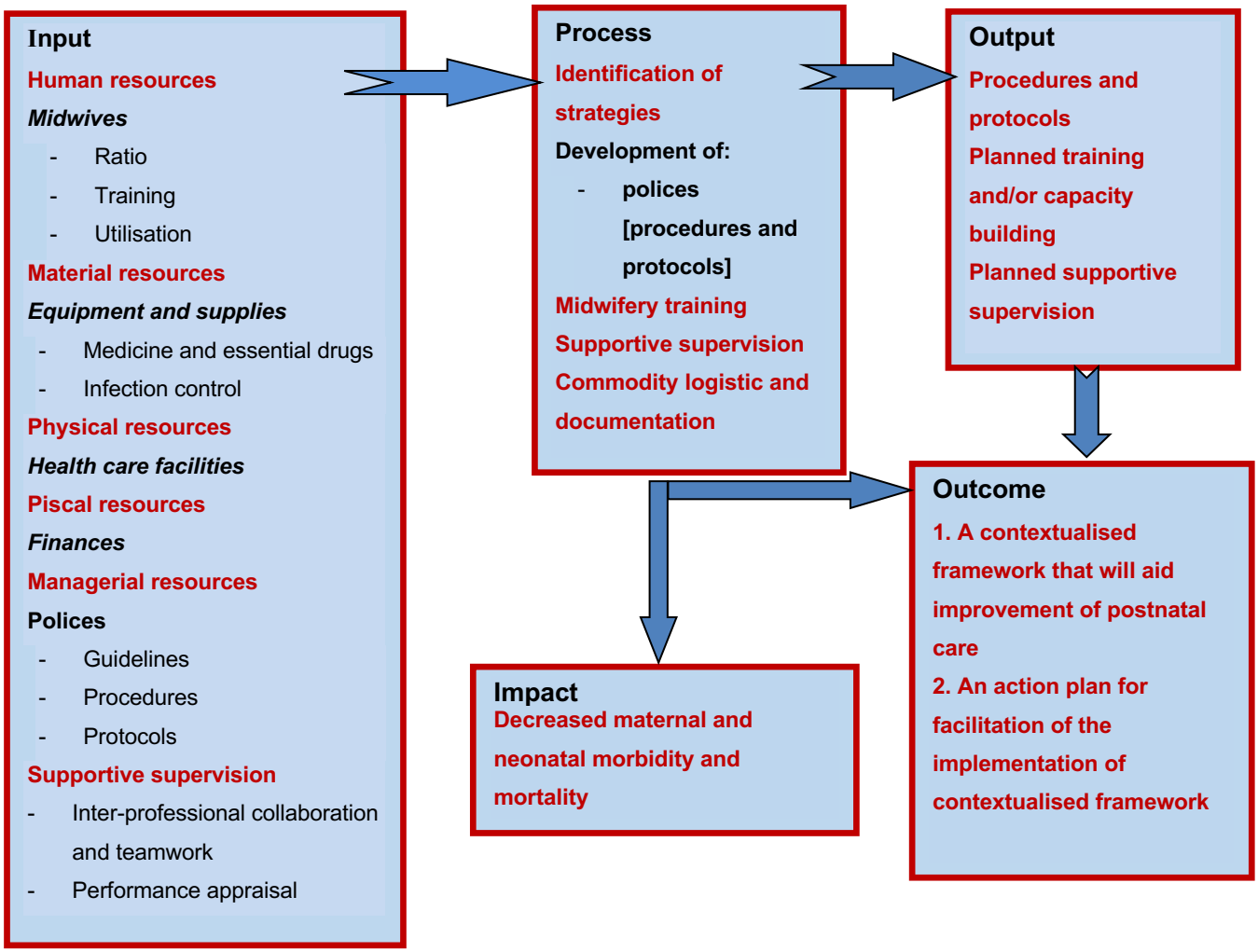

Figure 1.1: The application of the Systems Model (Omaswa, et al. 1994:34) in the provision of postnatal care

The Chelagat framework illustrated in Figure 1.2 and described in Chapter 3 (refer to Section 3.8) was contextualised, adapted, and validated within the scope of this study.

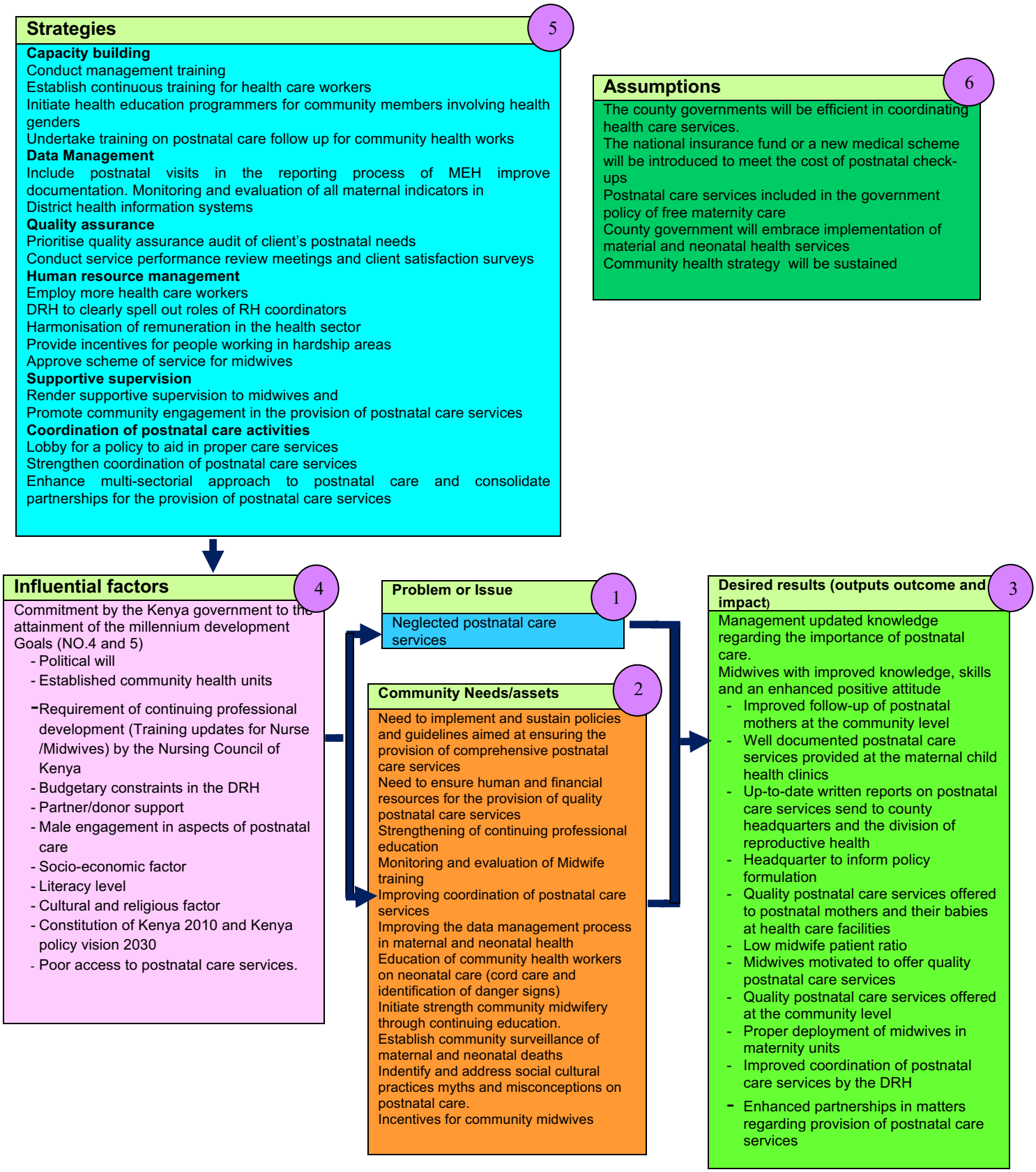

Figure 1.2: Framework for improving postnatal care utilisation (Chelagat 2015)

Chelagat's framework, underpinned by the Systems Model, was developed and guided by the Theory of Change Logic Model (refer to Figure 1.2). This framework presents a picture of how a certain effort or initiative to improve postnatal care is supposed to work. It explains why the strategies identified in the framework are a good solution to the experienced challenge (Milstein & Chapel 2012:Online). The framework is a systematic and visual way of understanding the relationship among the resources required to operate postnatal care services, the activities to be undertaken, and the results that the framework hopes to achieve (Kellogg Foundation 2004:1).

In Chelagat's framework for improving postnatal care, neglected postnatal care in Kenya was identified as the problem, which was then addressed (refer to Figure 1.2, number 1). Neglected postnatal care is also a problem identified in Ethiopia and was therefore regarded as the research problem (refer to Figure 1.2). The assumptions for implementing the framework (refer to Figure 1.2, number 6) relate to the expectations or predictions behind how certain factors could affect the developed strategies to address neglected postnatal care. The identified strategies to improve postnatal care in Kenya, as indicated in the framework (Figure 1.2 number 5), are expected to be similar to those that might improve postnatal care in Ethiopia. The framework also includes the intended results or outcomes (refer to Figure 1.2, number 3) and the influential factors (refer to Figure 1.2, number 4) for both the problem and the implementation of the framework, as supported by Taylor-Powell and Henert (2008:15), the Kellogg Foundation (2004:9), Milstein and Chapel (2012:Online).

The stakeholders (national and provincial reproductive health coordinators, as well as all midwives allocated to all hospitals in Kenya) as the participants who contributed to the development of Chelagat's framework, were similar to the stakeholders involved in postnatal care in Ethiopia. Postnatal care service providers, namely the midwives, nurses and health officers at health facilities, as well as the district, regional and national reproductive health coordinators in the Ethiopian health system assisted in adapting and contextualising the framework. These stakeholders also assisted in the validation of the contextualised framework and the action plan to facilitate its implementation in Ethiopia (refer to Table 1.2).

1.6 DEFINITIONS OF KEY CONCEPTS

1.6.1 Maternal health care

Maternal health care refers to care given to women during pregnancy (antenatal), childbirth (intrapartum), and the postpartum period to ensure good health outcomes for the woman and her baby (USAID 2015:18).

1.6.2 Antenatal care

Antenatal care refers to the care and support given to pregnant women from the time conception is confirmed until the beginning of labour. The care is delivered to ensure a safe pregnancy and healthy baby (Fraser, Cooper & Nolte 2014:231).

1.6.3 Postnatal period

The postnatal period refers to the period from one hour after the delivery of the placenta and continues until six weeks (42 days) after delivery of the baby (WHO 2014:1; Warren, Daly, Toure & Mongi 2012:80-81).

1.6.4 Postnatal care

Postnatal care is the care provided to the mother and her baby just after delivery of the placenta up to 42 days (Warren, et al. 2012:80-81; Angore, Tufa & Bisetegen 2018:10).

1.6.5 Utilisation

Utilisation is described as the way and manner in which individual people or a society at large use products or services because of the belief that it is useful or serves a very important functional and significant role in their wellbeing (Oxford Advanced Learner's Dictionary 2010:1646).

1.6.6 Postnatal care utilisation

Postnatal care utilisation is the reception of postnatal care by mothers and newborns within the first 24 hours after birth. For both home and facility births, at least three additional postnatal contacts are recommended for all mothers and newborns; on day three (48–72 hours), between days 7–14 after birth, and then six weeks after birth (WHO 2014:15).

1.6.7 Postnatal care provider (skilled attendant)

A postnatal care provider, also referred to as a skilled attendant, is an accredited health professional such as a midwife, doctor or nurse who has been educated and trained to be competent in rendering postnatal care and assessing the mother's health condition. These care providers are also able to identify, refer and/or manage any complications (De Vries 2012:9-10).

1.6.8 Maternal mortality

Maternal mortality is defined by the World Health Organization (WHO) as the death of women while pregnant or within 42 days after the termination of pregnancy (irrespective of the pregnancy duration); attributed to any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes (WHO 2014:14).

1.6.9 Framework

A framework is a real or conceptual structure intended to serve as support or a guide for the building of something that expands the structure into something useful. A framework formally articulates the mapping of services within and across sectors, with agreed streamlined entry-exit procedures that support continuity of care (Ministry of Health Uganda 2011:Online).

1.6.10 Action plan

An action plan refers to a road map designed to lead to a required potential, such as the achievement of a goal or resolution of the identified problem (Ahmed, Bwisa, Otieno & Karanja 2014:80; Rajan, Kalambay, Mossoko, Kwete, Bulakali, Lokonga, et al. 2014:1). An action plan indicates a series of steps that must be followed or activities that must be performed well, for the achievement of the pre-set objectives. This typically includes an outline of the objectives, measurements or indicators, action steps, and responsible bodies for each step.

1.7 OPERATIONAL DEFINITIONS

1.7.1 Postnatal care utilisation

In this context, postnatal care utilisation is defined as the use of postnatal care services rendered by competent healthcare professionals or mid-level health workers, for a woman at least once after the birth of her baby up to 42 days after birth.

1.7.2 Postnatal care providers

In this study, postnatal care providers are accredited health professionals licensed by the Federal Ministry of Health (FMOH) to provide postnatal care services. They include nurses, midwives, and health officers who render postnatal care services in Ethiopian public health facilities.

1.7.3 Postnatal care coordinators

In this study, postnatal care coordinators are accredited health professionals who are assigned by the FMOH to organise and coordinate the postnatal care services at different levels of the Ethiopian healthcare system.

1.7.4 Contextualised framework for improving postnatal care

In this study, the contextualised framework for improving postnatal care refers to the end product of the study; a framework that was validated to be implemented for the improvement of postnatal care in Ethiopia.

1.7.5 Validated action plan

In this study, the validated action plan refers to the action plan that was developed and validated to facilitate the implementation of the contextualised framework for possible improvement of postnatal care in Ethiopia. The action plan includes the actions to be taken, the responsible person/s or bodies, as well as the time frames that apply.

1.8 RESEARCH DESIGN AND METHODS

A sequential, explanatory, mixed-methods approach (refer to Chapter 3) was followed to assess, adapt, and contextualise a framework developed within the Kenyan context for implementation in Ethiopia. The study was conducted over three phases (refer to Table 1.1). In Phase 1, quantitative data were collected from healthcare providers (midwives, nurses and health officers) and postnatal care coordinators to assess the applicability, challenges, as well as the opportunities for adapting and contextualising Chelagat's framework (refer to Chapter 3) to the Ethiopian context.

In Phase 2, the combined data gathered in Phase 1, as well as a literature review, were used to develop the draft contextualised framework and the action plan for implementation. In Phase 3, the developed contextualised framework and action plan were validated using the Delphi technique (refer to Chapter 5).

Table 1.1: Description of the phases, objectives, populations and sample sizes

Phases	Objective	Population	Sample	Design	Instrument
Phase 1	Assess Chelagat's developed framework for applicability within the Ethiopian context.	515 Midwives	74 Midwives	Quantitative	Questionnaire
		2,040 Nurses	294 Nurses		
		320 Health offers	46 Health officers		
		40 District postnatal care coordinators	6 District postnatal coordinators		
		10 Regional postnatal care coordinators	2 Regional postnatal care coordinators		
	Identify possible challenges for the implementation of the framework in the Ethiopian context.	The same population as for objective 1	The same sample size as for objective 1		
	Identify opportunities for the implementation of the framework in the Ethiopian context.	The same population as for objective 1	The same sample size as for objective 1		
Phase 2	Develop the contextualised framework.	The researcher	The researcher		1. Results of Phase 1 and 2. Literature review
	Develop an action plan to facilitate the	The researcher	The researcher		1. Results of Phase 1 and 2. Literature

	implementation of the contextualised framework.				review
Phase 3	Validate the contextualised framework and action plan for implementation.	District, Regional and National postnatal care coordinators	18 Delphi panellists purposefully selected	Qualitative	E-Delphi

1.9 SETTING

The Federal Democratic Republic of Ethiopia has nine regional states and two cities. Oromia is one of the nine regional states, located in the centre of Ethiopia, and is where the current study was conducted.

Oromia Regional State was purposively selected for this study by the researcher as it is geographically very large in comparison with other regions and nearly one-third of the Ethiopian population live in the Oromia region (CSA, EDHS 2016:34). Administratively, the Oromia Regional State is divided into 18 zones. Each zone is further divided to form districts or councils, and there is a total of 309 districts (councils) in Oromia Regional State; the number of districts in each zone varies depending on its geographical size.

Next, the appropriate methodology is discussed as it was applied within each phase of the study.

1.10 PHASE 1

1.10.1 Population

The population of a study is defined as the group of people or objects in which the investigator is interested and to whom the results of the study can be applied (Polit & Beck 2013:306). In Phase 1 of the study, in which Chelagat's developed framework was assessed for applicability in the Ethiopian context, postnatal care providers and

coordinators working at the 80 health centres, 25 hospitals, the district and regional postnatal care coordinators in the district health departments, as well as the regional health department, formed the population. There was a total of 1 200 postnatal care providers (640 nurses, 240 midwives, and 320 heath officers) working in the health centres and 1 675 postnatal care providers (275 midwives and 1 400 nurses) working in the 25 district hospitals.

There were also 50 district and regional postnatal care coordinators (40 from the district and 10 from regional) working in the district's health department and Oromia Regional State Health Bureau. The total population was therefore 2 925, from which the study participants were selected for Phase 1 of the study (refer to Table 1.2).

Table 1.2: Population and sample of study participants by health facility and profession within the three phases

Institution category	Participant category	Phases of the study					
		Phase 1		Phase 2		Phase 3	
		Population	Sample			Population	Sample
Districts health department	Reproductive health coordinators	40	6			40	12
Regional health department	Reproductive health coordinators	10	2			10	3
National health department	Reproductive health coordinators	-	-			10	3
Hospitals=25	Nurses	1400	202				
	Midwives	275	39				
Health centres=80	Nurses	640	92				
	Midwives	240	35				
	Health officers	320	46				
Total		2,925	422			60	18

1.10.2 Sample

A sample is any subset of the measurements selected from the population (Ott & Longnecker 2010:5), and it should possess variations which are observed in the source population (Babbie 2013:76; Lyons & Doueck 2010:111). The sample size was calculated based on a single population proportion with the assumption that no study was conducted on a similar topic, and considering a 50% proportion was assumed to yield a maximum sample size. Moreover, a 10% non-response rate was also taken into account.

In the Ethiopian health system, three midwives, eight nurses, and four health officers are assigned to render maternal health services, including postnatal care, in every health centre. In the district hospitals, 11 midwives and 56 nurses are assigned to render maternal health care, including postnatal care. Proportional sample size allocation was made in selecting the study participants. Accordingly, eight postnatal care coordinators (6 from district health departments, 2 from the regional health department), 173 postnatal care providers from the selected 80 health centres (92 nurses, 35 midwives, and 46 health officers) and 241 postnatal care providers from the 25 selected hospitals (202 nurses, 39 midwives) were randomly selected and invited to be included in the study. There are no health officers assigned at the hospital level according to the Ethiopian health system (refer to Table 1.2), therefore, there was no sample of health officers at the hospital level.

The total number of participants for Phase 1 of the study comprised 422 participants (294 nurses; 74 midwives; 46 health officers; 6 district postnatal care coordinators and 2 regional postnatal care coordinators) (refer to Table 1.2).

1.10.3 Data collection methods and procedures

According to Burns and Grove (2011:32), data collection is defined as the systematic gathering of information related to the research purpose and objectives. A questionnaire (refer to Annexure 3) was used to collect data from each participant to assess applicability, identify challenges and opportunities for the adaptation and contextualisation of the framework in the Ethiopian context. Ten trained field workers

were purposively selected from university graduate nurses to gather the data (refer to Section 3.5.11).

1.10.4 Validity and reliability

The quality and effectiveness of a research instrument are determined by its **validity** and **reliability**. Validity is defined as the degree to which an instrument measures or detects what it intended to measure (Botma, Greeff, Mulaudzi & Wright 2010:174-178). Maintaining the validity and reliability of an instrument can impact the accuracy of the findings (Gravetter & Forzano 2010:219).

Before the commencement of the actual data collection in Phase 1, a pilot study was conducted with 5% (21) of the participants who were outside the study area but who were postnatal care providers and coordinators. This pilot study enabled the researcher to evaluate the validity and reliability (refer to Section 3.5.10) of the questionnaires that were used during the main study (Saunders, Lewis & Thornhill 2009:394). As recommended by Willig (2013:162), suggestions from the pilot participants were implemented before data gathering commenced.

Reliability is defined as the extent or degree to which the instrument that is used for data collection yields consistent results each time it is repeated (Bless, Higson-Smith & Sithole 2013:222-229).

A standardised questionnaire, the AGREE II (refer to Section 2.8), was used for data collection in Phase 1. In addition to the AGREE II, more questions (part 1) were formulated – guided by standardised WHO guidelines – to assess baseline information on postnatal care services in Ethiopia. The questions were placed in a logical order, in a clear, concise, and unambiguous manner with meaningful and easy to follow instructions. Similarly, unnecessary, repetitive, or inappropriate questions were avoided. Field workers were trained to minimise errors that might arise due to misunderstanding of the purpose and content of the instrument.

A pre-test was also conducted to examine whether there were questions that were unclear for respondents before the actual data collection started. The researcher

also verified the reliability of selected questions from study participants during the fieldwork.

1.10.5 Data management and analysis

The quantitative data from the questionnaires were analysed with the assistance of a statistician. The Statistical Package for Social Scientists (SPSS) Version 21 computer program was used to process and analyse the data. Descriptive statistics, using frequencies and percentages for categorical data were used, and the results for this study were presented in text form, tables, and pie-charts (refer to Chapter 3).

1.11 PHASE 2

Phase 2 entailed the development of the contextualised framework as well as the development of the action plan to facilitate the implementation of the framework (refer to Chapter 4).

The researcher utilised the results of the data collected and analysed during Phase 1, as well as available literature, to develop both the draft contextualised framework for the Ethiopian context and integrate it with the action plan to facilitate the implementation of the contextualised framework.

1.12 PHASE 3

During Phase 3 of the study, the contextualised framework and integrated action plan for implementation were validated using three rounds of E-Delphi technique. The Delphi technique was conducted by using the Google forms online survey (refer to Chapter 5).

1.12.1 Population

Postnatal care coordinators at district (40), regional (10) and national level (10) formed the total population of 60 for this phase of the study. The population was

those who were key stakeholders of postnatal care services, who were able to provide important information in the validation of the contextualised framework, as well as the validation of the action plan for implementation (refer to Chapter 5).

1.12.2 Sample and sampling technique

Eighteen Delphi panellists, 12 district postnatal care coordinators, three regional postnatal care coordinators, and three national postnatal care coordinators were purposively selected by the researcher. These panellists were included based on four criteria: they had at least six months' working experience; they had an educational background in health (nurses, midwives, and health officer); they had to be working in a district, regional or national postnatal coordination position; and they had to be willing to participate and complete the Delphi rounds (refer to Table 1.2).

The purposeful sampling technique is a deliberative process of choosing the members that can contribute to the research objective; this was the technique of choice in this phase of the study.

1.12.3 Data collection technique

The E-Delphi technique was used to allow every panellist to equally contribute and provide inputs until consensus on the contextualised framework and action plan for implementation was reached. The validation instrument (embedded in the framework and action plan) was developed based on the draft contextualised framework and the action plan, and shared with all panellists. This allowed each member of the panel of 18 experts from different levels of the health system in Ethiopia to provide their input in validating the contextualised framework as well as the action plan for implementation in the Ethiopian context.

The E-Delphi validation instrument was prepared in the form of (1) a Likert scale to determine the experts' measure of agreement on the framework content; (2) questions that address the body or person/s responsible for implementing the actions; and (3) the time frame within which each action must be completed, thereby

working towards reaching consensus as explained by Keeney, Hasson and McKenna (2011:77).

1.12.4 Rigour

Rigour can be defined as the trustworthiness of the data. It ensures the extent to which the study findings can be valued (Haynes, Turner, Redman, Milat & Moore 2014:11), and rigour must be maintained in a qualitative study.

In this study, a validation instrument was utilised to validate the contextualised framework and action plan for implementation. The validation instrument was directly linked to every item in the contextualised framework (refer to Annexures 5-7). All comments and suggestions from the supervisor and the statistician were incorporated before the validation instrument was pre-tested on four postnatal care service coordinators (refer to Chapter 5) in the field of postnatal care. After pre-testing, all suggestions were incorporated to finalise the validation instrument.

1.12.5 Data gathering process

A validation instrument, based on all aspects included in the developed contextualised framework and action plan for implementation, was compiled and embedded in the action plan. This validation instrument (refer to Annexure 5-7) was used to allow panellists to provide their individual opinions and reach consensus on a contextualised framework and action plan.

A recruitment letter (refer to Annexure 8-10) was sent to all Delphi panellists via email. The recruitment letter included background information on the contextualised framework and a link to access the validation instrument using Google forms E-Delphi. Participants who volunteered to participate clicked on the link to obtain access to the validation instrument embedded in the contextualised framework. Raw data were received back via the software program ‘Google forms’.

The complete data collection process, using the Google forms E-Delphi method and validation of the contextualised framework and action plan for implementation, is explained in Chapter 5.

1.12.6 Data management and analysis

The analysis of the inputs from the Delphi panellists using Google forms made it possible to detect fine diversities among the respondents with different views (Polit & Beck 2010:463). This assisted in the refinement of the proposed contextualised framework and action plan to facilitate implementation.

The researcher received both analysed data (on the Likert scale validation instrument) and raw narrative data (from open-ended questions in the validation instrument) via Google forms E-Delphi. After extracting and analysing the recommendations from the open-ended validation instrument, the researcher incorporated the recommendations and sent new versions, accompanied by the embedded validation instrument, back to the Delphi panel experts until a 75% consensus was reached (refer to Chapter 5). After three rounds of feedback, consensus was reached and the contextualised framework with action plan for implementation was finalised.

1.13 ETHICAL CONSIDERATIONS

Ethics is defined as a system of moral values concerned with the degree to which research procedures follow professional, legal, and social obligations concerning the participants (Polit & Beck 2014:170). The ethical aspects of research and the procedures to be applied should be overt to the study population, to the extent that innocent questions could affect the respondent (Blaikie 2010:31).

In this study and all its phases, the researcher upheld the principles of permission, autonomy, confidentiality, beneficence, privacy, as well as informed consent.

1.13.1 Protecting the rights of institutions

Ethical approval to conduct the study was obtained from the Health Research Ethics Committee of the Department of Health Studies, University of South Africa (UNISA) (refer to Annexure 1). Formal letters for permission and support to conduct the study and gain access into the field were requested from the respective administrative offices of Oromia Regional State Health Bureau (refer to Annexure 2). Permission was also obtained from each health facility, including health centres, hospitals, district, and regional health departments before involving them in the study.

1.13.2 Voluntary participation

Research participants were not asked to be involved without their interest; if they did not agree, their right not to participate was fully respected, without any negative effect. In this study, participants received an information letter (refer to Annexure 4) about the research, the objectives and their right not to participate, not to answer a question that they think is sensitive, or to withdraw from the study at any time during data collection without any negative effect to them. The participant was not forced into participation but asked to volunteer to participate.

1.13.3 Informed consent

A consent form and information leaflet (refer to Annexure 4) were provided to participants in Phase 1, and a recruitment letter (refer to Annexure 8-10) was sent to participants in Phase 3 of the study to ensure that they receive the correct information to allow for informed, voluntary consent. The participants were informed of the purpose of the study, and that participation was voluntary. The participants had the right to self-determination, fair treatment (justice), protection from discomfort or harm (non-maleficence).

1.13.4 Privacy and confidentiality

The researcher upheld the participants' confidentiality and privacy by ensuring that no names were required on the questionnaires; data were collected individually, and

the information provided could not be accessed by any third party. Since no names were written on the questionnaires and validation instrument for the Delphi technique, the information provided remained anonymous and could not be linked to any particular respondent. The signed consent forms were separated from the questionnaires to ensure anonymity and confidentiality.

1.13.5 Anonymity

To ensure the respondents' anonymity, they were not asked to provide their names on the questionnaire or validation instrument used for the quantitative and qualitative phases of the study. Instead, the researcher assigned a number to the questionnaires used for the quantitative study. Throughout the study, the principles of beneficence (doing good) and non-maleficence (not doing harm to the respondents), were applied.

1.14 SIGNIFICANCE OF THE STUDY

The development of a contextualised framework and action plan to facilitate implementation has the potential to improve postnatal care in Ethiopia. Due to the active involvement of key stakeholders, including postnatal care providers and coordinators at different health system levels in Ethiopia, the framework can be implemented and included in essential postnatal care components that will, in turn, enhance postnatal care throughout Ethiopia. Other researchers may be able to contextualise the framework in their context for possible wider implementation. The findings from the study will also contribute to existing knowledge on postnatal care through publications of the results; specifically, the contextualised framework with the action plan to facilitate implementation, in peer-reviewed scientific journals.

1.15 CHAPTER LAYOUT

The chapters in this thesis are organised as indicated in Table 1.3.

Table 1.3: Thesis and chapter layout

CHAPTER	DESCRIPTION OF THE CHAPTER
1	**Overview of the study**
2	**Literature review** • Maternal mortality • Postnatal care in Ethiopia and Kenya • Chelagat's framework • Models to test applicability to other contexts
3	**1. Overarching research design** **2. Phase 1** • Research design • Methodology • Data gathering • Data analysis and interpretation of findings
4	**Phase 2** • Literature review on: ➢ Contextualising a framework ➢ Action plan Development • Development of the contextualised framework and draft action plan for implementation
5	**Phase 3** • Methodology • The validation process • Discussion of the findings • Final contextualised framework and action plan for the implementation
6	**Conclusions, recommendations, and limitations**

1.16 SUMMARY

A validated contextualised framework and action plan to facilitate the implementation of the framework in Ethiopia can contribute to the improvement of postnatal care and ultimately reduce the mortality rates of both mothers and their babies.

Available literature to support a framework, such as Chelagat's framework for improving postnatal care in Kenya, and available models to test applicability within different contexts, will be discussed in Chapter 2.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

Chapter 1 presented an overview of the study. This chapter includes a review of literature accessed from various sources. As described by Polit and Beck (2016:109), a literature review entails relevant sources of information being critically reviewed and summarised to provide background information on the existing body of knowledge on the area of interest; it motivates new research ideas. It also forms the basis for the current study and helps to interpret and discuss the findings of the study (Polit & Beck 2016:109).

Literature is reviewed for different reasons, including identifying a research problem, refining research questions, and orientating a researcher to what is known and not known about an area of interest (Polit & Beck 2016:109; Boswell & Cannon 2011:118). A literature review contributes to the identification of gaps and inconsistencies in research (Polit & Beck 2016:109).

This chapter presents a critical review of the literature as it was undertaken to (1) understand the current concern of maternal mortality and postnatal care; (2) the principles of postnatal care; (3) background regarding the implementation of postnatal care practices; (4) description of Chelagat's framework and the suitability of the framework to the Ethiopian context; (5) principles; and (6) models to test the applicability of a framework for the Ethiopian context (refer to Table 2.1).

Table 2.1: Research progress and chapter layout

CHAPTER	DESCRIPTION OF THE CHAPTER
1	**Overview of the study**
2 	**Literature review** • Maternal mortality • Postnatal care in Ethiopia and Kenya • Chelagat's framework • Models to test applicability to other contexts

This literature search included official government reports, textbooks, journal articles, frameworks for improving maternal health care, dissertations on topics related to postnatal care, and information on postnatal care utilisation. The researcher used the key concepts: postnatal care, postnatal care in Kenya, postnatal care in Ethiopia, challenges of postnatal care, guidelines for postnatal care, applicability, contextualisation, assessment of applicability and framework in identifying relevant literature in finding information and resources from Google Scholar, Encore, EpiHost, and subject databases.

2.2 MATERNAL MORTALITY: A CONCERN

The health of mothers is generally regarded as an indicator of the health of society. Despite the struggle to achieve maternal wellbeing in all countries around the globe, more than 300 000 women die each year from complications related to pregnancy and childbirth (WHO, UNICEF, UNFPA, World Bank Group 2015:16). The measure of maternal health has been expressed in terms of the death of a woman from any cause except accidental or incidental while pregnant or within 42 days after the termination of pregnancy – irrespective of the duration of the pregnancy – related to or aggravated by the pregnancy or its management (WHO, UNICEF, UNFPA, World Bank Group 2015:34). Despite efforts to reduce maternal deaths, it is a concern that about 800 women around the world still die from pregnancy or childbirth-related complications daily (WHO, UNICEF, UNFPA, World Bank Group, United Nations 2015:2-3, WHO, UNICEF, UNFPA, WB & UNPD 2014:21). A large proportion of these deaths occur during the first 48 hours after delivery, mostly due to preventable complications (Chenir, Gelan & Sinaga 2018:2474-1353).

The postnatal period is an area of concern because more than 60% of maternal deaths occur during this period, and about 45% of postpartum maternal deaths occur within one day of delivery. The risk of maternal death is the highest close to birth, especially within the first 24 hours, and gradually decreases over the subsequent days and weeks. It is estimated that 65% of maternal deaths occur within one week of delivery and nearly 80% of maternal deaths occur within two weeks of delivery (Khanal, Adhikari, Karkee & Gavidia 2014:13; Warren 2015:14; WHO 2014:5).

Maternal mortality remains high in most developing countries (WHO, UNICEF, UNFPA, WB & UNPD 2014:22) where 99% of all maternal deaths occur (WHO, UNICEF, UNFPA, WB & UNPD 2015:16). Neonatal deaths are also a common postnatal period problem. Thirty-eight percent of global neonatal deaths occur in Sub-Saharan Africa, the highest neonatal mortality rate recorded in the world (34 deaths per 1 000 live births in 2011) (UNICEF 2016:10). It is thus important to take note of the similarities and the differences pertaining to aspects relevant to maternal mortality between Ethiopia and Kenya; the aim of this study is to contextualise a framework developed by Chelagat to improve postnatal care in Kenya, to the Ethiopian context, ultimately to contribute to a reduction of maternal mortality in both countries.

2.2.1 Ethiopia

Ethiopia is one of the countries in Sub-Saharan Africa, with a markedly high maternal mortality ratio (MMR) (WHO 2014:21). The MMR for Ethiopia stagnated at 676 per 100 000 live births in 2011 after initially declining from 871 per 100 000 live births in 2000 to 673 in 2005 (Central Statistical Agency (CSA) and Inner City Fund (ICF) International 2012:13, 15, 270). This indicates that there were no significant changes in the 10 years preceding the 2011 EDHS. However, the MMR slightly decreased from 676 in 2011 to 412 deaths per 100 000 live births in 2016 (CSA and ICF International 2016:45). According to the EDHS report (2016), maternal deaths accounted for 25% all deaths in the country which is slightly lower than reported in 2011 (30%) but higher than the 21% reported in 2005 (CSA and ICF International 2016:250-253).

Three Asian countries (India, Pakistan, Afghanistan) and three African countries, (Nigeria, Ethiopia, and the Democratic Republic of Congo), account for 50% of the global maternal deaths annually (WHO 2019:Online). In line with the high maternal mortality, Ethiopia also has a high lifetime risk of 1 in 67 maternal deaths which is significant in comparison with that of other countries (WHO 2019:Online).

The high number of maternal deaths in some areas of the world might reflect inequities in access to health services and utilisation of health care (WHOa 2012:29;

2012:40). In Ethiopia, there have been improvements in maternal health service utilisation as indicated by the antenatal care coverage of 62% compared to the previous 34% (CSA and ICF International 2016:22-24), yet the concern is that only 28% of births are overseen by skilled attendants. Moreover, the skilled postnatal care coverage is even worse, remaining as low as 19% (CSA and ICF International 2016:22-24).

2.2.2 Kenya

Kenya is one of the East African countries, with a population of over 40 million. It is situated in East Africa, neighbouring Ethiopia, Somalia, South Sudan, Tanzania, Uganda, and the Indian Ocean. Kenya is listed among the countries with a very high MMR (KDHS 2010:273) and as one of the 10 countries around the globe that account for nearly 59% of global maternal deaths annually (Merdad & Ali 2018:5). As indicated in the most recent Kenyan National Demographic and Health Survey (KDHS), the maternal mortality rate in Kenya stands at 362 per 100 000 live births (KDHS 2014:329), almost similar to that of the Ethiopian MMR of 412 per 100 000 live births. Kenya has a lifetime risk of maternal death of 1 in 67 (KDHS 2014:329), the same as that of Ethiopia's lifetime risk of maternal deaths in 2012 (WHOb 2012:33).

However, there is a significant difference between Ethiopia and Kenya in terms of the utilisation of maternal health care. In Kenya, antenatal care coverage is at 96% and skilled attendance at birth is 60% (KDHS 2014:121); better than that of 62% antenatal care and 28% skilled birth attendance in Ethiopia. The postnatal care utilisation in Kenya also seems to be better than within Ethiopia, as 57% of women receive postnatal care within the first six weeks after delivery (KDHS 2014:132).

2.3 POSTNATAL CARE

The postnatal period begins immediately after the birth of the baby and extends up to six weeks (42 days) (WHO 2014:1). The overall goal of postnatal care is to improve maternal and infant wellbeing through the provision of quality care, and reduce maternal and child mortality (Mazumdar 2011:1; Adegoke, Utz, Msuya & van den

Broek 2012:1-10). Unfortunately, this is the period when 50% to 70% of maternal deaths occur (Ethiopian FMOH 2015:1-4); regrettably mostly due to preventable life-threatening conditions that could have been identified. Medical care or referrals could have been initiated if these mothers received quality postnatal care (Mairiga & Saleh 2009:27; Warren, Abuya, Kanya, Obare, Njuki, Termmerman & Bellows 2015:12).

The WHO updated global guidelines on postnatal care for mothers and newborns through a technical consultation process (WHO 2014:1-67). This WHO document on postnatal care, termed “postnatal care of the mother and newborn” clearly guides policy-makers, programme managers, and healthcare providers on how to improve the quality and utilisation of postnatal care that must be offered to all women and their babies during the postnatal period (WHO 2014:35).

The WHO guidelines on postnatal care services addressed the timing and content of postnatal care for mothers and newborns, with a special focus on resource-limited settings in low- and middle-income countries like Ethiopia. The guidelines include recommendations on the type of health care that a health worker can safely deliver during the postnatal period (WHO 2015:5-6). In the WHO updated postnatal care guideline document (2015:4-8), components of postnatal care, best practices in the provision of postnatal care, strategies to improve quality, and how to achieve equitable use of postnatal care has been addressed to maximise postnatal care utilisation in low-resource settings.

Quality postnatal care should, therefore, be a comprehensive or integrated package that covers a range of issues that affect both the mother and baby. It is recommended that postnatal services should: (1) provide support for the mother and her family in the transition to a new family; (2) contribute in the prevention of health problems in mother and baby; (3) ensure the early diagnosis of possible complications; (4) provide treatment for complications that occur in mothers and infants; (5) refer the mother or infant for specialist care when necessary; (6) provide health education on baby care, maternal nutrition, and contraception; (7) support and promote breastfeeding; (8) provide contraception service; and (9) provide an immunisation service for the infant (Warren, et al. 2012:80-90; WHO 2014:2-5).

2.3.1 Support for the mother and her family

The provision of postnatal care services is a golden opportunity to provide support and identify risks that will help to save the lives of mothers and babies from common complications during this period (WHO 2014:6). The postnatal care services must include key interventions to provide, promote, and maintain the health of mother and baby during the crucial time after birth.

Mothers, after birth, have to be assessed regarding their emotional wellbeing, family and social support, as well as coping strategies to deal with the day-to-day challenges (Warren, et al. 2012:81; WHO 2014:4-5). Women and their families should be encouraged to provide information to the healthcare provider about any changes in mood, emotional state and behaviour that are outside the woman's normal pattern (Rai, Pathak & Sharma 2015:S216; Kronborg, Vath & Kristensen 2012:289-301). This will alert the healthcare provider so that postnatal depression and puerperal psychosis can be identified and the necessary interventions can be taken (Rai, et al. 2015:S216).

It is common for postnatal mothers to suffer from perceived postpartum stress in attaining the maternal role, dealing with negative body changes, and a lack of social support. Mothers may use different types of coping strategies such as problem-focused engagement, problem-focused disengagement, emotion-focused engagement, and emotion-focused disengagement. Postnatal care providers, such as midwives, nurses, and health officers must support the postnatal mothers in using the strategies mentioned above to cope with those social and emotional problems that may occur during the postnatal period (Osman, Saliba, Chaaya & Naasan 2014:125).

There may be a need to organise various types of relaxation techniques and stress management programmes for mothers before they are discharged from the hospital (Mathew & Mg 2017:118). Postnatal mothers with emotional problems need education on coping strategies, for example, praying for those who are religious, reading books, and expressing emotions to overcome the stress after delivery (Mathew & Mg 2017:118).

Postnatal mothers also need **social support** during the postnatal period. Social support may be defined as receiving voluntary assistance such as emotional, tangible, and informational support from other people to promote a positive response which will, in turn, promote and maintain the health of mothers and babies. The social support can come from different sources, such as family members, friends or the community, and can emerge in various forms of physical, emotional (sympathy, love, and care), verbal and financial assistance (Keramat 2016:785; Abdollahpour, Ramezani & Khosravi 2015:879-888).

Support can also be from professionals like the postnatal care providers or peers in the form of reassurance, praise or positive reinforcement, the provision of information, and the opportunity to discuss and respond to the mother's questions (Asiodu, Waters, Dailey & Lyndon 2017:5).

Social support during postnatal care has a significant contribution in promoting the quality of life for the mother and newborn baby (Keramat 2016:782). The social support can also effectively assist in promoting exclusive breastfeeding. Postnatal care providers can discuss the importance of social support and how it can be provided by family and relatives to increase support for the postnatal mother (Abdollahpour, et al. 2015:879-888; Keramat 2016:785).

2.3.2 Prevention of health problems

Adequate, timely, and quality postnatal care services by skilled health professionals allow for the early detection of postpartum problems and the prevention of possible complications. The early detection of postnatal health problems ensures that prompt treatment is given and facilitates interventions which could be useful in the reduction of maternal mortality worldwide (Fisun, Filiz & Birol 2015:131-132).

Effective prevention of maternal and newborn health problems can only be done by nurses, midwives and other healthcare providers who have the theoretical knowledge, skills, and competence to provide quality postnatal care. This includes a physical examination, identification of risk factors for health problems and complications, thereby contributing in the prevention of common health problems

during the postnatal period (Berhe, Araya, Tesfay, Bayray, Etsay, Gidey, et al. 2017:11-19; Persson, Fridlund, Kvist & Dykes 2011:105-116).

2.3.3 Early diagnosis of complications

The postnatal period is an extremely important time for healthcare providers, including midwives, to assess and detect the occurrence of life-threatening health problems. As stated, many complications can be prevented if optimal postnatal care is provided (Ranji, Gomez & Salganicoff 2019:3). The early diagnosis for possible complications provides an opportunity for health professionals to identify, monitor, and manage health conditions that may develop in the mother and baby during the postnatal period (WHO 2014:3-5; WHO, UNICEF, UNFPA, WB & UNPD 2014:21). Key activities to be carried out at a health facility where quality postnatal care is provided should address accurate screening and assessment of mothers, thus, the early identification and diagnoses of women at risk.

For deliveries taking place in health facilities, pre-discharge assessments of the mother and newborn will ensure the early identification of any high-risk mothers and babies that can develop into health problems (WHO 2014:7). Similarly, for home deliveries, mothers and newborns should be assessed by skilled postnatal care providers such as midwives within the first 24 hours after giving birth. Subsequent assessments, regardless of delivery location, should take place on day three after birth, once in the first 2–3 weeks, and again at six weeks in order to detect problems early (WHO 2014:7).

This postnatal assessment carried out at home or in the health facilities is an opportunity for the postnatal care providers to counsel mothers and family members while providing health education on preventive care and early detection of danger signs. This will result in prompt health-seeking behaviour. As it is common that some health problems occur in newborn babies within the first 24 hours of delivery, those delivered in health facilities should not be sent home in the critical first 24 hours after birth as this helps in the detection of health problems that may occur (Salam, Mansoor, Mallick, Lassi, Das, & Bhutta 2014:S3; WHO 2014:3).

The early postpartum period is a critical time for the onset of **postpartum haemorrhage (PPH)** (Bhutta & Black 2013:2228; WHO 2014:15) which is a leading cause of maternal mortality in developing countries, which affects approximately 2% of all women who give birth (Maswime & Buchmann 2017:1-7). PPH can be defined as a blood loss of 500 ml, or in case of severe PPH, in an amount of 1000 ml or more within 24 hours after birth. PPH is one of the life-threatening health problems that need to be diagnosed and managed early during postnatal care (Fukami, Koga, Goto, Ando, Matsuoka, Tohyama, et al. 2019:1) if the MMR is to be reduced.

Globally, deaths from PPH account for nearly one-quarter of all maternal deaths and is the leading cause of maternal mortality in most low-income countries, including Kenya and Ethiopia. PPH is also a significant contributor to severe maternal morbidity and long-term disability, as well as several other severe maternal health problems generally associated with substantial blood loss, such as shock and organ dysfunction (Bhutta & Black 2013:2228; Say, Chou, Gemmill, Tunçalp, Moller, Daniels, et al. 2014:327).

Health education, as an integral component of postnatal care services, must be provided for postnatal mothers, for promoting and maintaining maternal and newborn baby health as well as preventing common health problems (NICE 2014:3-8). The specific topics related to health education are discussed in Section 2.3.6 of this thesis.

Hypertension, defined as an average of 6 mmHg increase in the systolic and 4 mmHg in the diastolic blood pressure over the first four days after birth, is a common postnatal complication (Brown, Magee, Kenny, Karumanchi, McCarthy, Saito, et al. 2018:24-43). Sustained postnatal hypertension is evident in about a third of women who have had pregnancy-induced hypertension or pre-eclampsia. However, it is also acknowledged that hypertension can occur following delivery (Goldenberg, McClue, McGuire, Kamath & Jobe 2011:113).

During the postnatal period, up to 12% of women will have an elevated diastolic pressure greater than 100 mmHg, usually due to the resolution of the cardiovascular adaptations to pregnancy; in particular, mobilisation of fluid accumulated in the

extravascular space during pregnancy (Brown, et al. 2018:24-43). Early diagnosis and appropriate management have an advantage that the episodes of severe hypertension will be reduced and discharge of the postnatal mother from the hospital will not be unnecessarily delayed (Smith, Waugh & Nelson-Piercy 2013:49).

Puerperal sepsis, defined as the infection of the genital tract occurring at labour or within 42 days after delivery (Chepchirchir, Nyamari & Keraka 2017:1032-1040), can be prevented by enhancing basic hygienic practices during late pregnancy, delivery and immediately after delivery (WHO 2014:7). Although it is preventable in nature, it is a common complication during the postnatal period, with signs such as pyrexia and other symptoms like pelvic pain, Lochia, and sub-involution of the uterus. As puerperal sepsis contributes to maternal morbidity and mortality, it must be identified as early as possible (Khaskheli, Baloch & Sheeba 2013:975). As the **sub-involution** of the uterus can be complicated due to sepsis and haemorrhage, it must be diagnosed and the appropriate management has to be initiated (Zubor, Kajo, Dokus, Krivus, Straka, Bodova & Danko 2014:3).

Complications such as **anaemia, breast engorgement, and cracked nipples**, are also common problems that must be diagnosed and managed during postnatal care. **Anaemia**, which can be defined as a haemoglobin level of <110 g/l at one week postpartum and <120 g/l at eight weeks postpartum, can contribute to symptoms such as fatigue, physical disability, cognitive problems, and psychiatric disorders. Screening for postpartum anaemia should be considered as part of postnatal care and should be diagnosed and treated to prevent secondary complications (Saber, Khalaf, Abbas & Abdullah 2019:339; Milman 2012:144-145).

Breast engorgement and **cracked nipples** can negatively influence successful breastfeeding. During the postpartum period, it is the responsibility of the postnatal care providers, such as midwives, to diagnose these complications and support the mother to enhance successful breastfeeding. This is also indicated in the WHO technical consultation on postnatal care, which states midwives should support breastfeeding (Karaçam & Sağlık 2018:134). Successful breastfeeding can contribute to a reduction of infant morbidity and mortality as studies suggest infants who are breastfed are less likely to develop obesity, respiratory illness, diarrhoea,

gastrointestinal problems, and many other chronic diseases (CHERG 2013; WHO 2012). Breastfeeding, therefore, has to be promoted, assessed and any problems with breastfeeding have to be managed when diagnosed (Warren 2015:155).

Midwives and other healthcare workers providing postnatal care should also assess **neonates** to identify and manage common health problems. It is indicated that three-fourths of deaths during the neonatal period occurs in the first week of life from complications such as **asphyxia** and **sepsis** (with signs including pyrexia, respiratory distress and lethargy). **Early supplementary feeding** and **harmful cultural practices** during the postnatal period may aggravate those complications (WHO 2014:17; Maciel, Moraes, Soares, Cruz, de Andrade, Junior, et al. 2018:2462-2470).

Asphyxia can be defined as an insult to the foetus or newborn due to failure to breathe or breathing poorly, leading to decreased oxygen perfusion to various organs. It is the leading cause of neonatal deaths in newborns that should be identified and treated during the postnatal period (WHO 2014:17). Neonatal sepsis is another common neonatal health problem; it is an invasive infection, usually bacterial, responsible for substantial cases of morbidity and mortality (Lukacs & Schrag 2012:960-965). The early initiation of complementary feeding and cultural practices predispose newborn babies to many health problems. Therefore, postnatal care providers should give due attention to those problems while educating mothers during postnatal care (ICM 2013:13-18; Ojua, Ishor & Ndom 2013:177-180).

There are health problems such as **jaundice** and **postnatal growth retardation** that will be identified and managed or referred if timely and quality postnatal care is provided. The postnatal care for newborns also helps in the provision of health education on umbilical cord care as well as dispensing immunisation services. Postnatal care is vital for newborns with low birth weight and those with HIV-infection as special care and treatment must be provided to them (Warren 2015:19). The postnatal period is therefore critical for offering opportunities to deliver key preventive care services (immunisation, infant feeding counselling, and family planning) and treatment of any ongoing morbidity for all women and their babies. Furthermore, postnatal visits provide information to the mothers and families on

important health-seeking behaviour in order to identify health risks, such as persistent vomiting, convulsions, or suckling during breastfeeding (WHO 2014:3-4; WHO & UNICEF 2015:3-6).

Common complications among women, such as PPH, hypertension, and sepsis, as well as neonatal asphyxia and sepsis, should be identified and managed in a timely and appropriate manner while offering postnatal care; the management of complications can reduce maternal and neonatal mortality and morbidity rates (Warren 2015:155; Salam, et al. 2014:S3).

2.3.4 Management of complications related to the mother

The timing of postnatal care is important, thus the first contact during postnatal care is crucial for the effective management of any post-delivery complication. Any delay in receiving postnatal care can lead to the death of mothers and newborns (WHO 2016:3-4; WHO 2014:16). Optimal postnatal care must be rendered by a competent midwife or healthcare provider to prevent maternal deaths from PPH. There are variations in the specific healthcare provider responsibilities in managing PPH depending on the national guidelines and the type of health facility in which postnatal care services are provided (WHO 2016:2-4). The scope of practice of the diverse team of healthcare providers allows them to be involved in the management of the PPH to various extents. In the Ethiopian context, midwives, nurses, and health officers are highly involved in managing PPH. However, laboratory staff, obstetric staff, and anaesthetic staff are also important role players (FMOH 2016:161, 166; WHO 2012:6-8).

Managing PPH also depends on the severity of blood loss. For moderate PPH, Uterotonics (oxytocin alone as the first choice), which can be prescribed by the midwives, nurses, and other health officers, plays a central role in the treatment (KoS, MoH 2013:16). Other essential interventions which can be provided in Ethiopia by skilled postnatal care attendants include uterine massage and the administration of initial fluid such as isotonic crystalloids for management of PPH (FMOH 2016:166).

Competent midwives can perform bimanual uterine compression, external aortic compression and use the first-aid device for obstetric haemorrhage as temporising measures until definitive care is available (WHO 2014:30).

When a mother presents with persistent and severe PPH, uterine artery embolisation may be indicated if the required resources are available for the intervention (refer to Section 2.5.9). In managing this type of bleeding, there should be an indication for surgical intervention without further delay by obstetric staff if bleeding persists despite treatment with uterotonic drugs and other conservative interventions (WHO 2016:30).

Postnatal hypertension, which is defined as elevated blood pressure after delivery over a period of four days should be identified and managed to prevent maternal deaths (Say, et al. 2014:e327). The midwife and other postnatal care providers, after a diagnosis of hypertension, must prescribe the indicated antihypertensive drugs or recommend and monitor the antihypertensive drugs prescribed by physicians to control or treat the elevated blood pressure (Smith, et al. 2013:45-48).

As the advocate for the mother, the midwife must recommend that the medication prescribed by the physician be used with once-daily dosing to maximise compliance at a time that is often somewhat chaotic for mothers (Townsend, O'Brien & Khalil 2016:87-89). The midwife also needs to ensure that prescribed antihypertensive medication is safe for breastfeeding infants. If the hypertension is not controlled, the postnatal care providers should refer the mother for further treatment (Townsend, et al. 2016:87-89).

Puerperal sepsis can be treated by medications, including antibiotics, to reduce morbidity and mortality (WHO 2014:31). There are variations in prescribing medication among different countries. Within the Ethiopian context, the medications can be prescribed by different healthcare professionals such as midwives, nurses, health officers, and physicians, depending on the type of health facility where the postnatal care is rendered (Raifman, Mellese, Hailemariam, Askew & Erulkar 2013:3; Martins, de Souza, Khanum, Naz & Souza 2016:11). For example, in primary health care units where the majority of mothers receive postnatal care, antibiotics are

prescribed by midwives, nurses, and health officers as they are primarily responsible for providing the health services, including postnatal care (FMOH 2016:304).

Antibiotics should be used with great care, as inappropriate use may lead to health problems among mothers and newborns. Antibiotic exposure affects the ecological balance of the gastrointestinal tract, and some antibiotics may have an effect on pregnancy and breast milk (Alhashem, Tiren-Verbeet, Alp & Doganay 2017:324; Lucas, Robinson & Nel 2012:57-60). However, selective use of specific antibiotics in high-risk conditions for sepsis (example: third and fourth-degree perineal lacerations) should be considered by all postnatal care providers in managing the sepsis (Alhashem, et al. 2017:324).

Postnatal **anaemia,** characterised by haemoglobin levels of <110 g/l at one week postpartum and <120 g/l at eight weeks postpartum, should be treated on the diagnosis thereof to improve the quality of life for both mother and child. For the treatment of iron deficiency anaemia, iron tablets, or intravenous iron or red blood cells can be restored through blood transfusion, depending on the severity of the anaemia (Markova, Norgaard, Jørgensen & Langhoff-Roos 2015:3). The treatment will be effective with the active involvement of a diverse professional team comprising laboratory professionals who collect blood from donors, the midwives, and other skilled personnel transfusing the blood when needed.

The transfusion can be ordered by the midwives or physicians as indicated in the national guidelines accessible in the health facility (Ethiopian FMOH 2015:142). Midwives and other healthcare providers are also responsible for maintaining the stock balance of the medications used in treating anaemia and requesting for additional medication and supplies before the stock balance gets low (Raifman, et al. 2013:3-5).

It is expected that midwives, as well as other postnatal care providers, evaluate the effectiveness of the treatment given for anaemia. The midwives and nurses must also make a follow-up date for mothers to attend postnatal services within two weeks after commencement of the treatment (Markova, et al. 2015:3).

Breast engorgement is a common postnatal health problem that must be managed to enhance successful breastfeeding. Both pharmacologic and non-pharmacologic therapies are considered to be beneficial for the treatment of engorgement. The non-pharmacological management can be done by the mother at home once they are educated on how to treat themselves. If the baby is able to latch and suckle well, it is recommended that the mother should breastfeed as frequently as the baby demands during the day and night to relieve the discomfort (Karaçam & Sağlık 2018:134). If the baby is unable to do so effectively, the mother has to express her milk by hand or with a pump until the breast is softer so that the baby can latch better. As an option, the mother can manage breast engorgement by applying warm compresses to the breast or taking a warm shower before expressing, which helps the milk to flow. The mother can also use a cold compress as alternative management after feeding or expressing, which helps to reduce oedema (Pustotina 2016:3121-3125; Karaçam & Sağlık 2018:134).

Cracked nipples is another complication during the postnatal period that can interrupt breastfeeding if it is not managed timely. It usually results from improper latching (Buck, Amir, Cullinane, Donath, and CASTLE Study Team 2014:56-62). The cracking and bleeding nipple can be managed by varying the baby's position on the nipple by moving his or her body to switch pressure points from feeding.

The other option for treating sore nipples after birth, which can be performed by the mother, is the application of a cool, soaked tea bag to nipples between feedings and wearing breast shields under clothing to prevent scratching of the nipple surface. If the problem persists, the use of some medication such as acetaminophen may be recommended, even if breastfeeding (Buck, et al. 2014:56-62; Niazi, Rahimi, Soheili-Far, Askari, Rahmanian-Devin, Sanei-Far, et al. 2018:139).

2.3.5 Referral of the mother or infant

The vast majority of maternal deaths are preventable provided that skilled attendants provide care during pregnancy, at birth, and during the postnatal period (Olaitan, Okafor, Onajole & Abosede 2017:5). Competent healthcare providers must be accessible and utilised by the postnatal mothers to ensure that high-risk mothers and

babies can be identified, treated, or referred to advanced health institutions. Quality postnatal care includes timely referral of the woman and her baby to a higher level of care when they are at risk (WHO 2014:19), thus, it is an essential component of postnatal care services (WHO 2014:19).

There should be resources and infrastructure available to comply with an effective referral system. Effective transportation to a facility and experienced and trained postnatal care providers must be available. The health facility must have the necessary resources for the provision of postnatal care (Knight, Self & Kennedy 2013:5; Chaturvedi, Randive, Diwan & De Costa 2014:5-9).

2.3.6 Provision of health education

It is recommended by the WHO and various authors that all women should receive health education concerning their own health and that of their newborn baby (WHO 2014:3-5; Mahiti, Mkoka, Kiwara, Mbekenga, Hurtig & Goicolea 2015:5). Health education is an integral part of postnatal care (NICE 2014:3-8), and health professionals have a professional responsibility to provide quality and culturally sensitive health education to ensure that mothers have adequate knowledge that enhances timely health-seeking behaviour if needed (ICM 2013:13-18).

Health education for postnatal mothers must include information on: (1) good personal hygiene practices; (2) birth spacing and family planning; (3) safe sex; (4) intake of dietary supplements; (5) information on the signs and symptoms of complications such as PPH, postnatal hypertension, infection, and thrombo-embolism; and (6) breastfeeding that will allow the mother to seek timely healthcare when the need arises (WHO 2014:5-8).

Good personal hygiene is a significant strategy for preventing infection to mothers and their newborn babies, thereby reducing maternal and neonatal morbidity and mortality. It is, therefore, necessary for postnatal care providers to educate mothers on the importance and how to maintain optimal personal hygiene (WHO 2014:4). The use of postpartum contraception for **birth spacing** is an important aspect that must be addressed in health education with postnatal mothers. Postnatal care

providers should also educate postnatal mothers on family planning methods during postnatal care (ICM 2013:13-18).

Accurate information on how to prevent sexually transmitted diseases, including HIV and other communicable diseases, must be provided. Postnatal women should be educated on how to have **safe sex**, including the use of condoms (WHO 2014:27). It is also crucial to educate the postnatal mothers on the value of **good nutrition** to maintain and promote the health of the mother and baby (KoS, MoH 2015:106).

All postnatal women should be given education about common complications that may occur, including PPH, postnatal hypertension, sepsis, and others. Mothers must be informed to seek health care if any of these complications occur (WHO 2014:27). Education on breastfeeding is another important issue that has to be addressed when educating postnatal mothers, and the postnatal care providers must address important points such as the advantages of breastfeeding (refer to Section 2.3.7) to enhance maternal knowledge on the importance thereof (ICM 2013:13-18; Ojua, et al. 2013:177-178).

Postnatal mothers must know the importance of mobilisation as soon as possible following the birth if there are no restrictions to their mobilisation (WHO 2014:5; Warren, et al. 2012:80-90). Postnatal mothers should be educated on gentle exercise and taking time to rest. It is also important to provide information on common physical, psychological and social changes during the postnatal period and to educate postnatal mothers on how and where to report any health concerns to a healthcare professional (ICM 2011:11).

Postnatal mothers must be taught about daily care for their newborn, such as caring for the umbilical cord, identifying risks, exclusive breastfeeding (WHO 2014:5), as well as immunisation of their babies (ICM 2011:11).

2.3.7 Promote breastfeeding

During postnatal care visits, the progress of breastfeeding must be monitored. Exclusive breastfeeding is recommended to be continued until the baby is six

months old as it contributes to the reduction of infant morbidity and mortality. Exclusive breastfeeding protects the infant from common childhood illnesses and infection, thus reducing infant mortality (WHO 2014:3-4). The WHO and Centers for Disease Control (CDC), as well as the American Academy of Paediatrics (AAP) also recommend exclusive breastfeeding up to six months of age, and breastfeeding with complementary feeding for at least up to one year of age (Inoue, Binns, Otsuka, Jimba & Matsubara 2015:15).

The exclusive breastfeeding (EBF) up to six months has extra benefits for the family as it is used as natural birth spacing by delaying a return to fecundity. Breastfeeding's other advantages include that it has no cost, lowers the rate of breast and ovarian cancer in mothers, promotes a faster return to the mother's pre-pregnancy weight, and promotes bonding between mother and infant (Cato, Sylvén, Wahlström Henriksson & Rubertsson 2018). For these reasons it is recommended that policies and programmes should actively promote home and facility-based counselling and support for EBF, including counselling focusing on how to minimise barriers to breastfeeding and ways to manage them if they occur (WHO 2015:3). However, despite its diverse benefits for mothers and infants, exclusive breastfeeding rates remain low.

For a mother to effectively and exclusively breastfeed her baby during the postnatal period, there should be support and the postnatal care providers need to take responsibility to assess whether the newborn is properly fed and whether the mother requires additional support on breastfeeding issues (Palmér & Ericson 2019:35). Hence, midwives and other postnatal care providers should continue to counsel and promote early and exclusive breastfeeding at any opportunity they have contact with the mother, including during antenatal care settings, at delivery, and in all postnatal care visits (Palmér & Ericson 2019:35; WHO 2014:3).

The counselling and support provided for mothers can decrease the risks of early weaning and overcome breastfeeding challenges (Asiodu, et al. 2017:863-872). Initiation and continuation of exclusive breastfeeding by mothers are positively influenced by information, education, and support on breastfeeding from lactation consultants, peer counsellors, and healthcare providers. This finding was reported in

a meta-analysis done in 10 countries that found professional support is beneficial for all breastfeeding women (Sindhu, Ramanujam, Bose, Kang & Mohan 2019:29). Existing culture and norms also influence breastfeeding counselling (WHO 2014:17).

2.3.8 Contraception services

The aim of postpartum family planning is to assist and support the women to decide on the contraceptive of their choice, help initiate contraception, and promote the sustained use of contraceptives for two years or longer (Gaffield, Egan & Temmerman 2014:4-9; WHO 2014:5). For timely initiation of family planning, women should be counselled on the benefits of birth spacing and family planning. Once a decision is made on the utilisation of family planning methods, discussions should be held with the mother on available contraceptive options, and contraceptive methods should be offered depending on the woman's choice (WHO 2014:5).

Assisting postnatal mothers to initiate family planning methods during the postnatal period is also a strategy that increases family planning utilisation in all women of reproductive age. Women who start to utilise family planning during the postnatal period will continue these methods in the future beyond the postnatal period. It thus helps individual women or couples to delay, space, or limit their pregnancies to achieve their desired family size. This contributes to a healthy life for women, newborns, infants and children, and the family as a whole (Gaffield, et al. 2014:4-9).

In Ethiopia, family planning services are provided by accredited health professionals, including nurses, midwives, health officers, and medical doctors. The low-level health professionals (so-called health extension workers) assigned at PHCUs also provide oral contraceptive pills (Ethiopian FMOH 2016:54). This is similar in Kenya where doctors, clinical officers, registered midwives, and nurses make up the professional labour force of skilled attendants, including family planning services (Kenyan Ministry of Public Health and Sanitation, Kenyan Ministry of Medical Services 2012:22-23).

2.3.9 Immunisation services

Immunisations against childhood communicable diseases through the Expanded Program on Immunisation (EPI) are among the most cost-effective public health interventions available (Madhi, Bamford & Ngcobo 2014:228-234). For complete immunisation of children, postnatal mothers must have good understanding and knowledge about the importance and schedule of immunisation to protect children and the public from vaccine-preventable diseases (WHO 2014:3-4; Šeškutė, Tamulevičienė & Levinienė 2018:2). Postnatal care providers should provide immunisation for the newborn baby, educate the mother on the importance of immunising their baby, and schedule for the immunisation.

The national immunisation guidelines for vaccine-preventable diseases apply in Ethiopia and Kenya. Accordingly, Bacillus-Calmette-Guerin (BCG) is given as soon as possible after birth; Oral Polio Vaccine (OPV0) is recommended to be given between birth and two weeks of age. The vaccines for Measles, DPT-HepB-Hib orpenta-valent, Rotavirus, and the Pneumococcus vaccine are given during routine immunisation services as per the national immunisation guidelines (Ethiopian FMOH 2015:8-9). Similarly, the TT vaccine is administered for women of reproductive age as routine immunisation (Ethiopian FMOH 2015:8-9; WHO 2014:4-5).

2.4 ORGANISATION OF POSTNATAL CARE

The WHO provides guidelines to improve the utilisation and quality of postnatal care with the aim of improving child survival rates and reducing maternal morbidity and mortality in low-income countries, including Ethiopia and Kenya (WHO 2014:7). The WHO recommends that mothers who gave birth in healthcare facilities should not be discharged before the crucial first 24 hours of life. For all home births, postnatal visits to the healthcare facility should be scheduled as soon as possible after birth (WHO 2014:7).

In the case of home deliveries, at least two home visits are recommended, which is the case in countries such as Ethiopia and Kenya where home visits are part of the community strategy aimed at bringing healthcare services to the community. The

home visit as a strategy to provide postnatal care is recommended as it contributes to a reduction of maternal mortality and morbidity (McPherson & Hodgins 2018:1).

The first visit should occur within 24 hours after birth and the subsequent visits at three, seven, and fourteen days after delivery to ensure maternal and newborn wellbeing (WHO 2014:2-5; WHO 2010). In most cases, the ministry or department of health in every country is charged with the responsibility of organising, funding, monitoring, and evaluating the postnatal care services (WHO 2013:Online). In Kenya, the National Ministry of Health is responsible for funding and coordinating all health-related activities, including postnatal care (Division of Reproductive Health [DRH] Kenya 2012:Online; WHO 2013:Online). This is similar within Ethiopia as the Ethiopian FMOH leads and organises maternal health services, including postnatal care through the maternal and child healthcare division. Both ministries of health in Ethiopia and Kenya have implemented a number of approaches for delivering quality and effective postnatal care for mothers who deliver in health facilities as well as those who had home births (Richard 2009:279-286; DRH Kenya 2012:Online).

In Kenya, strategies such as the National Orientation Manual for Health Providers and Kenya Health Sector Strategic Plan that gives due attention for postpartum services were developed and implemented as part of the continuum of care (Liambila, RamaRao & Clark 2015:4). In Ethiopia, as part of the organisation of postnatal care, the FMOH set a goal to increase maternal healthcare utilisation, including postnatal care, through implementations such as the health sector transformation plan that address socio-cultural, distance and financial barriers that prohibit mothers from utilising health facilities that are already available (FMOH, 2015:76). Despite the commitment and motivation from the Ethiopian FMOH in organising postnatal care, several factors can be associated with the utilisation of postnatal care.

2.5 FACTORS ASSOCIATED WITH THE UTILISATION OF POSTNATAL CARE

Despite the existence of evidence from different sources on the importance and advantages associated with optimal utilisation of postnatal care, the uptake of these services is still very low and varies across regions and countries (Tesfahun, et al.

2014:2341-2351; Neupane & Doku 2013:1922-1930). In low-income countries like Kenya and Ethiopia, utilisation of postnatal care is as low as 57% in Kenya (KDHS 2014:132) and a concerning 19% in Ethiopia (EDHS 2016:139).

The following factors, identified from the literature, are associated with the utilisation of postnatal care services in low- and middle-income countries (LMICs):

2.5.1 Knowledge

Women's knowledge of postnatal care is a pre-requisite to obtaining access to and utilising postnatal care services timely and effectively. Women with no or limited knowledge about postnatal care, the benefits of postnatal care, the complications of pregnancy and childbirth are less likely to utilise the available postnatal care services (Wudineh, Nigusie, Gesese, Tesu & Beyene 2018:508; Workineh & Hailu 2014:169-76; Limenih, Endale & Dachew 2016:4; Tesfahun, et al. 2014:2341, 2348). In some countries, cultural practices remain women's first choice due to their lack of knowledge on postnatal care and its benefits (Probandari, Arcita, Kothijah & Pamungkasari 2017:541).

To increase the utilisation of postnatal care, it is important that the pregnant mothers should have the awareness and be encouraged (refer to Section 2.5.2) to attend postnatal visits at the health facility or receive this service at home. To improve the awareness of mothers regarding postnatal care, healthcare providers, community health agents, and postnatal care coordinators should provide information at all levels to improve the health status of women and their babies (FMOH 2015; Okour, Alkhateeb & Amarin 2012:11).

The Ethiopian FMOH has therefore implemented multiple high impact interventions, including the health sector transformation plan, which has strategies to enhance women's awareness of maternal health services, including postnatal care, through inter-sectoral collaboration at both facility and community levels (FMOH 2015; Okour, et al. 2012:11).

2.5.2 Antenatal care attendance and place of delivery

Antenatal care (ANC) is the strongest predictor of postnatal care utilisation; it increases significantly among women who have had three or more ANC visits compared to women who did not have any ANC visits (Tesfahun, et al. 2014:2348; Rwabufigiri, Mukamurigo, Thomson, Hedt-Gautier & Semasaka 2016:122). The antenatal period can be seen as a window of opportunity to engage and educate women about the importance of postpartum care, influencing them to utilise postnatal care services. However, in Ethiopia, it seems not to be the case; although 62% of women attended ANC, only 19% received postnatal care (EDHS 2016:139).

Similarly, institutional delivery, assisted by medically trained professionals such as medical doctors, nurses, and midwives, also has a significant effect on the utilisation of postnatal care (Fekadu, Ambaw & Kidanie 2019:64; Chungu, Makasa, Chola & Jacobs 2018:94). A study conducted in Ethiopia supported these findings as two-thirds of women who delivered at a health facility received postnatal care services within 41 days after delivery, while those who delivered in non-institutional settings were less likely to seek postnatal services (Tesfahun, et al. 2014:2348). Similar findings were also reported from Kenya, where postnatal care utilisation from a skilled provider was most prevalent among women who delivered in a health facility (KDHS 2014:133).

The better postnatal care utilisation by those who delivered at health institutions is related to the fact that such women are ideally encouraged to stay for at least 24 hours before discharge, during which time they receive postnatal care. If neonatal risk factors are identified, mother and baby should be encouraged to stay longer to enable feeding, warmth, and care for complications, which increase the mother's and baby's opportunity to receive postnatal care (Abebo & Tesfaye 2018:9). Improved postnatal care utilisation among those who deliver at a health facility is also associated with health education on subsequent postnatal visits, and women are informed to seek healthcare for newborns if they notice any of the common danger signs (Wudineh, et al. 2018:508; Akum 2013:7).

Women's socio-economic status, the ability to pay for postnatal care, as well as support from the government (budget allocation), can affect utilisation of postnatal care.

2.5.3 Socio-economic aspects

The shortage of economic resources, high healthcare costs, and lack of health financing schemes can affect the women's decision-making process, leading to delays in the use of appropriate maternal health care, including postnatal care (Cutler 2017:508-509). The provision of quality postnatal care is highly influenced by the availability of adequate finance for healthcare services. Therefore, the health system and health facility should ensure financial protection for the poor who cannot afford the service charges (Tama, Molyneux, Waweru, Tsofa, Chuma & Barasa 2018:603).

The introduction of user fees and cost-sharing arrangements inhibit access to healthcare services for the poor (Tama, et al. 2018:603), specifically in low-income countries. At times, healthcare can be unaffordable for families in Sub-Saharan Africa, including Ethiopia and Kenya (Tama, et al. 2018:603). In Africa, where the vast majority of low-income countries (including Ethiopia and Kenya) are ranked, many people cannot afford health care; thus, the health system should ensure that health costs are affordable for those with low income so they access these services (Federal Democratic Republic of Ethiopia 2014:25).

The need to develop a strong health financing system that treats all people with different income status and paying capacity fairly is a common objective of all countries. Even the wealthiest countries are finding it increasingly difficult to keep up with rising healthcare costs, adding more to their budgets to meet the healthcare needs of their people (Tama, et al. 2018:603). As a solution to the financial problem, some type of health insurance scheme might be used to reduce the role of user fees and out-of-pocket payments, motivating people to utilise healthcare services (Onah & Govender 2014:e93887).

The health systems are also facing a scarcity of budgets to meet the health needs of the people. In African countries, for example, the average total health expenditure stood at US$ 135 per capita in 2010, which is only a fraction of the US$ 3150 spent on health in an average high-income country (Cutler 2017:508-509; Abegaz & Mohammed 2018:47). This is also the case in Ethiopia; for instance, the budget allocated for health care in Ethiopia in 2013 was only 9.75% of the total budget of the country. This was well below the suggested allocation of an average of USD 34 per capita recommended by the WHO for LMICs (Abegaz & Mohammed 2018:47; Federal Democratic Republic of Ethiopia 2014:25). Moreover, the per capita health allocation for Ethiopia is significantly lower than the African average total health expenditure, and that of the world; it is only 100.16 ETB (FMOH 2014:25).

Another factor influencing the attendance of postnatal care is maternal age (Mukonka, Mukwato, Kwaleyela, Mweemba & Maimbolwa 2018:189-193). This aspect is discussed in the following section.

2.5.4 Age of the mother

The age of a woman is significantly associated with accessing and utilising postnatal care services (Rwabufigiri, et al. 2016:122; Olayinka, Achi, Amos & Chiedu 2014:10-15).

Older women are less likely to access and utilise postnatal care (Ochako, Fotso, Ikamari & Khasakhala 2011:1; Birmeta, Dibaba & Woldeyohannes 2013:256) possibly due to the link to their parity and the fact that they might not have encountered any complications with their pregnancy and delivery (Rwabufigiri, et al. 2016:122). Congruently, adolescents are less likely to access postnatal care services (Pandey, Lama & Lee 2012:554-573; Sakala & Kazembe 2011:113) as they may be shy or have an unplanned pregnancy, which exposes them to stigma where they may be ashamed to seek health care.

Maternal educational level has also been found to significantly influence the attendance of postnatal care (Worku, Yalew & Afework 2013:20).

2.5.5 Education level of the mothers

There is a strong relationship between the level of education of mothers and the utilisation of postnatal care (Wudineh, et al. 2018: 508; Neupane & Doku 2013:1922-1930). Better-educated mothers are more likely to utilise postnatal care services (Ononokpono & Odimegwu 2014:1; Birmeta, et al. 2013:256).

2.5.6 Male involvement

Male involvement can also influence the utilisation of postnatal care (Davis, Vyankandondera, Luchters, Simon & Holmes 2016:81). The attitude, perception, behaviour of men and their beliefs affect the maternal health outcomes of women and their babies directly or indirectly (Davis, et al. 2016:81). The exclusion or limited participation of men in maternal healthcare services could lead to fewer women seeking maternal health services, resulting in negative maternal health outcomes.

Including men in reproductive health policies and service delivery offer both men and women important benefits (Davis, et al. 2016:4-7; Kraft, Wilkins, Morales, Widyono & Middlestadt 2014:122-141). However, it has been determined that gender is not the only aspect influencing healthcare behaviour; religious and cultural beliefs are additional factors preventing effective postnatal care utilisation (Bohren, Hunter, Munthe-Kaas, Souza, Vogel & Gülmezoglu 2014:71).

2.5.7 Religious and cultural beliefs

Both religious and cultural beliefs are factors that influence the utilisation of postnatal care. Cultural beliefs and norms that are deep-rooted and practiced by the community, shape the way women perceive their own health and their response to the available health services (Yaya, Uthman, Amouzou, Ekholuenetale & Bishwajit 2018:194; Shiferaw, Spigt, Godefrooij, Melkamu & Tekie 2013:15).

Religion, which can be defined as the combination of beliefs, feelings, dogmas, and practices that define the relations between an individual and sacred being or divinity, has a vital role in the utilisation of postnatal care services. It shapes the beliefs,

norms, and values that exist in the community (Somefun & Ibisomi 2016:21; Choby & Clark 2013:6; Doku, Neupane & Doku 2012:Online). These values or beliefs may prevent women from utilising postnatal care services. Religious belief has been found to be a push factor or source of exclusion from maternal healthcare utilisation in some regions of the world, including Africa (Somefun & Ibisomi 2016:21).

Culture may be defined as the pattern of learned behaviour and the product of the behaviour shared by the members of society. A socially inclusive community expresses cultural diversity, ethnicities, faiths, and traditions that are freely practiced and respected by all members of the community (Shiferaw, et al. 2013:15). The cultural beliefs, practices, and rules could affect utilisation of maternal health services in one way or another as these may be attributed to the fear of possible consequences if one went against such traditions or rules. In a community, it is expected that people behave in a certain manner that respects a particular culture and which directly or indirectly has an influence on the perception and attitude of people. It may therefore also influence health service utilisation, including postnatal care (Sunanda & Paul 2013:48; Srivastava, Avan, Rajbangshi & Bhattacharyya 2015:97).

A well-recognised cultural barrier in many communities throughout Africa, including Ethiopia and Kenya, is the one that keep mothers and babies indoors for the first month after birth (Gessesse 2015:101-102); it is recognised as a period of seclusion. Seclusion means not leaving home to access health care, as many women perceive the postnatal period as a time of rest. The mother is meant to gain strength, eat local or cultural foods to cultivate breastfeeding, and bond with her baby (Gessesse 2015:101-102).

Cultures may also have traditional customs and rituals for both the mother and baby (Morris, Short, Robson & Andriatsihosena 2014:101-117). Postnatal care providers and coordinators' understanding of these beliefs and practices is an important part of ensuring effective and timely postnatal care (Gessesse 2015:101-102).

Apart from the factors mentioned above, community characteristics, is another factor that affects utilisation of postnatal care (KoS, MoH 2013:23; Marston, Renedo, McGowan & Portela 2013:e55012). This aspect is discussed next.

2.5.8 Established community characteristics

The motivation of an individual to seek health care is influenced positively or negatively by several familial and community factors. In the provision of health services, understanding the characteristics and needs of the community in which the service recipient is living remains very important (Kamwendo 2012:Online). As individuals live within households and households are part of the community, it is crucial to look beyond familial factors influencing the decisions to seek postnatal care. Researchers have also argued that individual decisions can also be influenced by community characteristics; therefore, providing knowledge at the individual level is not sufficient to promote behavioural change. While health promotion places emphasis on individual behaviour, broadening the scope to other determinants of health, including contextual determinants, is necessary (Jat, Ng & San Sebastian 2011:59). Arguably, a woman's decision to utilise a particular health service is the result of cumulative factors such as personal need, social factors, and the location of services (KoS, MoH 2013:23).

2.5.9 Health facility-related factors

The utilisation of postnatal care is also influenced by health facility factors (Jacobson 2011:4). Health system barriers such as managerial capacity, low coverage, poor quality, an insufficient workforce, infrastructure, health information system, and supply chain logistics affect women's access and utilisation of postnatal care (Jacobs, Ir, Bigdeli, Annear & Van Damme 2011:288-300). Each of these factors is discussed in the sections that follow.

2.5.9.1 Management capacity

In a health facility where postnatal care is offered, managerial skills play a significant role. Managers in any unit of clinical practice, such as the postnatal care unit, ought

to be more knowledgeable and skilful than other health professionals assigned to the unit. Moreover, the manager is often consulted in decision-making regarding patient care and solving any other problems related to client care (Stevens 2013:Online).

Poor health management capacity, referral and communication failures in providing services for women with complications, as well as limitations in dealing with work stress among the healthcare providers have been identified as barriers that compromise the utilisation of postnatal care (Jacobs, et al. 2011:288-300).

2.5.9.2 Low postnatal care coverage

The low coverage and inequities in the provision of essential maternal healthcare services in Sub-Saharan Africa, including Kenya and Ethiopia, are challenges the health system is facing in the achievement of improved maternal and child survival rates and reduced maternal and child mortality (Duysburgh, Kerstens, Kouanda, Kaboré, Yugbare, Gichangi, et al. 2015:131; Singh, et al. 2012:e37037). Health facility factors, such as inadequate staffing, contribute to women not accessing healthcare services. This lack of adequate staff may be the result of inequity in staff distribution among the diverse geographic location (Bradley, Kamwendo, Chipeta, Chimwaza, de Pinho & McAuliffe 2015:65) or a lack of infrastructure. In some rural communities, one may not be able to access infrastructures such as the internet, good road networks or other amenities. Such challenges may again contribute to high staff turnover or diminish the interest of the staff to provide professional services. These factors thereby exacerbate the existing low postnatal coverage as a result of a lack of trained postnatal care providers, as described by Essendi, Johnson, Madise, Matthews, Falkingham, Bahaj, et al. (2015:103).

2.5.9.3 Poor quality of care

Quality of care is defined as timely care adherent to scientific evidence-based services rendered to a client. It takes the preferences and aspiration of individual clients and diverse cultures into account in a way that motivates for the utilisation of a service (Nair, Yoshida, Lambrechts, Boschi-Pinto, Bose, Mason & Mathai 2014:e004749). The provision of quality health services requires settings where skills

and resources are appropriate for the needs of clients (Grace & Higgs 2010:945). Quality health care that is provided for clients should address the core dimensions for quality, such as effectiveness, efficiency, accessibility, acceptability, equity, and safety (Nesbitt, Lohela, Manu, Vesel, Okyere, Edmond, et al. 2013:e81089).

The poor quality of the available health services rendered to clients, as well as the negative attitude of healthcare providers, deter mothers from seeking postnatal care (Fotso & Mukiira 2011:505-515). In many health facilities, there is an increasing body of evidence that poor provider attitude is another key deterrent to women accessing and utilising maternal health services, including postnatal care. The poor attitude of healthcare providers may be observed in different forms, including neglect, verbal and physical abuse, lack of privacy, and poor hygiene (Mannava, et al. 2015:36).

Poor quality of postnatal care can also be linked to other factors. For instance, it is reported that the poor quality of postnatal care in Ethiopia is a result of the weak health infrastructure, poorly trained health professionals, and inadequate supplies of drugs and equipment; coupled with patients' poverty, it results in low utilisation of postnatal care services (CSA 2012:131-132).

Another requirement for quality postnatal care is the healthcare provider's competency. Healthcare providers should competently provide quality care to enhance maternal and newborn health; otherwise, it can minimise the motivation of postnatal mothers by discouraging them from receiving the services (Fullerton, Ghérissi, Johnson & Thompson 2011:4; Warren 2015:11).

2.6 TRENDS IN POSTNATAL CARE UTLISATION

2.6.1 Ethiopia

The level of postnatal care coverage in Ethiopia is extremely low: 81% (EDHS 2016:139) of those who gave birth to a live baby between 2011 and 2016 did not receive any postnatal care. The timing of receiving the service is also a concern as only 17% of women who have received postnatal care received it within two days after delivery, as recommended by the WHO (WHO 2014:3, EDHS 2016:24).

Although the WHO recommends all women should be seen by a skilled attendant at least once within 24 hours after delivery (WHO 2013:3), according to the 2011 EDHS report, of those women who received postnatal care, only 4% received postnatal care within 4 hours of delivery, 2% within 4-23 hours, 1% within 1-2 days, and 1% within 3-41 days of delivery (CSA 2012:129).

Despite the commitment from the government of Ethiopia to achieve the Millennium Development Goal (MDG5) to improve maternal health and reduce the maternal mortality rate by three-quarters over the period 1990 to 2015, Ethiopia had the lowest postpartum care coverage of any Sub-Saharan Africa country (WHO, UNICEF, UNFPA, World Bank Group, United Nations 2015:7). For instance, fewer than 1% of the women who delivered at home received postnatal care within 42 days, according to the 2011 EDHS (CSA 2012:129). Similarly, according to the 2005 EDHS, an estimated 95% of mothers nationwide did not receive postnatal care in the critical first two days after both home and facility delivery (CSA 2006:119-120).

2.6.2 Kenya

According to the most recent Kenyan demographic health survey, only 53% of women received postnatal care within the critical two-day period following delivery. However, although the utilisation of postnatal care in Kenya is low, it is still higher than that of Ethiopia (refer to Section 2.6.1). It is also indicated that 38% of women received postnatal care within four hours after delivery, 9% received care within 4-23 hours, and 6% were seen 1-2 days following delivery (Kenyan EDHS 2014:132). Although more than 96% of Kenyan women received ANC from a medical professional, only 61% of all births took place in a health facility, and nearly half of the mothers did not receive postnatal care (KDHS 2014:122, 127).

To improve maternal healthcare utilisation, in April 2011, the government of Kenya published a National Orientation Manual for Health Providers (Nurses, Midwives, Clinical Officers, and Medical officers) on targeted postnatal care. As indicated in the manual, a key message was implementing (Liambila, et al. 2015:4-6) the postpartum services as a primary component of the continuum of care that women need to access during pregnancy, delivery and after delivery.

In order for postnatal services to be meaningful for the mother and the baby, the visits and services need to be targeted. Thus, targeted postnatal care stipulates services should be delivered to both the mother and baby in a minimum of four visits, spread throughout the first six weeks. Accordingly, the document indicated that providing a continuum of postnatal care is expected to result in reduced maternal and neonatal morbidity and mortality (Liambila, et al. 2015:4-6).

In 2015, Chelagat developed a framework that was validated and recommended for implementation in Kenya for the improvement of postnatal care, and ultimately, the maternal and neonatal outcomes. Included in Chalagat's framework were the inputs needed to provide quality postnatal care.

2.7 INPUTS REQUIRED IN THE PROVISION OF POSTNATAL CARE

As described (refer to Chapter 1) and emphasised by the Theory of Change Logic Model, inputs are needed for the implementation of different activities that are important in the provision of quality postnatal care. Inputs required for the provision of postnatal care are also described in Chelagat's framework for improving postnatal care in Kenya (refer to Figure 1.2). In Chelagat's framework, human resources, material resources, physical resources, and medical resources are among other inputs required to provide quality postnatal care.

2.7.1 Human resources

Adequate and skilled human power is one of the key components in the provision of quality postnatal care. Insufficient human resources in the healthcare sector of many countries, Ethiopia and Kenya included, have seriously impeded the provision of maternal healthcare utilisation as it negatively impacts on service delivery (Brown & Gilbert 2012:14-21).

2.7.1.1 Postnatal care providers and their roles

Postnatal care can be offered by different categories of health professionals (De Vries 2012:9-10). In Ethiopia, postnatal care is rendered by skilled attendants who

work in teams. Skilled attendants refer to health professionals such as nurses, midwives, health officers as well as medical doctors who are recognised and accredited by the Ethiopian Ministry of Health. These individuals have been educated and trained to be competent to manage normal pregnancies, childbirth, and the immediate postnatal period. They are also capable in the identification, management, and referral of women and newborns in case of complications in the postnatal period (Adegoke, et al. 2012:5; FMOH 2014:10).

In Kenya, postnatal care also requires a multi-disciplinary team approach, but to achieve safe motherhood, obstetricians and midwives are the key professionals needed as a major component of postnatal care (WHO 2011:Online). The researcher in this study, however, focused on the nurses, midwives and health officers as the main providers and coordinators of postnatal care in Ethiopia (FMOH 2014; Nyasulu 2012:35-40).

2.7.1.2 Training

Ethiopia

According to the Ethiopian health system, health professionals, who are skilled attendants and able to provide postnatal care should at least hold a diploma in nursing and midwifery. Nurses and midwives are trained at diploma and degree (BSc) level (FMOH 2014:24).

The health officers, who are trained at degree level, are also chief providers of postnatal care in the Ethiopian health system, especially at the PHCUs (FMOH 2014:24; Haileamlak 2018:249). For the provision of quality postnatal care, health providers must be equipped with the necessary knowledge and skills to be competent in rendering postnatal care. They should also possess positive attitudes to function as competent practitioners driven by strong ethics (Akum 2013:3; FMOH 2016:54).

According to the Ethiopian FMOH report in 2014, 65 554 health workers were working in public, private and NGO institutions which translate to a total density of 0.84 health workers per 1 000 people (FMOH 2014:50-52). The Ethiopian FMOH

recognises that although progress has been made in the recruitment and training of healthcare providers, there is a human resource crisis at middle and higher levels, particularly among physicians (Ethiopian FMOH 2014:5, 23). Concerning the availability and competency of healthcare providers – as a human resource for postnatal care and a determinant factor for ensuring the quality of postnatal care – the Ethiopian Ministry of Health has the objective to improve human resources through training and retaining qualified health workers in different categories governed by professional ethics (Haileamlak 2018:249).

Kenya

Similar to the training approaches in Ethiopia, the training of healthcare providers in Kenya is comprehensive and includes general nursing, midwifery, and community health nursing. The requirements for admission depend on the level at which the midwife is being trained; whether it is at a technical or graduate level (Kenya Ministry of Health 2014:17-20). A minimum requirement for midwifery training is the attainment of secondary education, which is also the case in Ethiopia (ICM 2010:Online).

2.7.1.3 Ratios

Ethiopia

According to the FMOH's report (2013) primary health service coverage reached 93%. In the report, it was indicated that there were 3 541 health centres, 311 hospitals, and 16 251 health posts in the country to provide quality health services to the community (FMOH 2015:63). In Oromia, where the current study was conducted, there were 41 hospitals and 1 215 health centres rendering reproductive health services, including postnatal care (FMOH Health and Health-Related Indicators 2014:9).

Although Ethiopia has one of the highest numbers of health workers in Sub-Saharan Africa, its large population results in a very high health worker to population ratio. The Ethiopian population to midwifery ratio is significant as there is less than one midwife for every 5 000 women (FMOH 2017:171-172). Midwifery skills are particularly in short supply with large regions such as Oromia reporting a midwife-

population ratio of 1:100 000 (FMOH 2014:50-52). Similarly, there is only one physician for every 38 000 Ethiopians instead of the WHO recommendation of a minimum of 1:10 000 (Yodit & Aklilu 2013:36-37).

The nurse-population ratio is slightly better, but only because of the large numbers of 'junior' or 'assistant' nurses with very limited (one year) training who do not provide postnatal care (Yodit & Aklilu 2013:36-37). Moreover, as most health professionals prefer urban areas, rural localities face a never-ending shortage of human resources.

Kenya

The existing shortage of midwives in the LMICs such as Kenya has contributed to the high midwife-patient ratio and, in turn, to a high MMR (Wakaba, Mbindyo, Ochieng, Kiriinya, Todd, Waudo, et al. 2014:6). Like most countries in Africa, the shortage of healthcare workers is not unique to Kenya and the ratio of healthcare providers in Kenya is almost similar to that of Ethiopia. Kenya is one of the countries identified by the WHO as having a "critical shortage" of healthcare workers, which is very similar to the Ethiopian situation (Wakaba, et al. 2014:6).

According to the Nursing Council of Kenya, a ratio of one midwife to five patients is recommended, however, the real situation is that one midwife must provide care for over 20 postnatal mothers and their neonates (Nursing Council of Kenya 2012:15). Moreover, the WHO has set a minimum threshold of 23 doctors, nurses and midwives per population of 10 000 as necessary for the delivery of essential maternal and child health services (Kenyan Ministry of Public Health and sanitation, Kenyan Ministry of Medical services 2009:10-11; WHO 2014:21).

Though the midwife is an important component in the provision of postnatal care, not only are the ratios important, but also the appropriate competencies and skills required for the provision of quality postnatal care (Uys & Klopper 2013:1-4).

As an added challenge, material resources are needed for the provision of quality postnatal care, as discussed next.

2.7.2 Material resources

Material resources, which in the context of this study include equipment, supplies, and drugs, must be available for the provision of postnatal care. These resources are key inputs in the delivery of postnatal care and influences utilisation of services as the postnatal care providers require these resources to provide quality care (Essendi, et al. 2015:103).

2.7.2.1 Equipment and supplies

In order to provide standardised and quality health services, including postnatal care, health facilities should have the required equipment and supplies to ensure optimal care delivery. Healthcare-seeking behaviour among mothers might be minimised due to limited equipment or supplies, causing women to get discouraged and they deter others from seeking postnatal care from healthcare facilities (Srivastava, et al. 2015: 97).

2.7.2.2 Essential drugs

In this particular study, essential drugs are considered to be antibiotics, emergency obstetric drugs, medication for general emergency care, as well as drugs indicated on the essential drug lists of Ethiopia.

Healthcare systems have the responsibility of providing postnatal care, and to do so, they need to develop strategies to equip the facility with an efficient supply of essential drugs and other necessary consumables. However, a major influential factor in ensuring this supply in any healthcare delivery system or health facility is the proper allocation of financial resources (WHO 2013:Online). In LMICs, most health facilities are under-equipped with basic supplies and drugs that are necessary for providing basic services to clients (Warren 2010:103; Essendi, et al. 2015:103). Hence, healthcare providers are forced to refer mothers to other health facilities and, in doing so, expose families to unnecessary costs and discomfort.

Moreover, insufficient equipment and drug supply in health facilities may contribute to negative staff attitude; for staff to fully enjoy their work, there should be accessibility to equipment so that they can provide their services professionally. In a situation where this is a challenge, it may pose the risk of a lack of interest in their work and fatigue, especially when they always have to improvise. This was clearly indicated in a study conducted in Nigeria which found negative staff attitude is a barrier to the access and utilisation of maternal health services (Mkoka, Goicolea, Kiwara, Mwangu, Hurtig, Isabel, et al. 2014:108).

2.7.3 Physical resources

Physical resources, in this study, refer to the healthcare facilities that mothers visit to receive postnatal care. The availability, distribution, and convenience of these health facilities have their own impact on the utilisation of postnatal care. The crowded and unclean physical area may delay the reception of the services by mothers and discourage both the mothers and healthcare providers (Srivastava, et al. 2015:97).

2.7.3.1 Health care facilities

The utilisation of postnatal care increases with the availability of adequate healthcare facilities that are equitably distributed (WHO 2010:Online; Srivastava, et al. 2015:97). Therefore, the distance to a health facility is either a push or pull factor that plays an important role in the utilisation of postnatal care services. The ease of access to postnatal care services may be facilitated or hindered by the location and physical distance of the service from the client's home (Somefun & Ibisomi 2016:21; Tura, Afework & Yalew 2014:60).

Healthcare facilities, as well as the service providers, must be easily accessible to postnatal mothers. This motivates the mothers' enhanced utilisation of postnatal care (Ajaegbu 2013:3). This is confirmed by evidence from studies conducted in developing counties that indicated a strong association between access or physical proximity and postnatal care utilisation (Prusty, Gouda & Pradhan 2015:9; Bedford, Gandhi, Admassu & Girma 2012:234; Metcalfe & Adegoke 2012:96-105).

The financial costs, such as transport to a facility to seek postnatal care, can reduce women's use of postnatal care services. This is also the case in Ethiopia as some postnatal mothers have no access to postnatal care due to financial constraints (Kanté, Chung, Larsen, Exavery, Tani & Phillips 2015:341). Congruently, though some progress has been made by the Ethiopian government in providing basic health services to poor women and their children, the progress may be uneven because many people are still not receiving the services (CSA and ICF International 2012:126).

While there appears to be a wide range of therapeutic choices in the modern public health facilities in Ethiopia (Abebo & Tesfaye 2018:9), the utilisation of maternal and child health services is limited (CSA, EDHS 2016:135-140). Having identified the availability and accessibility to healthcare facilities as major determinants to the utilisation of postnatal care, managerial resources should also be considered.

2.7.4 Managerial resources

In this study, similar to that of Kenya, managerial resources are identified as important inputs in the contextualisation of the framework and will be discussed under policies, procedures and protocols, supportive supervision, and performance appraisal (refer to Section 2.7.4.3). Managerial resources are required for the improvement and effectiveness of postnatal care at all levels of postnatal service delivery (Ethiopian FMOH 2014:3-10).

2.7.4.1 Constitution of the government of Ethiopia

The right to health for every citizen of Ethiopia has been guaranteed in the 1995 Ethiopian Federal Democratic Republic Constitution (FDRE) (1995). The constitution stipulates the obligation of the state to issue policy and allocate ever-increasing resources to provide public health services to all Ethiopians. The Ethiopian government follows a decentralised healthcare system, with a primary focus area on the provision of preventive, promotive and curative healthcare services by public, private for-profit and not-for-profit organisations in the health sector.

Ethiopia first declared a health policy in 1993; since then, the government has designed several policies and strategies for improving maternal and reproductive health services. Accordingly, the assurance of health care for all segments of the population was one of the top priorities in the Ethiopian Health Policy, and it states that special attention shall be given to the health needs of women and children, among others (Transitional Government of Ethiopia 1993). Similarly, the endorsement of MDG5 in the Health Sector Development Programmes (HSDPs) is an indication of the government's commitment or political will to reducing maternal mortality across the nation (FMOH 2005:57).

The core strategies for maternal and newborn health are:

- empowering women, men, families, and communities to recognise pregnancy-related risks;
- ensuring access to a core package of maternal and neonatal health services; and
- creating an environment conducive to safe motherhood and child health (FMOH 2005:16-18).

2.7.4.2 Political will

There is strong evidence that countries that have achieved long-term sustained improvements in maternal health have benefited from continued political commitment to maternal health over many years. Sustained political will and momentum is a pre-requisite that plays a significant role in sustained improvements in maternal health (Kennedy, Cheyney, Dahlen, Downe, Foureur, Jefford, et al. 2018:222-231; Abdulraheem, Olapipo & Amodu 2012:5-13). For effective healthcare delivery, the political will has to be translated into the implementation of changes, which requires the implementation of good change management processes and improvements in health sector governance.

Health governance refers to the interrelations of the roles and responsibilities of government, providers, and clients and the relationships, structures, and procedures that connect them. This indicates that good health governance requires strong

political leadership and commitment at all levels and is essential for improvements in maternal health care, including postnatal care (Kennedy, et al. 2018:222-231).

The government of Ethiopia's overall desire is to have the highest possible level of health and quality of life for all its citizens, attained by providing and regulating a comprehensive package of promotive, preventive, curative and rehabilitative health services of the highest possible quality in an equitable manner (FMOH 2014:15).

2.7.4.3 Policies: Guidelines, procedures, and protocols for the provision of postnatal care

As described by the WHO, policies, guidelines, and protocols are crucial elements in the improvement of service delivery (WHO 2014:Online). Policies are the general statements regarding the provision of services, such as postnatal care, that aid in decision making, whereas guidelines are the recommendations or best practice options that enhance and support the provision of services.

In maintaining quality and standards of health services, procedures and protocols (the step-by-step written instructions to be followed by healthcare providers or stakeholders) are used. Policies, procedures, and protocols aid in the provision of consistent practice and encourage healthcare providers, such as the midwives, to offer quality and standardised postnatal care services within their scope of practice (Haran, Van Driel, Mitchell & Brodribb 2014:51).

In the Kenyan health system, the DRH is responsible for the development of national policies and guidelines that lay down the foundation on how services should be provided to clients. Once developed or adopted, policies and guidelines should be regularly be updated in order to incorporate new empirical issues (Kredo, Bernhardsson, Machingaidze, Young, Louw, Ochodo & Grimmer 2016:122-128).

Lack of policies and guidelines has been cited as a contributing factor to insufficient postnatal care delivery (WHO 2014:Online). Standards of care should be developed, and monitoring should be undertaken to evaluate the level of care being provided to mothers and their newborns (WHO 2014:Online). To this effect, the Kenyan Ministry

of Public Health and Sanitation, through the DRH, has established a number of policies, strategies, guidelines, and tools aimed at strengthening the maternal, neonatal, and child health programme (Roets, Chelagat & Joubert 2018:62-67). Similarly, the Ethiopian FMOH is also responsible for designing, developing, and contextualising a number of policies, strategies, guidelines, and tools aimed at strengthening the maternal, neonatal, and child health programme (Ethiopia FMOH 2014:20).

To implement the healthcare services included in the health policy, the government of Ethiopia developed a 20-year Health Sector Development Program (HSDP) in 1998, through which long-term goals were developed for the health sector. There have been reports indicating encouraging improvements in the coverage and utilisation of the health services and improved access to and quality of primary health care, including maternal health care, since the implementation of the HSDP (Ethiopia FMOH 2014:17). Moreover, to improve the health of its citizens, the Ethiopian FMOH has formulated and implemented several policies and strategies. Those policies and strategies were feasible and effective to create change in maternal healthcare utilisation, which is one of the priority areas of the national policy that stipulates special attention would be given to the health needs of the family, particularly women and children (FMOH 2014:28-29).

The policy and strategy documents of the FMOH of Ethiopia promote family health services through core strategies such as ensuring adequate maternal health care and referral facilities for high-risk pregnancies, intensifying family planning for the optimal health of the mother, child, and the family as a whole. Other strategic issues highlighted in the policy document include expanding services and facilities, ensuring the availability of necessary equipment and medicine, and strengthening management capability and human resource development. These are also believed to play a role in improving maternal health services (FMOH 2014:29-30).

2.7.4.4 Supportive supervision

Supportive supervision is a facilitative approach to supervision that enhances the continuous improvements in the quality of care by providing the necessary technical

and material support for quality improvement processes. This will be achieved by emphasising continuous follow-up, joint problem-solving and two-way communication between supervisors and supervisees (Smith 2012:Online). The purpose of supportive supervision is assuring the quality of care and assessing whether the services provided meet the clients' needs (Kisakye, Muhumuza Kananura, Ekirapa-Kiracho, Bua, Akulume, Namazzi, et al. 2017:1345496). Supportive supervision for postnatal care services includes specific activities, such as the observation of performance and comparison of actual practices with standards or plans; provision of feedback on performance; provision of updated technical guidelines; use of client input and data to ascertain opportunities for improvement; problem-solving as a team; and follow-up of previously noted problems (Abdulraheem, et al. 2012:5-13).

As a guide during supportive supervision, the supervisor can typically use job aids such as checklists and assessment formats to facilitate supportive supervision and easily compare the performance against standards (Kerber, Peterson & Waiswa 2015:8).

Available evidence highlights the importance of supportive supervision by indicating evident relationships within the system, identification and solutions for the problems, optimising the allocation and utilisation of resources, motivating health workers, promoting the use of standard procedures, and teamwork (Namazzi, Waiswa, Nakakeeto, Nakibuuka, Namutamba, Najjemba, et al. 2015:24271). Supportive supervision also provides opportunities for regular feedback from supervisors and therefore promotes skill-building through appropriate strategies, such as training and mentorships (Bradley, Kamwendo, Masanja, de Pinho, Waxman, Boostrom & McAuliff 2013:43).

Supportive supervision contributes to achieving the organisation's goal. However, providing supportive supervision may be challenged by work overload and institutional culture among healthcare providers. They may think that the supervision portrays them as incompetent; however, supportive supervision approaches have been reported to make practitioners feel sustained and revitalised because they are not 'fault-finding' missions (Bradley, et al. 2013:43).

In Ethiopia, it is believed that the achievement of the provision of good quality postnatal care requires a series of well-timed supportive supervision sessions of the services rendered to ensure women's safe passage to motherhood. To this effect, for monitoring purposes, the Ethiopian FMOH recognised and selected key indicators for monitoring and evaluating maternal healthcare services (FMOH 2014:15). Accordingly, each indicator represents a link of the continuum of care and is connected with other dimensions of health care (FMOH 2014:15). Measures of coverage of skilled care at birth as well as postnatal care services are critical elements in the continuum of care that is monitored during supportive supervision (FMOH 2014:15).

2.7.4.5 Inter-professional collaboration and teamwork

In the provision of quality maternal health care, including postnatal care, active and systematic engagement among key stakeholders at all levels, from policy formulation to health service delivery, is crucial for the success of any health system (Bridges, Davidson, Soule Odegard, Maki & Tomkowiak 2011:6035). Hence, the provision of maternal health care requires the involvement of several stakeholders, including policy-makers, programme managers, and service providers from government organisations, private organisations, health development partners, technical assistance agencies, district directors, and service providers (Government of Swaziland 2014).

Additionally, there should be timely and effective communication among maternal healthcare service providers and coordinators in a health facility to enhance the quality of postnatal care rendered to mothers (Dlamini 2016:94).

2.7.4.6 Performance appraisal

Performance appraisals, when conducted properly and timely, is beneficial for both healthcare providers and their supervisors in the provision of standardised services as well as improving their future performance (Jawahar 2010:494, 526). The performance appraisal offers a golden opportunity to focus on work activities, goals to achieve, detect and correct existing problems, motivate better future careers and

the performance of healthcare providers (Jawahar 2010:494-526). As a result, the performance of the organisation as a whole is enhanced. Therefore, in performance appraisals, the value of this intense and purposeful interaction between supervisors and subordinates should not be underestimated.

In conducting the performance appraisal, different approaches can be used. It can be done through an 'official' appraisal interview or carried out by conducting staff meetings where healthcare providers give feedback to their co-workers (Lutwama, Roos & Dolamo 2013:355).

2.7.4.7 Continued professional development

Continuing professional development can be defined as a continuing process that is carried out outside formal undergraduate and postgraduate training. It helps to equip individual healthcare providers to maintain and improve standards of medical practice through the development of knowledge, skills, attitudes, and behaviour. These improved standards contribute to changes and improvements in practice (Galvin, Smith, Sorum & Ellefsen 2010:3051-3062).

Continued professional development has other benefits as well; it is used for the achievement of the principle that health professionals should be accountable and governed by professional ethics to the society they serve (Légaré, Borduas, Jacques, Laprise, Voyer, Boucher, et al. 2011:17).

In the contextualisation of Chelagat's framework, a tool for assessing the applicability and contextualisation possibility of the framework to the Ethiopian context, Appraisal of Guidelines for Research and Evaluation (AGREE II), as discussed below, was used. A short summary of other available tools will be mentioned.

2.8 ASSESSMENT TOOLS FOR APPLICABILITY OF FRAMEWORKS

Assessment tools, including the 1) WHO-integrated tool to assess the quality of care for mothers, 2) a new scale for the evaluation of clinical practice guidelines' applicability, and 3) the AGREE II can be used to assess the adaptation and

contextualisation possibility, as well as the implementation possibility, of frameworks to other contexts.

The WHO developed an integrated tool to assess the quality of care for mothers in 2014. The **integrated tool for the assessment of the quality of care for mothers** comprises of four modules related to A) infrastructure, B) maternal, C) newborn and D) paediatric care. The objectives, structure, and methods differ from other global facility assessment tools currently in use since it allows for an assessment of the quality of care provided, not just the quantity or availability (WHO 2014). As the assessment tool focuses on quality of care rather than adaptation and/or contextualisation possibilities, it was not used in the current study.

With the **new scale for the evaluation of clinical practice guidelines applicability**, the applicability of clinical guidelines is composed of four distinct domains, each assessed by its key items. The clinical practice guideline application evaluation (CPGAE) consisted of 19 items across four domains: (1) technical level, 4 items; (2) coordination of support, 2 items; (3) structure and content, 9 items; and (4) the role of the guideline, 4 items (Li, Xie, Wang, Xie, Deng & Lu 2018:61). Although the tool can be used in assessing clinical guideline applicability, it does not address other aspects of applicability such as scope and purpose, applicability, and editorial independence of the guidelines or frameworks to be contextualised.

In this study, the assessment tool identified to be most applicable was the **Appraisal of Guidelines for Research and Evaluation II** (AGREE II) as the components in the tool were suitable for the assessment of the adaptation possibility of Chelagat's framework within the Ethiopian context.

2.8.1 The Appraisal of Guidelines for Research & Evaluation II instrument (AGREE II)

The AGREE instrument is the most commonly used guideline or framework assessment tool. The **A**ppraisal of **G**uidelines for **R**esearch & **E**valuation (AGREE) instrument (AGREE Collaboration 2003:18-23) was developed to address the issue of variability in guideline quality. The instrument is a tool that assesses the

methodological rigour and transparency in which a guideline or framework is developed. The original AGREE instrument was published in 2003 by a group of international guideline developers and researchers, the AGREE Collaboration (2003:18-23). The original AGREE instrument has been refined, which has resulted in the new AGREE II version and a new User's Manual which was published in 2013 (Brouwers, Kho, Browman, Burgers, Cluzeau, Feder, et al. 2010:E839-E842).

AGREE II includes 23 appraisal criteria (items) organised within six domains and two overall assessments: 1). Overall framework quality; and 2) Recommendation for use. The tool is designed to assess guidelines or frameworks developed by local, regional, national, or international groups or affiliated governmental organisations (refer to Annexure 3) to assess its possibility of adapting, adopting, contextualising and implementation. The six domains are the 1) overall aim of the guideline, 2) stakeholder involvement, 3) rigour of development, 4) clarity of presentation, 5) applicability, and 6) editorial independence.

Each domain in AGREE II assesses a unique dimension of the developed framework quality. **(1) The Scope and Purpose** dimension (contains 3 items) is highly concerned about the overall aim that the framework addresses, the specific health problem to be solved when the framework is implemented, and the population to be targeted in implementing the framework. **(2) Stakeholder Involvement** (contains 3 items) addresses the extent to which the framework was developed by appropriate professionals, including stakeholders, and represents the views of its intended users. **(3) Rigour of Development** (contains 8 items) is concerned about the process used to gather and synthesise the evidence, the methods to formulate the recommendations, and to update them when the framework was developed. **(4) Clarity of Presentation** (contains 3 items) addresses the language, structure, and format of the framework's development. **(5) Applicability** (contains 4 questions) pertains to the likely barriers and facilitators to the implementation, strategies to improve uptake, and resource implications of applying the guideline. **(6) Editorial Independence** (contains 2 questions) is concerned with the formulation of recommendations not being unduly biased with competing interests. When this tool is used, researchers have to assess every domain by answering the questionnaire offered to them in the form of a Likert scale. They also provide their opinion on what

they believe would improve the quality of the guidelines or frameworks to be contextualised in the space provided (refer to Annexure 3).

2.8.2 Advantages of the use of AGREE II

AGREE II can be used by researchers who wish to undertake their own assessment of a framework before contextualising it into their practice. The tool is also used by framework developers to follow a structured and rigorous development methodology to conduct an internal assessment to ensure that their frameworks are sound. The tool is also used to evaluate frameworks from other groups for potential adaptation to their own context (Brouwers, et al. 2010:E839-E842) (refer to Annexure 3).

The potential benefits of guidelines in improving health service delivery is highly impacted by the quality of the guidelines or frameworks implemented. The AGREE II tool, which was used in this study, is recommended in assessing the quality, appropriateness, methodologies, and rigorous strategies as well as other aspects of frameworks to be contextualised (refer to Section 2.8.1). Therefore, the use of the AGREE II tool in contextualising, adapting, or adopting the clinical guidelines or frameworks has advantages as it ensures quality, stakeholder's involvement, rigour of development, and applicability of the framework to be contextualised. The use of AGREE II also has other advantages as it saves resources since developing new tools require extra resources.

2.8.3 Application of AGREE II in the study context

The AGREE II tool was used in this study. A few (nine) questions were added to enrich the questionnaire so that the information collected could answer the objectives of adaptation and contextualisation possibility, and to assess challenges and opportunities in implementing Chelagat's framework in the Ethiopian context.

The respondents received a consent letter (refer to Annexure 4), information sheet (refer to Annexure 4), Chelagat's framework, a short description of the development of the framework to provide important background information, as well as the questionnaire (AGREE II) (refer to Annexure 3). The explanations on the purpose of

the framework, the theoretical grounding that guided the development of the framework, the process of how the framework was developed, the stakeholders who were involved in the development of the framework, and instructions on how to complete the questionnaire were also provided to the respondents.

2.9 CONCLUSION

Kenya and Ethiopia are east African countries with similar socio-economic status, and both are in need of better postnatal care services. Both countries also have high maternal mortality rates. The body of evidence on the global trend of postnatal care utilisation has indicated that postnatal care is one of the most neglected aspects of women's health in the developing world in particular.

In this chapter, maternal mortality (specifically focusing on Kenya and Ethiopia), postnatal care and its components, the organisation of postnatal care, factors affecting the utilisation of postnatal care, trends in the utilisation of postnatal care, inputs required for the provision of postnatal care, as well as an assessment tool to determine the adaptation possibility of Chelagat's framework in the Ethiopian context, were discussed.

Chelagat's framework was developed to improve postnatal care in Kenya, and was assessed using the AGREE II tool for possible adaptation and contextualisation in the Ethiopian context. The analysis of the data and the findings of this assessment (Phase 1) will be described in Chapter 3.

CHAPTER 3
OVERALL RESEARCH DESIGN AND PHASE 1

3.1 INTRODUCTION

Prior to applying the empirical phase of a study, a researcher is required to decide on the research design and the research methods, including the sample and sampling techniques to be applied (Wood & Ross-Kerr 2011:114). This chapter provides the overarching research design, focusing on Phase 1 of the study. It will include the methodology followed, the gathered data, as well as the findings and the interpretation thereof (refer to Table 3.1).

Table 3.1: Study progress and thesis structure

CHAPTER	DESCRIPTION OF THE CHAPTER
1	**Overview of the study**
2	**Literature review** • Maternal mortality • Postnatal care in Ethiopia and Kenya • Chelagat's framework • Models to test applicability to other contexts
3 	**1. Overarching research design** **2. Phase 1** • Research design • Methodology • Data gathering • Data analysis and interpretation of findings

A sequential mixed-method approach that included both quantitative and qualitative data gathering techniques were used to answer the research objectives and questions (Creswell, Klassen, Clark & Smith 2011:12). While the description of the research design focuses on the road map of how the research was conducted, the methodology focuses on the processes, tools, and procedures utilised in the research.

The research method also includes discussions on the research context, population, sample, sampling technique, data collection methods, data analysis, aspects of validity and reliability of the instrument, and ethical issues as described by Polit and Beck (2013:306).

3.2 RESEARCH CONTEXT

Ethiopia is the second-largest African country after Nigeria in terms of population size (CSA [Ethiopia] 2017:Online). According to the 2017 statistics of the Population Projections for Ethiopia, the population was approximately 94 352 000 (CSA [Ethiopia] 2017:Online). The Ethiopian government is a federal system that consists of nine regional states and two administrative cities. Oromia Regional State is one of the nine regional states located in the centre of Ethiopia (refer to Figure 3.1), and is the context where this study was conducted.

Oromia Regional State is geographically very large in comparison with other regional states (refer to Figure 3.1), and nearly one-third of the Ethiopian population live in this region. Administratively, Oromia is divided into 18 zones that are divided into 309 districts (councils), and 44 town administrations. Each zone has its own district (council) that varies in number depending on its geographical size. There are also 6881 kebeles (subdivisions) (CSA 2014:Online).

According to the population projection made based on the 2007 Population and Housing Census Result, Oromia Regional State had a total population of 32,815,995, consisting of 16,448,053 men and 16,367,942 women at that time. The urban inhabitants were 3,370,040, accounting for 10.21% of the population – slightly below the 16% national average (CSA 2018:Online). With 353,006.81 square kilometres of land area (32% of the country), Oromia represents the largest regional state (CSA [Ethiopia] 2012:Online) hosting 35.4% of the country's population.

The Oromia Regional State has an estimated population density of 76.93 people per square kilometre. There are 5,590,530 households in the regional state, which results in an average for the region of 4.8 persons to a household, with urban households having on average of 3.8 and rural households 5.0 people (CSA 2018:Online).

Oromia hosts people of diverse ethnic backgrounds of which the majority (87.8%) are Oromo. Amhara is the second-largest ethnic group (7.22%), and the remaining 4.98% constitute ethnic groups including Tigre, Gurage, and south nation nationalities. Afan Oromo is spoken in all nine regional states of Ethiopia and in Oromia; it constitutes the largest share of mother tongue (CSA 2014:Online).

According to the Ethiopian Health and Health-Related Indicators report, there were 41 hospitals, 1,215 health centres, and 6,368 grassroots-level health institutions called 'health posts' in the Ethiopian health system, serving the community primarily in terms of the prevention of diseases (Health and Health-Related Indicators 2014:50).

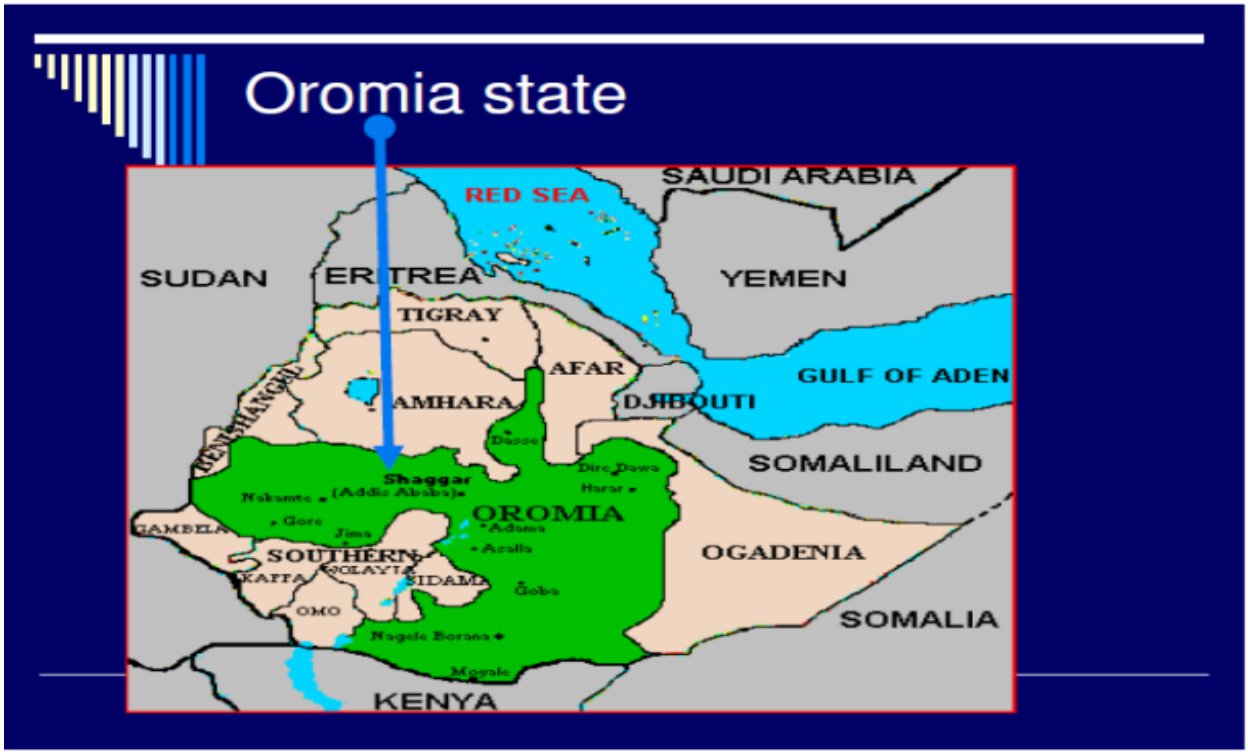

Figure 3:1: Map of Oromia Regional Sate

3.3 RESEARCH DESIGN

The research design is an overall blueprint or an integrated statement for conducting a study, including specifications for enhancing the study's integrity (Polit & Beck 2013:246). A research design, as used in this study, guides the researcher in

explicitly stating the structure, study population, sample, time frames, methods, and procedures to be followed in conducting the research (Creswell & Clark 2017:53).

Choosing the correct research design avoids invalid interpretation and conclusion of the results of the study, and ensures that the findings obtained from the data analyses answer the stated research questions as appropriately as possible (Blaikie 2010:24-25). The design of choice was a sequential mixed-method research design to achieve the study objectives.

3.3.1 Mixed methods

A mixed-method approach, which combined both quantitative and qualitative data, was used in this study. As the two methods have similarities, strengths, and weaknesses, the combination of the two compliments one another (Ozawa & Pongpirul 2013:324; Leech & Onwuegbuzie 2009:267).

The strengths of the quantitative design, which motivated the use thereof, include: (1) the possible generalisation to an entire population or a sub-population; (2) its ability to investigate reality about the problem under the study using the deductive approach; (3) its results are objective and easy to replicate; and (4) the fact that it is transparent (Hussein 2009:1-12). In Phase 1, the quantitative data were gathered from the postnatal care providers and coordinators to get their expert views, opinions, and recommendations on the adaptation possibility of Chelagat's framework, as well as the challenges and opportunities for implementing the framework in the Ethiopian context. The data gathered in this phase, therefore, ensured generalisation to the source population, identified the real postnatal care services issues (challenges and opportunities), objectively gathered information on postnatal care services, and the data gathered on postnatal care were transparent.

The quantitative data from Phase 1 addressed the first three objectives of the study and guided the researcher in the development of the contextualised framework and the action plan for implementation.

The weakness of the quantitative study, namely its (1) inability to explain social phenomena, (2) lack of deeper underlying meanings and explanations of information, such as on personal opinions and views, and (3) too superficial descriptions of the results, are complemented by the strengths of qualitative research (Polit & Beck 2013:314; Rahman 2017:102-112).

The researcher minimised the weaknesses of the quantitative data by including open-ended questions after the Likert-scale questions. Respondents explained their personal views, opinions, and recommendations on the contextualisation possibility of the framework as well as the challenges and opportunities of contextualising Chelagat's framework in the Ethiopian context. Open-ended questions were asked to allow for qualitative enhancement of the quantitative data.

Most authors (Denzin 2010:421-422; Creswell, et al. 2011:71) reported that mixed-method research helps the researcher to understand both the subjective and objective views of human beings. Thus, it is more than simply collecting and analysing both kinds of data; it involves the use of both approaches systematically so that the overall strength of a study is greater than the use of either qualitative or quantitative research (Creswell, et al. 2011:12). A sequential mixed-method approach was used based on the advantages mentioned.

3.3.2 Sequential mixed-method research

Sequential explanatory mixed methods is the approach used when one type of data provides a basis for the collection of another type of data (Cameron 2009:144). It is also when the researcher can elaborate or expand on the findings of one method by also utilising another method (Migiro & Magangi 2011:3759).

In this study, the quantitative phase included the assessment of the adaptation possibility of a framework as well as the challenges and opportunities that might be faced in adapting and contextualising a framework developed by Chelagat (2015) for the Ethiopian context. The qualitative phase (Phase 3) included an E-Delphi technique that was used for validating the contextualised framework as well as the action plan to facilitate the implementation.

The study was conducted in three phases, where different approaches and data gathering methods were used (refer to Table 3.2).

Table 3.2: Study design and data gathering techniques

Phase	Design	Data gathering technique
Phase 1	Quantitative	Questionnaire
Phase 2	-	Literature review and analysed data from Phase 1 were used.
Phase 3	Qualitative	E-Delphi

3.4 ETHICAL CONSIDERATIONS FOR ALL PHASES OF THE STUDY

Ethical considerations, thus the application of the principles shared in the Belmont report (Friesen, Kearns, Redman & Caplan 2017:15-21), as well as the declaration of Helsinki (Ndebele 2013:2145-2146), were applied in all phases of the study as described next.

3.4.1 Permission to conduct research

To safeguard the respondents' rights, do no harm to them (maleficence), and do good (beneficence) to participants (De Vos, Strydom, Fouché & Delport 2011:119), all ethical principles were adhered to, and permission to conduct the study was obtained. Ethical approval was obtained from 1) Health Research Ethics Committee of the Department of Health Studies, University of South Africa (UNISA) (refer to Annexure 1) as well as the (2) Oromia Regional Health Bureau (refer to Annexure 2). In addition to the ethical approval, a letter of support was also presented to respective district health offices and health institutions to make them aware of the study and gain approval to conduct the research.

3.4.2 Privacy and confidentiality

Confidentiality is about keeping information obtained from the research participants private and confidential; thus, it is vital to keep the information undisclosed from others (Babbie 2011:89; Iphofen 2009:91-92; Porta 2008:49). It is also vital to ensure

that respondents will not be at risk of being uncomfortable due to fear of the information being released to a third party (Gravetter & Forzano 2010:126).

In this study, respondents as described by Porta (2008:195), Blaikie (2010:31) and Moule and Goodman (2009:288), completed the questionnaires in a private, conducive environment (in their offices). Moreover, the questionnaire ensured the privacy and confidentiality of the data by not requesting any identifying information (names and addresses of respondents) in the data collection instrument. At the end of data collection, each signed consent form was detached from the anonymously completed data collection instrument and sealed in a separate envelope so that no one would be able to match any completed questionnaire with any signed consent form.

3.4.3 Informed consent

Informed consent implies that respondents are informed adequately about the research and clearly understand the information provided to them (Beins & McCarthy 2012:32). Respondents were informed through an information letter (refer to Annexure 4) and a recruitment letter (refer to Annexure 8) about the nature and purpose of the research, the questionnaire to be completed, and other relevant information to protect them. A consent form was provided to ensure that respondents received the correct information to allow for informed consent (refer to Annexure 4).

Respondents were informed about the estimated time commitment needed; how they have been selected; the importance of their participation; possible risks; implications for participation; privacy; confidentiality; and their right to withdraw from the study at any time. The respondents were made aware that there would be no remuneration for their participation in the study. After reading through the information letter that clearly stated there would be no risks in participating in the study, informed consent was obtained from the respondents.

3.4.4 Voluntary participation (veracity)

In social science, research participants or respondents should not be forced to give consent to participate in a study against their will (Babbie 2011:89; Blaikie 2010:31; Moule & Goodman 2011:57). In this study, participants were assured that they could withdraw from the study at any time without any negative consequences.

3.4.5 Autonomy

The principle of autonomy is based on the fact that research respondents should be provided with sufficient information to enable them to decide whether to participate in a study (Coughlin, Beauchamp & Weed 2009:26). In respecting the person's autonomy, researchers must ensure that participation in the research is voluntary and given after being fully informed about the research (Bordens & Abbott 2013:200). In this study, the researcher first informed the respondents about the research and its objective, their right not to participate, not to answer a question that they think is sensitive, or to withdraw from the study any time during the data collection process. The respondents were also informed that they would have access to the study findings (refer to Annexure 4). Once the researcher gained their informed consent, the data collection process commenced.

3.5 PHASE 1

The objectives, population, sample, study design, data collection instrument (refer to Table 3.3), the data collection procedures, findings, and interpretation of the findings in Phase 1 of the study are discussed in the sections that follow.

Table 3.3: Description of the objectives, population, sample and study design of Phase 1

Phase	Objective	Population	Sample
1	1. Assess the developed framework of Chelagat for applicability within the Ethiopian context. 2. Identify possible challenges for the implementation of the framework in the Ethiopian context. 3. Identify opportunities for the implementation of the framework in the Ethiopian context	• 515 Midwives • 2,040 Nurses • 320 Health offers • 40 District postnatal care coordinators • 10 Regional postnatal care coordinators	• 74 Midwives • 294 Nurses • 46 Health officers • 6 District postnatal care coordinators • 2 Regional postnatal care coordinators
Total		**2,925**	**422**

3.5.1 Research design

A quantitative descriptive research approach was used. A quantitative study is a formal, objective, and systematic process in which numerical data are used to obtain information about a specific issue under study (Creswell 2012:626). The researcher conducted a quantitative cross-sectional survey of postnatal care providers and postnatal care coordinators to assess the applicability of Chelagat's framework, as well as identifying the challenges and opportunities of implementing the framework in the Ethiopian context.

The possibility to adapt and contextualise the framework, that was developed to improve postnatal care in Kenya, was assessed using a structured questionnaire (refer to Annexure 3) to generate numerical data and to use statistics to interpret, organise and represent the collected data as suggested by Creswell (2012:626).

The specific objectives were to assess: (1) the adaptation possibility of Chelagat's framework in the Ethiopian context, (2) the challenges that might be faced in implementing Chelagat's framework in the Ethiopian context, and (3) the opportunities for contextualising and adapting the framework.

Addressing objective 2 and 3 of Phase 1 of the study (refer to Table 3.3) assisted in the identification of opportunities and challenges that healthcare providers and postnatal care coordinators at different levels may face in implementing the framework (refer to Chelagat's framework in Chapter 1, Figure 1.2, and contextualised framework in Chapter 4, Figure 4.1).

3.5.2 Population

A population can be described as a group of people or objects with common defining characteristics in which a researcher is interested; and to whom the results of the study can be applied (Polit & Beck 2013:306). The population is thus those who meet the criteria for sampling (Polit & Beck 2014:274).

Postnatal care providers at different health institutions in Oromia Regional State, namely health centres and hospitals, as well as the postnatal care coordinators at district and regional levels, formed the population of Phase 1 of the study (refer to Table 3.3). The identified populations are the key contributors to the improvement of postnatal care in the Ethiopian health system.

3.5.3 Accessible population

An accessible population refers to the population that is accessible to a researcher and from which a sample can be drawn in a scientific way (Polit & Beck 2014:274; Boswell & Cannon 2011:146). The accessible population were the three cadres of postnatal care providers, namely the midwives (515), nurses (2040), and health officers (320), as well as the 40 district and 10 regional postnatal care coordinators working in Oromia region (refer to Table 3.3).

3.5.4 Sample

A sample is defined as the subset of a particular population selected by a researcher for a specific purpose or study (Bezuidenhout, Davis & Du Plooy-Cilliers 2014:135). There are various ways with different degrees of suitability through which samples are selected and included in a study. A randomly selected sample is cost-effective and more efficient to produce good quality evidence as it is difficult to reach the whole target population (Boswell & Cannon 2011:147).

To be included in the sample, respondents had to possess common characteristics called inclusion criteria (Boswell & Cannon 2011:149). Only midwives, nurses, health officers as well as the district and regional postnatal care coordinators who had worked in the postnatal care context for more than six months were eligible to be sampled.

Respondents from health centres and hospitals, namely nurses (294), midwives (74), health officers (46), and postnatal care coordinators (8) from postnatal coordinating offices were selected using the simple random sampling technique (refer to Table 3.4).

Table: 3.4: Population and sample of study participants

Institution category	Participant category	Population	Sample
Districts health department	Postnatal care coordinators	40	6
Regional health department	Postnatal care coordinators	10	2
Hospitals	Nurses	1400	202
	Midwives	275	39
Health centres	Nurses	640	92
	Midwives	240	35
	Health officers	320	46
Total		**2,925**	**422**

3.5.5 Sampling technique

As a result of the scarcity of resources, such as time and finance, it is impractical to study the whole population in a quantitative approach; hence, researchers usually use a sample. However, for generalisation for the source population to be realistic, the sample should be representative of the population (Lyons & Doueck 2010:111; Polit & Beck 2010:307).

A sample that participates in a study is considered representative if it approximately shares the common characteristics of the general population from which they are selected, and if all members of the population have equal or a known chance of being selected in the sample (Babbie 2013:77; Boswell & Cannon 2011:147). Simple random selection of study units through probability sampling (Babbie 2013:72) remains the most effective method for the selection of samples (Babbie 2011:241). Each member of the target population has an equal opportunity to be selected to take part in the study (Lohr & Julet 2010:33), thereby preventing bias and sampling errors (Babbie 2010:195; Creswell 2014:142-143).

Purposive sampling, on the other hand, is a sampling technique in which researchers deliberately choose the sample that can contribute to the achievement of the research objective (Polit & Beck 2013:320). Although the health facilities were selected using typical case sampling (a type of purposive sampling), simple random sampling was used to select postnatal care providers and coordinators from each facility, district, and regional health department. Proportional sample size allocation was made for the health facilities or departments from which the sample was selected.

3.5.6 Sample size and Sampling frame

The total sample size was determined using the single population proportion formula as described by Kothari (2004:179):

$n=Z\ (\alpha/2)\mathbf{2}*P\ (1-P)/d2$

$n= 1.96^2\ 1(1-0.5)/0.05^2$

$n = 384$

The assumptions under this formula were:

- n=sample size
- Z (α/2) =is the value of normal distribution representing a confidence level of 95%. Its value is 1.96.
- P=Proportion of the case
- d=Margin of error

Considering a non-response rate of 10%, the final sample size was 422. In calculating the sample size, the following assumptions were taken into account. The first assumption was that no studies were conducted on the specific topic and the prevalence is considered to be 50% at 95% confidence interval, with a margin of error (Confidence limit) of 5%. The other assumption was that there might be a 10% non-response rate.

The sampling frames, as a list of individuals from which the researcher selected the sample (Creswell 2012:381), were (1) the lists of postnatal care providers, namely the midwives, nurses, and health officers and, (2) the lists of postnatal care coordinators. The lists were obtained from each health facility, district, and regional health department (refer to Table 3.4).

3.5.7 Data collection instrument

The selection of an appropriate data collection instrument is the key component of the research process (Moule & Goodman 2009:288). The instrument must contain questions designed to provide appropriate information to address the research questions and objectives (Daugherty 2011:220). The aim of a particular study determines whether a standardised questionnaire can be used or if an original questionnaire needs to be developed (Fan & Geerts 2012:3-5).

A structured self-administered questionnaire was developed and used for postnatal care providers (nurses, midwives, and health officers) and postnatal care coordinators to gather data. The questionnaire was divided into two sections. The

first section of the questionnaire was used to gather biographical data as well as questions on postnatal care services based on a literature review.

In Section 2 of the questionnaire, a well-tested questionnaire (refer to Annexure 3), namely the AGREE II (2013) was used to collect the information to assess the possibility to contextualise or adapt the framework developed by Chelagat for the Ethiopian context. AGREE II is a tool that assesses the methodological rigour and transparency in which a framework is developed. The AGREE II is recommended to be used by researchers who wish to undertake an assessment on guidelines or frameworks before adapting its recommendations into their practice (AGREE 2013:1) or context (refer to Chapter 2, Section 2.8 for details).

Section 2 of the questionnaire included background regarding the development of Chelagat's framework to enable participants to use AGREE II in an informed way. All AGREE II Likert-scale questions were followed by an open-ended question where respondents provided their recommendations on those specific items to be assessed. Moreover, in Section 2 of the questionnaire, nine questions (7 Likert-scale questions followed by space for comments and 2 open-ended questions) were added to the AGREE II, to enrich the questionnaire. This provided respondents with an opportunity to identify challenges and opportunities in the contextualisation of the framework and to provide suggestions (refer to Annexure 3).

The seven Likert-scale questions were included under domains 2, 3, and 5 to enrich the AGREE II and to ensure that the Ethiopian context is emphasised. Two open-ended questions were also included at the end of the AGREE II. These open-ended questions motivated the respondents to provide their views and recommendations in detail on the challenges and opportunities in postnatal care services in the Ethiopian context, which contributed to addressing objectives 2 and 3 of the study.

A questionnaire was chosen to collect data due to the advantages as mentioned by Daugherty (2011:220):

- The answers to all structured questions from all respondents could be compared as standardised formats were used. The same questions were asked similarly and in the same order for all respondents (Shaffer 2009:16).
- It is a quick way to gather comprehensive information (Babbie 2010:285) which was also the case in this study, as the data gathering was completed within one month (November 2018).
- The collected data ensured high validity and reliability since the same questionnaire was used for all the respondents, as indicated by Babbie (2010:287).
- Questionnaires are a time-saving way of data collection as data can be collected from large samples in a relatively short time (Daughtery 2011:220). For instance, in this study, data were collected from 422 respondents within 30 days.

Questionnaires, as data gathering instruments, also have disadvantages as described by various authors (Shaffer 2009:22; Ott & Longnecker 2010:29). These disadvantages mentioned in the literature were addressed in this study by implementing the following measures:

- Data may show variation due to variations in individuals' skills and level of understanding of the questionnaire (Shaffer 2009:22). In this study, the questions were made clear and concise, and the questionnaire was pre-tested (refer to Section 3.5.10).
- To increase understanding and responses to the questions, only respondents who had more than six months' experience in the postnatal care services were selected for possible participation.
- Pre-coded response choices may not be comprehensive enough or answers may not all be accommodated; hence respondents may be forced to give inappropriate answers (Covington 2008:273). In this study, background information to the framework was provided, and some open-ended questions were included to overcome this limitation of questionnaires to address the research objectives.
- Errors in responding and recording can affect the findings of the study (Ott & Longnecker 2010:29). To avoid such problems, the researcher and statistician carefully coded and entered the data into SPSS computer software.

- Design time and interpretation can also make questionnaires relatively expensive (Daughtery 2011:220). To minimise the time required for the completion of the questionnaires, the researcher used the WHO guidelines as well as questionnaires from other published studies when designing the questionnaire. In Section 2, a standardised and pre-tested questionnaire (AGREE II) was used to address the research objectives.

Before the commencement of data collection, the final draft of the questionnaire was reviewed by the researcher's supervisor and academic experts as a scientific review committee to minimise possible errors because of ambiguous questions.

English was used as the language of choice in the questionnaire because all respondents were healthcare providers with a minimum diploma educational level, implicating that they could all read, understand and write English as a medium of instruction.

3.5.8 Validity

According to Shaffer (2009:15), whatever research design or methods are used, research instruments must fulfil two essential qualities, namely validity and reliability. Validity and reliability are highly influenced by the data collection instrument (Wood & Ross-Kerr 2011:198) as the validity and reliability of instruments can affect the accuracy of the factors being studied (Gravetter & Forzano 2010:219). Validity is defined as the degree to which an instrument measures what is supposed to be measured (Johnson & Christensen 2012:245). According to Johnson and Christensen (2012:245), validity is a property of inference, and it is one of the most important strategies to achieve the objectives of the study.

Internal validity is the degree to which the researcher comes to conclusions concerning what actually happened (Bhattacherjee 2012:35), thus internal validity is concerned with the actual happening of a particular event, issue or set of data in a particular study (Cohen, Manion & Morrison 2007:139). In this study, to maintain internal validity, the structured questionnaire was designed carefully and reviewed by

the researcher's supervisor. Expert opinions were sought from other public health experts and an experienced statistician.

In designing the questionnaire, the wording of the questions was arranged to avoid systematic misinterpretations by the respondents. Variables were controlled during analyses by applying SPSS computer software to maintain validity. Since these are all critical remedies to ensure the validity of the study, internal validity in this research was not at risk.

External validity is concerned with the application of the conclusion from study respondents or the generalisability of the conclusion to a wide range of people or events outside the study (Johnson & Christensen 2012:245). In this study, valid findings were achieved by employing an appropriate and strong research design. The representative sample size was drawn, and accurate data collection methods were applied to maximise the validity of responses.

3.5.9 Reliability

Reliability is the ability of an instrument to replicate the same results using the same technique under similar conditions (Babbie 2010:150-152). To maintain the reliability of the measurement, the researcher ensured that the data collection methods were consistent and did not distort the findings as questions had the same meaning for all the respondents. The questionnaire was set in a logical order, in a clear, concise, and unambiguous manner with meaningful and easy to follow instructions. In Section 2 of the questionnaire, responses were standardised and were in Likert-scale form as most of the questions in this section were adapted from standard questionnaires. The answers were pre-coded in the questionnaire in advance.

A pre-test was also conducted to ensure that the questionnaires were well understood by all respondents to improve the reliability of the study. The timing of administering the questionnaire was arranged in such a way that the respondents had time available to provide their genuine response which increased the reliability of the data. Moreover, careful measures were taken during coding, analysis, and interpretation of the data. Generally, since the study was based on quantitative data

that were collected using a structured questionnaire, the findings which were statistically analysed with precise estimations were reliable.

3.5.10 Pre-test

According to Polit and Beck (2010:563), a pre-test is defined as a small-scale version or trial done in preparation for a significant study. The primary purpose is to fine-tune the data collection instrument to ensure that the respondent understands the questions and that all answers can be recorded (Polit & Beck 2010:563).

During the pre-test, questionnaires were completed by 5% (21) of the sample size that had similar characteristics as the study participants, but selected from health facilities and departments located outside the study areas. The pre-test respondents were purposefully selected by the researcher because they were known to the researcher for their professional background, experience in postnatal care provision and coordination. They received the same recruitment letter as that of the main study respondents and were requested to volunteer to participate. Of the 21 who were selected (15 nurses, 4 midwives, and 2 health officers), only 18 volunteered and participated in the pre-test.

As suggested by Delport and Roestenburg (2011:195), pre-testing can reveal necessary changes, as was the case in this study. The pre-test respondents commented on four questions in Section 1 that were found unclear, and corrections were implemented as indicated in Table 3.5.

An important aspect that needed to be addressed in Section 2 of the questionnaire was the background information pertaining to Chelagat's framework that had to be understood by participants to allow them to use the AGREE II questionnaire in a reliable manner (refer to background in Annexure 3). The background information was compiled from the complete original study of Chelagat (refer to Figure 1.2), and the questionnaire was reviewed by an expert who was well informed about Chelagat's framework.

Table 3.5: Corrections made after pre-test

Question number	Question	Corrections
5	At what level of postnatal care service provision are you currently offering postnatal services?	At what level of postnatal care service provision/coordination are you currently offering postnatal services?
7	Were you given adequate orientation when you were allocated to the maternity unit/postnatal ward?	Were you given adequate orientation when you were allocated to the postnatal ward/ coordination unit?
8	Did your orientation include an orientation with the guidelines available for postnatal care?	If you received orientation, did the orientation include an orientation with the guidelines available for postnatal care?
16	Are postnatal mothers in your hospital treated with respect and dignity?	Are postnatal mothers in your hospital /health facility treated with respect and dignity?

The background information provided awareness on the framework pertaining to how the framework was developed, including the processes followed and the stakeholders involved. Other information that was shared included the objective of the current study and instructions on how to complete the questionnaire to enable understanding and ensure easy completion of the questionnaire; thus, no challenge was experienced during the pre-test study (refer to Section 3.5.10).

3.5.11 Fieldworkers

Ten field workers (6 males and 4 females) from a university college of medicine and health sciences were purposively selected for data collection. They were chosen based on their experience as fieldworkers in other similar studies.

All field workers had at least a bachelor's degree in health-related fields as they had a better ability to understand and explain the aim of the study and offer clarification on the questionnaire when needed. Three research supervisors (1 nurse, 1 midwife and 1 public health professional, each with a BSc degree) were selected from the three health facilities to supervise the data collection process. The role of the

research supervisors was to oversee the data collection process, troubleshoot problems encountered by the field workers, and to communicate directly with the researcher.

3.5.12 Training

Prior to the initiation of data collection, the researcher conducted a three-day training workshop for the fieldworkers and supervisors. The training focused on explaining the objectives of the study, addressed the ethical issues and how to assist the respondents in completing the questionnaire when they need clarification. Section 2 of the questionnaire, with specific reference to the background of Chelagat's developed framework, was discussed and explained. The training was done in English to ensure that the concepts, the questionnaire and framework were clearly understood.

During training, the field workers were allowed to share their previous experiences, including challenges that could be faced in the field from previous similar exposures.

3.5.13 Data collection

After getting ethical approval from the Health Research Ethics Committee of the Department of Health Studies, University of South Africa (UNISA) (Annexure 1), ethical clearance was sought from the Oromia Regional Health Bureau (Annexure 2). Permission for the study was also submitted to respective offices of health centres, hospitals, as well as the district and regional health departments, before the data collection process commenced.

Field workers met with the head of the facilities or departments and submitted a copy of the institutional support letter from the Oromia Regional Health Bureau to inform them about the study before data collection. After getting approval, these heads of health facilities or departments either accompanied the field workers to the postnatal care units or delegated the responsibility to another officer to introduce the field workers to the study respondents.

The study respondents were selected by using simple random sampling as there was a sampling frame prepared by the researcher based on the existing lists of postnatal care providers and coordinators at each health facility/department. The field workers received lists of respondents from the researcher before the commencement of data collection. The field workers explained the purpose of the proposed study to the respondents. For respondents who were not on duty, another visit took place to include them. Before the day of the data collection, the researcher and research assistants organised the logistics needed for the data collection, such as arranging transportation to the study site and distributing questionnaires to the field workers. The researcher supervised the entire data collection process.

3.5.14 Questionnaire administration

Each fieldworker received a copy of an ethical clearance certificate from Oromia Regional Health Bureau (refer to Annexure 2) when visiting the perspective health facilities, district or regional health offices. After being selected, for those who refused (2 candidates) to participate in the study, the field workers communicated with the researcher and the two were replaced by the next two persons on the list (as the lists of the population were already fixed). Data were collected from the postnatal care providers and coordinators between 1 and 30 November 2018.

Confidentiality was assured in that no names or personal information was requested on the questionnaire. The field workers gave the information letter as well as the voluntary consent form to the selected respondents in health facilities and postnatal care departments. After they read and understood the information sheet on the consent form, the study respondents voluntarily signed the consent form, indicating that they agreed to participate in the study. Questionnaires were distributed to every consenting participant, and they were requested to complete it in private and return the completed questionnaire within two days.

The field workers made an appointment with the respondents to collect the questionnaire, and all 422 completed questionnaires were returned. The fieldworkers collected the questionnaires within two days, thus achieving a remarkable 100% response rate.

3.5.15 Data management and analysis

Data management includes activities that the researcher must perform, such as planning, organising, and preserving the results and drawing conclusions from the analysed data. Storing data safely, findable, and making it usable in reproducing findings are important aspects that the researcher should consider in managing data (Creswell 2012:15).

Data analysis involved preparing the raw data for analysis, conducting different analyses, getting deeper into the understanding of the data, representing the data, and making interpretations of the larger meaning of the data (Creswell 2009:183). Once the researcher cleaned and coded the data, a qualified statistician (refer to Annexure 11) entered the data from the 422 questionnaires into Statistical Package for Social Sciences (SPSS) software program version 21. After the statistician entered the data, the researcher randomly selected 42 (10%) completed questionnaires, entered these into SPSS, and checked for validity by comparing this data with that entered by the statistician.

The data analysis was carried out by using statistical procedures such as comparing groups or relating scores of individuals, providing information to answer the research questions. Data gathered from Section 1 of the questionnaires were summarised and presented in tables and pie-charts using frequencies and percentages. All percentages were rounded to one decimal point and expressed as such in the text and the graphical presentations (Creswell 2012:15).

Data gathered from Section 2 of the questionnaire were analysed using the recommendation given by AGREE II (2013:10). The analysis of Section 2 of the questionnaire was based on the six domains indicated in AGREE II, namely 1) Scope and Purpose; 2) Stakeholder Involvement; 3) Rigour of Development; 4) Clarity of Presentation; 5) Applicability, and 6) Editorial Independence.

As recommended in AGREE II, each of the AGREE II items and the two global rating items was rated on a seven-point scale that ranged from 1 to 7 (1 – strongly disagree to 7 – strongly agree). The researcher used the AGREE II User's Manual section to

rate each domain. Accordingly, the AGREE II was used to calculate the domain scores by summing up all the scores of the individual items in a domain and scaling the total as a percentage of the maximum possible score for that domain.

Maximum possible score = 7 (strongly agree) x number of items x 422 (appraisers)
Minimum possible score = 1 (strongly disagree) x number of items x 422 (appraisers)

As recommended in AGREE II, the scaled domain for the contextualisation possibility of the framework was assessed using the formula (AGREE 2013:12):

$$\text{The scaled domain: } \frac{\text{Obtained score} - \text{Minimum possible score}}{\text{Maximum possible score} - \text{Minimum possible score}}$$

In addition to the six domains in the AGREE II questionnaires, specific open-ended questions were asked under some domains and the responses were open coded. In analysing the open-ended questions, an inductive thematic analysis approach, as described by Willig (2013:184), was employed. Themes and categories were identified after the data were read and coded so that similar ideas were grouped as themes that were underpinned by categories. The direct quotes were used as the underpinnings of the categories.

3.6 FINDINGS AND INTERPRETATION OF THE FINDINGS

A total of 422 respondents agreed to participate and received questionnaires, 422 completed the questionnaire, thus a 100% response rate was achieved.

3.6.1 Biographical data (N=422)

3.6.1.1 Age (N=422)

Table 3.6 presents the age ranges of the respondents (postnatal care providers and coordinators) from different professional categories of healthcare practices. The mean ages of respondents were 37.65 years (midwives), 37.53 years (nurses), and 37.31 years (health officers), respectively. The standard deviation of the respondents'

ages was 8.997, 8.763, and 8.478 for midwives, nurses, and health officers, respectively.

Of all the respondents, 142 (f=33.6%) were 30-39 years old, 122 (f=28.9%) were 40-49 years old, and 115 (f=27.3%) were younger than 30 years (refer to Table 3.6). This indicates that nearly all respondents from all professions were within the productive age group that positively influences postnatal care services. Those who are in the productive age and experienced are believed to offer better postnatal care services, as mentioned by Dlamini (2016:69).

Table 3.6: Age (N=422)

Professional category	Age category	Frequency (F)	Percent (f= %)	Mean	Standard deviation
Midwives (n=77)	Younger than 30	21	27.3	37.65	8.997
	30-39	25	32.5		
	40-49	23	29.9		
	50-59	7	9.1		
	60 and older	1	1.3		
Nurses (n=296)	Younger than 30	80	27.0	37.53	8.763
	30-39	101	34.1		
	40-49	85	28.7		
	50-59	27	9.1		
	60 and older	3	1.0		
Health officers (n=49)	Younger than 30	14	28.6	37.31	8.478
	30-39	16	32.7		
	40-49	14	28.6		
	50-59	5	10.2		
All respondents (N=422)	Younger than 30	115	27.3	37.52	8.754
	30-39	142	33.6		
	40-49	122	28.9		
	50-59	39	9.2		
	60 and older	4	0.9		

3.6.1.2 Gender (N=422)

The majority of respondents (57.1% of midwives, 58.8% of nurses, and 61.2% of the health officers) were females. For all professions, 248 (f=58.8%) were females and only 174 (f=41.2%) were males (refer to Table 3.7). A majority of females (F=248; f=58.8%) were providing postnatal care as was the case in Kenya, where 88.54% (n=253; F=224) of the postnatal care providers who participated in Chelagat's study were also females (Chelagat 2015:57). However, this ratio is different from the national human resource sex distribution of Ethiopia where, for instance, only 32% of nurses and 12% of health officers were females (Feysia, Herbst & Lemma 2012:5). Interestingly, only 6 (N=18; f=33.3%) of the panellists in Phase 3 of the study, where the contextualised framework and an action plan were validated, were females (refer to Table 5.4).

Table 3.7: Gender (N=422)

Professional category	Gender	Frequency (F)	Percent (%)
Midwives (n=77)	Male	33	42.9
	Female	44	57.1
Nurses (n=296)	Male	122	41.2
	Female	174	58.8
Health officers (n=49)	Male	19	38.8
	Female	30	61.2
All respondents (N=422)	Male	174	41.2
	Female	248	58.8

3.6.1.3 Educational level (N=422)

Forty-nine (f=63.6%) of the midwives, 183 (f=61.8%) of the nurses, and 31 (f=63.3%) of the health officers had a bachelor's degree as their highest level of education (refer to Table 3.8). Of all respondents (N=422), 263 (f=62.3%) had a bachelor's degree as their highest level of education, and 125 (f=29.6%) had a diploma in the healthcare profession.

The Ethiopian healthcare system is very fortunate to have more degree-prepared nurses than Kenya, where only 1.96% of nurses (n=257; F=5) were degree prepared (Chelagat 2015:59). Nurses, midwives, and other healthcare providers with advanced qualifications have more advanced knowledge and skills to offer standardised and quality postnatal care to mothers and newborns (UNFPA 2007:Online; AMREF 2012:Online), and therefore the Ethiopian health system is very privileged.

Only a small number (n=34; f=8.1%) of respondents had a Master's degree in a healthcare-related profession. This is of concerns as those with postgraduate qualifications are able to conduct research, change policies, and influence decisions made by policy-makers (AMREF 2012:Online). The small number of postnatal care providers and coordinators with Master's degrees is a concern and must be improved in Ethiopia.

Table 3.8: Educational level (N=422)

Professional category	Educational level	Frequency (F)	Percent (%)
Midwives (n=77)	Master's degree	6	7.8
	Bachelor's	49	63.6
	Diploma	22	28.6
Nurses (n=296)	Master's	24	8.1
	Bachelor's	183	61.8
	Diploma	89	30.1
Health officers (n=49)	Master's	4	8.2
	Bachelor's	31	63.3
	Diploma	14	28.6
All respondents (N=422)	Master's	34	8.1
	Bachelor's	263	62.3
	Diploma	125	29.6

3.6.1.4 Work experience in years (N=422)

Twenty-nine (f=59.2%) health officers, 164 (f=55.4%) nurses and 41 (f=53.2%) midwives had work experiences ranging from 1-10 years. This finding revealed that midwives had relatively less work experiences than the nurses and the health officers

(refer to Table 3.9). The median work experiences for all respondents (midwives, nurses, and health officers) was 10 years.

The mean duration of the respondents' work experience in postnatal care was 10.76 years with a standard deviation of 6.940. Two hundred and thirty-four (f=55.5%) of the respondents had work experience of 10 years or less, and 151 (f=35.8%) had 11-20 years of experience in their current postnatal care position. Only 37 (f=8.8%) reported over 21 years of experience in postnatal care services (refer to Table 3.9). It therefore seems as if Ethiopian healthcare workers have the required experience and thus they have adequate as well as relevant clinical experience in postnatal care services to contribute to effective and standard postnatal care provision (Newick, Vares, Dixon, Johnston & Guilland 2013:7).

Table 3.9: Work experiences in years (N=422)

Professional category	Work experience	Frequency (F)	Percent (%)	Mean	Median	Standard deviation
Midwives (n=77)	1-10 years	41	53.2	10.7403	10	6.83528
	11-20 years	30	39.0			
	21-30 years	6	7.8			
Nurses (n=296)	1-10 years	164	55.4	10.7770	10	6.98213
	11-20 years	106	35.8			
	21-30 years	26	8.8			
Health officers (n=49)	1-10 years	29	59.2	10.7607	10	6.94033
	11-20 years	15	30.6			
	21-30 years	5	10.2			
All respondents (N=422)	1-10 years	234	55.5	10.76	10	6.940
	11-20 years	151	35.8			
	21-30 years	37	8.8			

The mean duration of work experiences among postnatal care providers in Ethiopia was nearly the same as that reported in Kenya, where it was 11.22 years (Chelagat 2015:60).

3.6.2 Type of health facility (N=422)

As indicated in Table 3.10, 29 (f=59.2%) health officers, 175 (f=59.1%) nurses and 45 (f=58.4%) midwives were rendering postnatal care at health centres.

Table 3.10: Type of health facility (N=422)

Professional category	Level of the health system	Frequency (F)	Percent (%)
Midwives (n=77)	Health centre	45	58.4
	Hospital	29	37.7
	District health department	3	3.9
Nurses (n=296)	Health centre	175	59.1
	Hospital	105	35.5
	District health department	14	4.7
	Regional health department	2	.7
Health officers (n= 49)	Health centre	29	59.2
	Hospital	17	34.7
	District health department	3	6.1

As illustrated in Figure 3.2, for all professions, 249 (N=422; f=59.0%) were working in health centres, 151 (f=36%) were working at district hospitals, and 20 (f=5%) were working in the district health department. Only two (f=0.5%) were working in the regional health department.

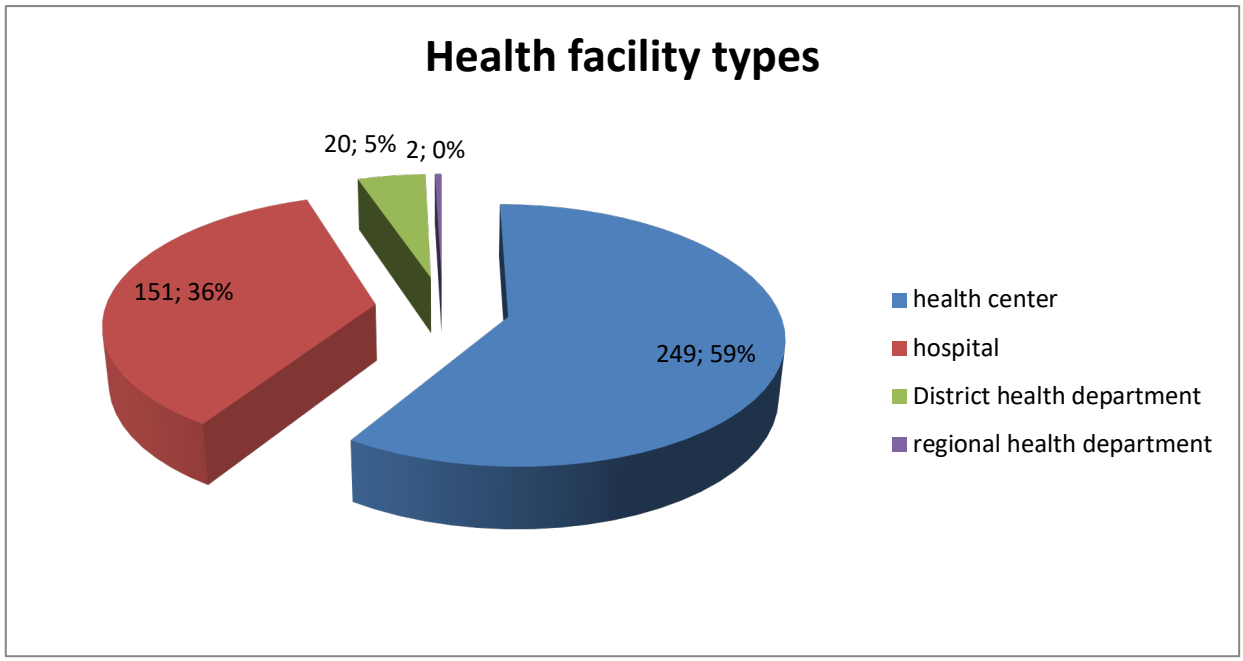

Figure 3.2: Distribution of respondents per type of health facility

3.7 POSTNATAL CARE PRACTICES IN ETHIOPIA

3.7.1 Postnatal care room (N=422)

Midwives and nurses had similar opinions on the availability of a separate room for the provision of postnatal care in the health facility where they were rendering the services as 35 (f=45.5%) midwives, and 132 (f=44.6%) nurses reported that there were no separate postnatal care rooms. However, 32 (f=65.3%) health officers reported that there was a separate room for postnatal care in their specific facility (refer to Table 3.11).

Of all respondents, 238 (N=422, f=56.4%) reported that the room where postnatal care is rendered is separate, while 184 (f=43.6%) replied that there was no separate room for the postnatal care services (refer to Table 3.11). It is a concern that the postnatal care provision rooms were not separate from others in many of the health facilities in the Ethiopian context.

This result indicated a significant difference between Ethiopia and Kenya on the availability of separate postnatal care rooms. In Kenya, 78.82% (n=255; F=201) of

respondents reported that postnatal mothers were being nursed in units specially designated for them (Chelagat 2015:75).

Table 3.11: Separate room for postnatal care (N=422)

Professional category	Availability of separate postnatal unit	Frequency (F)	Percent (%)
Midwives(n=77)	Yes	42	54.5
	No	35	45.5
Nurses (n=296)	Yes	164	55.4
	No	132	44.6
Health officers (n=49)	Yes	32	65.3
	No	17	34.7
All respondents (N=422)	Yes	238	56.4
	No	184	43.6

3.7.2 Orientation on postnatal care (N=422)

As indicated in Table 3.12, nurses had a relatively more positive opinion regarding orientation as 192 (f=64.9%) received orientation on postnatal care compared to midwives and the health officers. Of all respondents, 273 (f=64.7%) were given adequate orientation when they commenced working in postnatal care provision or the postnatal care unit. However, 149 (f=35.3%) respondents revealed that they did not receive adequate orientation, which is a concern.

The orientation, also called induction, is the process of introducing and welcoming healthcare providers into the postnatal unit, thereby assisting them to become familiar with all the processes in the unit and being aware of what is expected of them (Sauarez 2005:Online). During orientation, it is practical that the department head assesses new staff's competence on postnatal care service delivery and identifies those areas in which the individual needs assistance in the provision of quality postnatal care (Ministry of Health Ireland 2011:Online).

The orientation given by experienced postnatal care providers or unit coordinators will be a significant contribution to quality postnatal care. Such orientation readies the

postnatal care providers in all aspects of providing quality postnatal care which will, in turn, reduce maternal and neonatal morbidity and mortality (DRH Kenya 2011:Online).

Although it is recommended by the WHO that policies, guidelines, and protocols should always be accessible and used in the provision of standardised and quality postnatal care (WHO 2014:1-15; DRH 2011:Online), in this study, the orientation given to postnatal care providers and coordinators did not include familiarisation with guidelines or protocols. A significant number of respondents (F=128; f=30.3%) were not oriented on the guidelines and the protocols (F=149; f=35.3%).

Table 3.12: Orientation for new staff (N=422)

Professional category	Orientation on postnatal care	Frequency (F)	Percent (%)
Midwives (n=77)	Yes	48	62.3
	No	29	37.7
Nurses (n=296)	Yes	192	64.9
	No	104	35.1
Health officers (n=49)	Yes	33	67.3
	No	16	32.7
All respondents (N=422)	Yes	273	64.7
	No	149	35.3

3.7.3 Counselling of mothers (N=422)

The results of this study indicated a significant difference among the study respondents' opinion on counselling postnatal mothers. Sixty-three (f=81.8%) midwives were of the opinion that postnatal mothers are counselled, compared to the 222 (f=75%) nurses and 35 (f=71.4%) health officers (refer to Table 3.13).

Postnatal counselling, in this study, refers to the communication between postnatal mothers and postnatal care providers to motivate the postnatal mothers to make informed decisions regarding their own care and that of their babies. Postnatal counselling is also a strategy that promotes an understanding between the postnatal

care provider and the mothers, thus it is an important aspect of postnatal care (WHO 2014:3-5). Postnatal care providers should, therefore, be trained and equipped with the necessary skills to offer appropriate counselling to postnatal mothers that will contribute to the improvements of postnatal care (WHO 2014:3-5).

Of all respondents, 320 (N=422, f=75.8%) indicated that counselling is an integral component of postnatal care provided for postnatal mothers (refer to Table 3.13). This result is in line with the WHO guidelines for the provision of postnatal care which emphasises counselling as an integral part of postnatal care (WHO 2014:305; NCAPD, MOPHS and ICF 2011:114). The counselling process during postnatal care should focus on essential issues such as diet and nutrition, exercise, contraception, breastfeeding, and general care of the newborn (WHO 2014:7).

Table 3.13: Counselling of postnatal mothers (N=422)

Professional category	Counselling provided	Frequency (F)	Percent (%)
Midwives (n=77)	Yes	63	81.8
	No	14	18.2
Nurses (n=296)	Yes	222	75.0
	No	74	25.0
Health officers (n=49)	Yes	35	71.4
	No	14	28.6
All respondents (N=422)	Yes	320	75.8
	No	102	24.2

3.7.4 Competency of the postnatal care providers (N=422)

Nearly 68% (n=77; F=52) of midwives were of the opinion that postnatal care providers have the required competency compared to the 65.9% (n= 296; F=195) of nurses and 65.3% (n=49; F=32) of health officers (refer to Table 3.14).

Postnatal care providers must be competent enough to provide postnatal care as those who lack the competency do not provide quality and standardised postnatal care to mothers and newborn babies (UNFPA, ICM & WHO 2014:10-12; WHO

2013:Online). However, findings from this study indicated, of all respondents, 143 (N=422, f=33.9%) had the opinion that postnatal care providers lack the competency to provide quality postnatal care. This is an indication that postnatal care providers need improvement in their knowledge, skills, and attitudes that can be achieved through continuous professional development aimed at increasing the competency of the postnatal care providers (refer to Table 3.14).

Table 3.14: Competency of postnatal care providers (N=422)

Professional category	Postnatal care providers competent	Frequency (F)	Percent (%)
Midwives (n=77)	Yes	52	67.5
	No	25	32.5
Nurses (n=296)	Yes	195	65.9
	No	101	34.1
Health officers (n=49)	Yes	32	65.3
	No	17	34.7
All respondents (N=422)	Yes	279	66.1
	No	143	33.9

3.7.5 Continuing professional education (N=422)

Nurses and midwives reported better participation in continuing professional development. Of all respondents, 262 (f=62.1%) participated in continuous professional education to ensure competency while they were working in the postnatal care unit. The Ethiopian FMOH recommends continuing professional development to ensure healthcare providers such as nurses, midwives, and health officers possess the competencies required to practice safely, effectively, and provide quality healthcare services.

To achieve this aim, the Ethiopian FMOH developed a plan that nurses, midwives, and health officers should annually undergo 30 hours of continuing professional education for their professional licence to be renewed at a five-year interval (Ethiopian FMOH 2014). The findings in this study indicated that 160 (f= 37.9%) of the study respondents did not participate in continuing professional development

(refer to Table 3.15) and thus did not comply with the Ethiopian Ministry of Health plan. Participation in professional development activities in this study proved to be lower compared to the Kenyan study that reported 89.53% (N=258; n=231) of active participation in professional development (Chelagat 2015:65). This is a significant concern which needs improvement.

Table 3.15: Continuing professional development (N=422)

Professional category	Participation in professional development	Frequency (F)	Percent (%)
Midwives (n=77)	Yes	49	63.6
	No	28	36.4
Nurses n=296)	Yes	184	62.2
	No	112	37.8
Health officers (n=49)	Yes	29	59.2
	No	20	40.8
All respondents (N=422)	Yes	262	62.1
	No	160	37.9

3.7.6 Participation in in-service training (N=422)

In Ethiopia, in-service training is one of the approaches for enhancing continuing professional development (FMOH 2016). Forty-nine midwives (f=63.6%) participated in in-service training as compared to 178 (f=60.1%) nurses and 27 (f=55.1%) health officers (refer to Table 3.16).

Table 3.16: Participation in in-service training (N=422)

Professional category	Received in-service training	Frequency (F)	Percent (%)
Midwives (n=77)	Yes	49	63.6
	No	28	36.4
Nurses (n=296)	Yes	178	60.1
	No	118	39.9
Health officers (n=49)	Yes	27	55.1
	No	22	44.9

Providing in-service training for healthcare providers, including postnatal care providers, plays a significant role in building their capacity. In turn, it helps in improving the quality of services rendered to mothers and babies in both developed and developing countries (Awofeso 2012:Online; KoS, MoH 2011:23).

In this study, 254 (f=60%) respondents reported that they had received in-service training (refer to Figure 3.3). This indicated that a sizable number of postnatal care providers had no in-service training, which is a barrier to improving the quality of postnatal care in Ethiopia since in-services training improves the competency of the postnatal care providers, thereby improving the quality of postnatal care (KoS, MoH 2011:23).

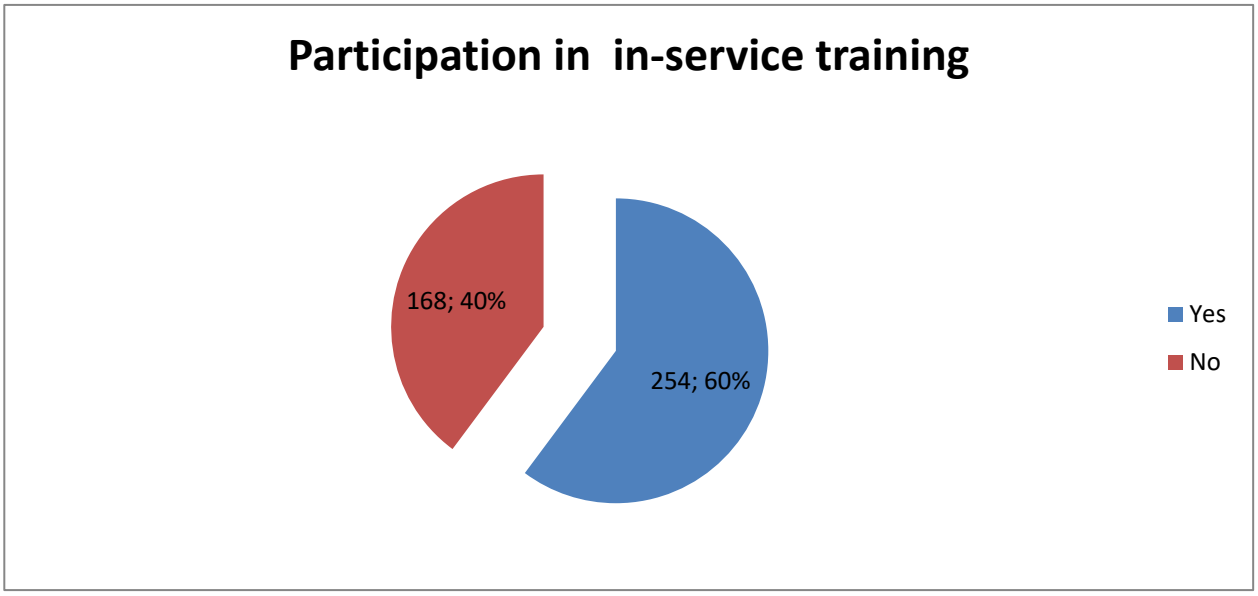

Figure 3.3: Respondent's participation in in-service training

3.7.7 Teamwork (N=422)

As indicated by Mosadeghrad (2014:84), cooperation and teamwork are important components of high-quality healthcare services, including postnatal care. Teamwork supports the provision of efficient, effective and quality postnatal care and promotes shared responsibility for patient care among the postnatal care team at different levels (Chelagat 2015:66). A lack thereof can thus contribute to the underutilisation of postnatal care (Chelagat 2015:66; Munabi-Babigumira, Glenton, Lewin, Fretheim & Nabudere 2017).

The research findings revealed that many nurses (F=258; f=87.2%), midwives (F=65; f=84.4%) and health officers (F=39; f=79.6%) work in teams when rendering postnatal care services for mothers and babies (refer to Table 3.17). Among all respondents, 362 (N=422, f=85.8%) reported that postnatal care providers work in a team (refer to Table 3.17). In Kenya, on the other hand, Chelagat (2015:66) reported that almost all midwives (n=254; f=98.83%) worked in a team when rendering postnatal care (Chelagat 2015:66).

Table 3.17: Teamwork (N=422)

Professional category	The practice of teamwork	Frequency (F)	Percent (%)
Midwives (n=77)	Yes	65	84.4
	No	12	15.6
Nurses (n=296)	Yes	258	87.2
	No	38	12.8
Health officers (n=49)	Yes	39	79.6
	No	10	20.4
All respondents (N=422)	Yes	362	85.8
	No	60	14.2

3.7.8 Supportive supervision (N=422)

Supportive supervision increases healthcare providers' professional skills and competencies, and thus influence the care and the emotional support rendered to the mothers during the postnatal period (Henshaw, Clarke & Long 2013:75-85; Narchi 2011:24). Fifty-three (f=68.8%) midwives indicated that they received supportive supervision compared to the 195 (f=65.9%) nurses and 30 (f=61.2%) health officers.

In Ethiopia, 278 (N=422, f=65.9%) respondents experienced supportive supervision in postnatal care services (refer to Table 3.18) compared to the 88.28% (N=258, n=256; F=226) of the respondents who received supportive supervision in the study conducted in Kenya (Chelagat 2015:68).

Table 3.18: Supportive supervision (N=422)

Professional category	Supportive supervision	Frequency (F)	Percent (%)
Midwives (n=77)	Yes	53	68.8
	No	24	31.2
Nurses (n=296)	Yes	195	65.9
	No	101	34.1
Health officers (n=49)	Yes	30	61.2
	No	19	38.8
All respondents (N=422)	Yes	278	65.9
	No	144	34.1

3.7.9 Record keeping (N=422)

In health service delivery, including postnatal care, documentation remains an integral component to ensure quality care (Chelagat 2015:162). The lack of critical record-keeping can negatively influence postnatal care service delivery and thus compromise the quality of services provided to mothers and newborns. These documents (records) may be prepared and available in various formats, including handwritten, printed, or stored in audio-visual systems, depending on the manner of implementation of the healthcare delivery system and the resources available (ICM 2013:14-19; Potter & Perry 2010:212).

The day-to-day services offered to postnatal mothers and babies must be recorded and reported. The report should contain the types of services offered at health facilities, compiled from data generated at the various service delivery points. In organising the report on postnatal care, the information can be obtained from postnatal care units and child clinics. The data for postnatal care reports must be timely, accurate, complete, and clear to facilitate the writing of reports that would add value to decision-making and improve the quality of care at all levels of healthcare delivery (CRNNS 2012:4).

Available and quality data on postnatal care at all levels of the health system will assist in the identification of priority areas and the development of a plan for the improvement of postnatal care. Healthcare providers and coordinators at different

levels can make use of this data in planning and budgeting for quality services, as well as supplying adequate materials and other required equipment (Roets, et al. 2018:62-67; ICM 2011:17).

In the current study, the need for improved record-keeping practices was indicated by 68 (f=88.3%) midwives and 254 (f=85.8%) nurses, compared to the 39 (f=79.6%) health officers (refer to Table 3.19). Three hundred and sixty-one (N=422, f=85.5%) respondents indicated that postnatal care services rendered to mothers must be recorded. Despite the benefits of documentation and reporting (record keeping), a significant number of respondents, 61 (N=422, f=14.5%), did not record postnatal care services that were rendered (refer to Table 3.19). Record-keeping in postnatal care services can be improved by implementing consistent, supportive supervision where the supervisor checks the gap in recording and reporting and provides support when needed (Henshaw, et al. 2013:75-85).

Table 3.19: Record keeping (N=422)

Professional category	Postnatal care record	Frequency (F)	Percent (%)
Midwives (n=77)	Yes	68	88.3
	No	9	11.7
Nurses (n=296)	Yes	254	85.8
	No	42	14.2
Health officers (n=49)	Yes	39	79.6
	No	10	20.4
All respondents (N=422)	Yes	361	85.5
	No	61	14.5

3.7.10 Respect and dignity (N=422)

The respondents were asked to provide their opinion on the respect and dignity offered to postnatal mothers. The results revealed that 61 (f=79.2%) midwives were of the opinion that postnatal mothers are treated with respect and dignity. Two hundred and twenty-eight (f=77.0%) nurses and 36 (f=73.5%) health officers were of the same opinion. Although not included in this study, it would have been useful to know how mothers experienced the dignity and the respect they received, since

some authors reported that many mothers are not treated with respect and dignity when receiving care, including postnatal care (The White Ribbon Alliance for Safe Motherhood 2013:Online). A previous study conducted in Ethiopia found mistreatment of women seeking maternal health care as a barrier to the utilisation of maternal healthcare services, including postnatal care (CSA 2012:131-132).

Only 23% (F=97) of the respondents (healthcare workers) supported the women's opinion and indicated that mothers were not treated with respect and dignity. The majority, thus 325 (N=422; f=77%), were of the opinion that postnatal mothers were treated with respect and dignity (refer to Table 3.20). Even though the healthcare professionals' oath guides them in maintaining the respect and dignity of mothers when providing health care, a significant number of mothers were not treated with respect and dignity, which is confirmed in a report by Green (2017:777).

Table 3.20: Respect and dignity offered (N=422)

Professional category	postnatal mothers respected	Frequency (F)	Percent (%)
Midwives (n=77)	Yes	61	79.2
	No	16	20.8
Nurses (n=296)	Yes	228	77.0
	No	68	23.0
Health officers (n=49)	Yes	36	73.5
	No	13	26.5
All respondents (N=422)	Yes	325	77.0
	No	97	23.0

Women in many counties around the world are subjected to disrespect, humiliation, discrimination, emotional and even physical abuse as they seek different maternal health services at health facilities (Moyer, Adongo, Aborigo, Hodgson & Engmann 2014:262-268). Contrary to the opinions of the respondents in this study, Chelagat (2015:77) revealed that in Kenya, nearly all (N=258; n=255; F=254; f=99.61%) of the midwives felt that mothers were treated with respect and dignity in receiving postnatal care.

3.7.11 Guidelines (N=422)

3.7.11.1 Accessibility to guidelines

To provide quality postnatal care, policies that include appropriate guidelines should always be accessible for postnatal care providers for reference whenever the need arises (DRH Kenya 2011: Online; WHO 2014:1-15). A significant variation was reported by different health professionals in Ethiopia in accessing postnatal care guidelines as some (F=62; f=80.5%) midwives indicated having access to the guidelines compared to the nurses (F=223; f=75.3%) and health officers (F=33; f=67.3%) (refer to Table 3.21). Similar results were reported from the study conducted in Kenya, that indicated for 68.6% (n=252; F=173) of the midwives the postnatal care guidelines were accessible (Chelagat 2015:64).

Of concern is the 104 (f=24.6%) respondents who reported that they did not have immediate access to guidelines related to postnatal care. This lack of access to the guidelines can compromise the postnatal care rendered and lead to differences in the quality of services offered to mothers and their babies at different health facilities (WHO 2014:4).

Table 3.21: Guidelines accessibility (N=422)

Professional category	Guidelines accessible	Frequency (F)	Percent (%)
Midwives (n=77)	Yes	62	80.5
	No	15	19.5
Nurses (n=296)	Yes	223	75.3
	No	73	24.7
Health officers (n=49)	Yes	33	67.3
	No	16	32.7
All respondents (N=422)	Yes	318	75.4
	No	104	24.6

3.7.11.2 The utilisation of Guidelines (N=422)

Guidelines prepared for the provision of postnatal care for mothers and newborns respond to mothers' and newborns' needs, as described by Pelzang (2010:913-914),

and therefore must be utilised. The guidelines place the postnatal mothers and newborns at the centre of the delivery of care so that the right services are performed by the right healthcare provider at the right time, to maintain and promote the health of mothers and babies (Pelzang 2010:913-914).

Guidelines can assist postnatal care providers and coordinators to deliver more holistic postnatal care, foster communication skills between mothers and postnatal care providers as described by the WHO (2014:1-67).

In this study, despite the benefits of the utilisation of guidelines, 111 (N=422; f=26.3%) respondents reported that they did not use guidelines related to postnatal care. This is of concern since the lack of guidelines can be a barrier to the improvement of postnatal care in health facilities in Ethiopia. Fifty-eight (f=75.3%) midwives, 222 (f=75.0%) nurses and 31 (f=63.3%) health officers (refer to Table 3.22) reported that they indeed utilised these guidelines.

Table 3:22: Utilisation of guidelines (N=422)

Professional category	Guidelines utilised	Frequency (F)	Percent (%)
Midwives (n=77)	Yes	58	75.3
	No	19	24.7
Nurses (n=296)	Yes	222	75.0
	No	74	25.0
Health officers (n=49)	Yes	31	63.3
	No	18	36.7
All respondents (N=422)	Yes	311	73.7
	No	111	26.3

3.7.11.3 Type of the guidelines utilised (n=311)

Among those who utilised guidelines (n=311), 273 (f=87.8%) utilised the WHO guideline; 38 (f=12.2%) utilised the Ethiopian National Ministry of Health guidelines for postnatal care (refer to Figure 3.5), and in the Kenyan context, 51.4% (n=19; N=37) of the hospitals utilised the Essential Obstetrics Care Manual for Health Service Providers in Kenya (Chelagat 2015:98). As all the guidelines are based on

the WHO recommendations on postnatal care, there is no significant difference between Ethiopia and Kenya.

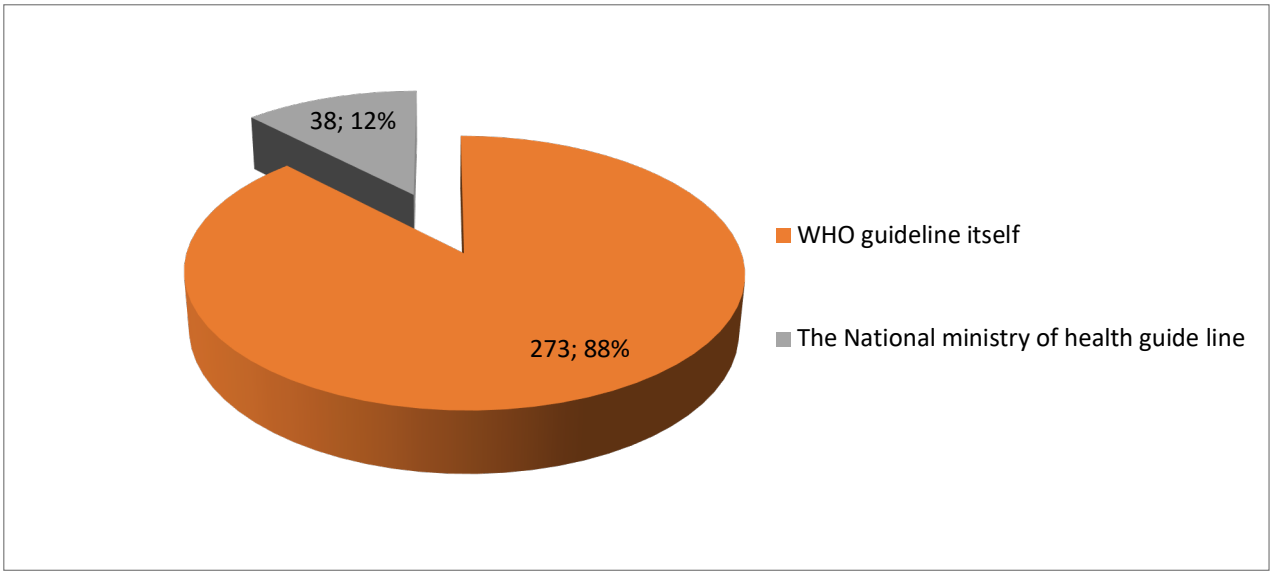

Figure 3.4: Types of guidelines utilised

3.7.12 Budget (N=422)

In many developing countries, it is a common problem that health facilities offering postnatal care lack adequate budgets for purchasing drugs and medication to be used for postnatal care (Mkoka, et al. 2014:2). It was, therefore, not a surprise that a budget shortage for postnatal care delivery was reported by the midwives (F=30; f=39.0%), nurses (F=131; f=44.3%) and health officers (F=25; f=51.0%). It was interesting to note that more health officers (f=51%) than nurses and midwives were of the opinion that there is no adequate budget for postnatal care services in Ethiopia.

Of all respondents, 186 (N=422; f=44.1%) claimed that the budget allocated for postnatal care services is inadequate (refer to Table 3.23). In Kenya, in the study conducted by Chelagat (2015:158-159), an inadequate budget for postnatal care was identified and Chelagat recommended that the Kenyan government address constraints to the budget.

Ethiopian health facilities usually face insufficient budgets and financial resources, which lead to frequent shortages of basic and essential drugs and supplies. This frequent unavailability of medical supplies and essential drugs contributed to the underutilisation of maternal healthcare services, including postnatal care (FMOH 2014).

Table 3:23: Budget for postnatal care (N=422)

Professional category	Adequate budget for postnatal care	Frequency (F)	Percent (%)
Midwives (n=77)	Yes	47	61.0
	No	30	39.0
Nurses (n=296)	Yes	165	55.7
	No	131	44.3
Health officers (n=49)	Yes	24	49.0
	No	25	51.0
All respondents (N=422)	Yes	236	55.9
	No	186	44.1

The inadequate budget has an impact on the availability of human resources (Tsofa, Molyneux & Goodman 2016:260-276). When a sufficient budget is allocated at regional and national government levels, it facilitates the recruitment and deployment of midwives and other postnatal care providers. The allocation of sufficient financial resources for health care, postnatal care included, is critical in availing the necessary supplies and equipment for use in the provision of postnatal care, thereby improving the utilisation of the service (Tsofa, et al. 2016:260-276).

3.7.13 Cultural and Religious beliefs (N=422)

Cultural practices have an impact on the health of mothers and babies during the postnatal period (Ademiluyi & Aluko-Arowolo 2015:153) and, therefore, must be identified and addressed. In this study, 316 (f=75%) respondents were of the opinion that the cultural practices in the community have an impact on both the provision and reception of postnatal care (refer to Figure 3.5).

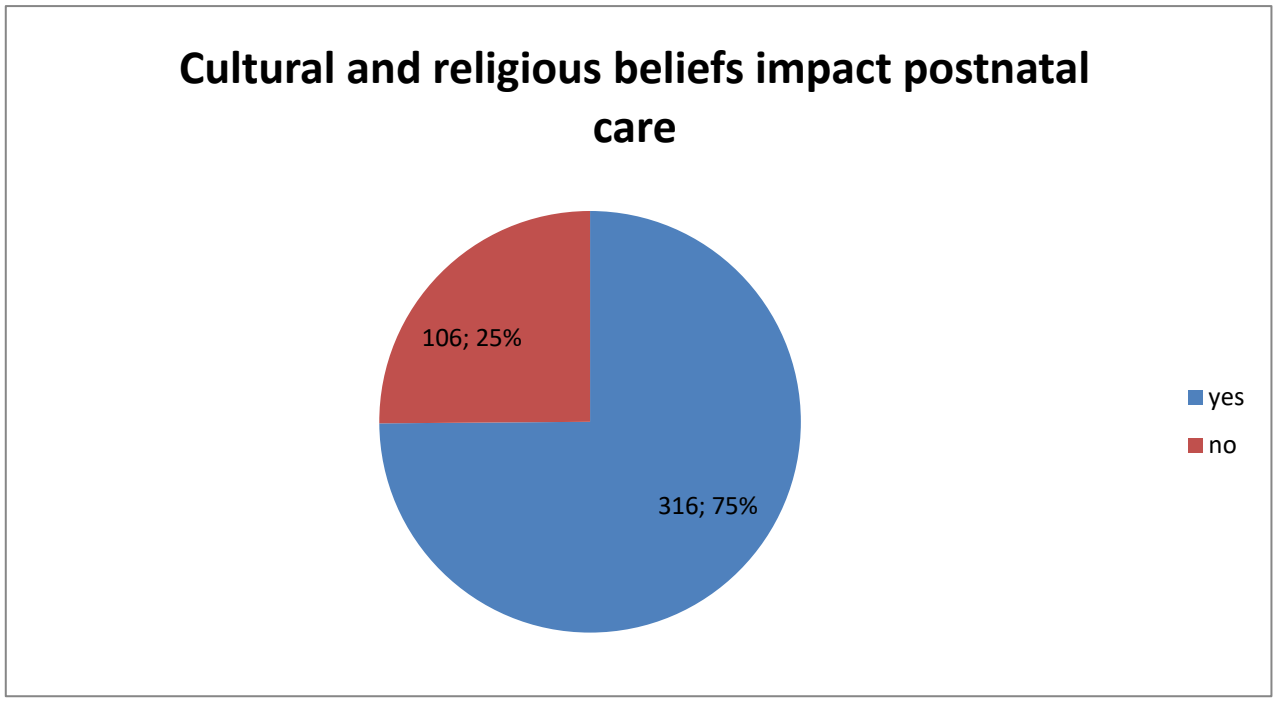

Figure 3.5: Cultural and religious practices impact postnatal care

Cultural and religious factors influence the utilisation of maternal healthcare services, including postnatal care. In Africa, specifically, culture and religious beliefs play a significant role in the day-to-day life of the people (Iyalomhe & Iyalomhe 2012:62-71; Ademiluyi & Aluko-Arowolo 2015:153).

Cultural and religious beliefs are reported as major barriers to healthcare services, particularly maternal healthcare services (Serizawa, Ito, Algaddal & Eltaybe 2014:572-581). As a result, the mothers may be prohibited from making decisions regarding their own health and that of their babies (Doku, et al. 2012:29).

In this study, 223 (f=75.3%) nurses, 35 (f=71.4%) health officers and 47 (f=61.0%) midwives were of the opinion that cultural practices influence postnatal care (refer to Table 3.24). This finding is congruent with the findings from the study conducted in Kenya where 66% (n=250; F=165) of midwives reported that cultural practices negatively influenced and became barriers to postnatal care utilisation (Chelagat 2015:71).

Table 3.24: Cultural and religious beliefs (N=422)

Professional category	Cultural and religious beliefs affect postnatal care	Frequency (F)	Percent (%)
Midwives (n=77)	Yes	47	61.0
	No	30	39.0
Nurses (n=296)	Yes	223	75.3
	No	73	24.7
Health officers (n=49)	Yes	35	71.4
	No	14	28.6

3.7.14 Community involvement (N=422)

As an integral component of the organisation of postnatal care services, the community members must be well informed and motivated in all matters regarding the services being provided to mothers and newborns. They should also be informed about the benefits of the postnatal care services, the common health problems that may occur during the postnatal period, and the contribution of local customs and beliefs to these problems (Sakeah, McCloskey, Bernstein, Yeboah-Antwi, Mills & Doctor 2014:340).

This study found that 133 (N=422; f=32.0%) respondents did not involve community leaders in planning and providing postnatal care services (refer to Figure 3.6), despite the fact that health service programmes run successfully when community members are involved, as described by Babalola, Van Lith, Mallalieu, Packman, Myers, Ahanda, et al. (2017:S5-S14). Similarly, the maternal healthcare services become effective when the community is involved in decision-making (Marston, et al. 2013:e55012). A participant in this study provided a comment that supported community involvement, and stated:

> "*We postnatal care coordinators should always involve the community at a different level".*

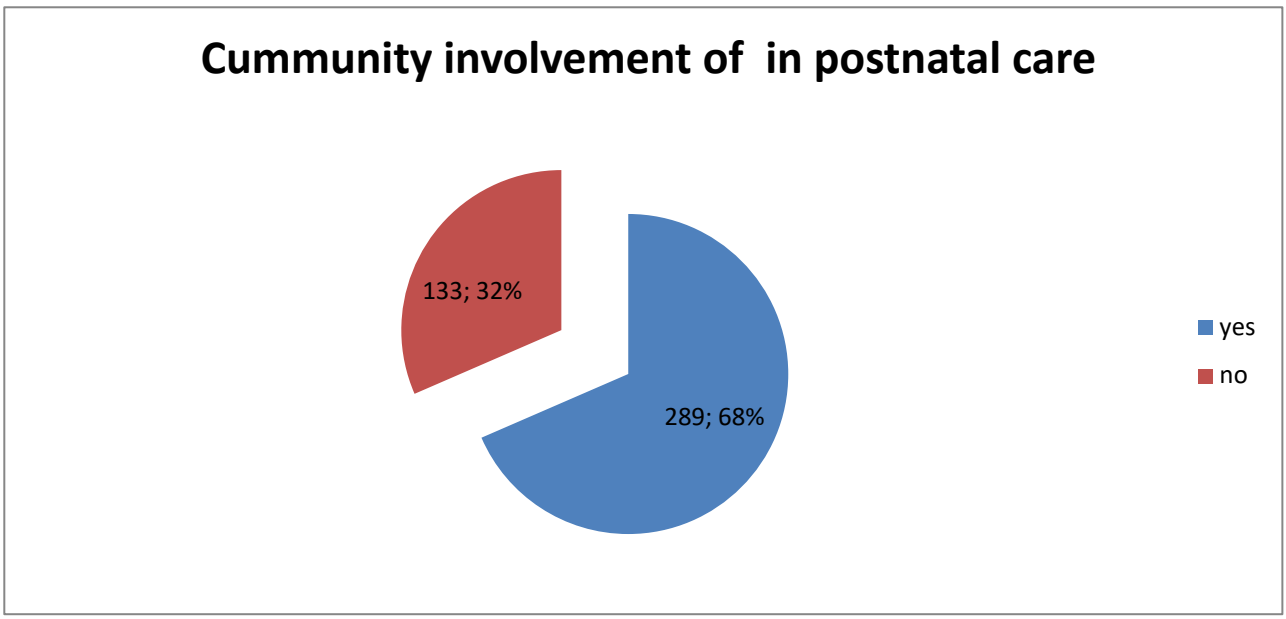

Figure 3.6: Community involvement

In the Kenyan study, Chelagat's framework for postnatal care improvement indicated that community involvement was limited in many regions. Chelagat recommended the need to strengthen community involvement (Chelagat 2015:151).

As indicated in Table 3.25, midwives (F=53; f=68.8%), nurses (F=203; f=68.6%), and health officers (F=33; f=67.3) reported that there was community involvement in postnatal care services in the health facility or department in which they were working.

Table 3.25: Community involvement in postnatal care (N=422)

Professional category	Community involved in postnatal care	Frequency (F)	Percent (%)
Midwives (n=77)	Yes	53	68.8
	No	24	31.2
Nurses (n=296)	Yes	203	68.6
	No	93	31.4
Health officers (n=49)	Yes	33	67.3
	No	16	32.7

3.7.15 Summary

This section of the chapter presented the postnatal care services in Ethiopia and, where possible, the findings were compared with the findings from the Kenyan study (Chelagat 2015) to indicate the similarities and differences in context. Most aspects of postnatal care services were found similar to that of Kenya. However, some postnatal care aspects in Kenya were found to be better, specifically pertaining to the availability of separate postnatal care rooms, participation in professional development, the practice of teamwork, supportive supervision, as well as treating postnatal mothers with respect and dignity.

In the next section of this chapter, a description of the assessment of the adaptation possibility, challenges and opportunities of contextualising Chelagat's framework, using the AGEEE II (refer to Annexure 3), follows.

3.8 ADAPTATION POSSIBILITY OF CHELAGAT'S FRAMEWORK IN THE ETHIOPIAN CONTEXT (APPLICATION OF AGREE II)

3.8.1 Domain 1: Scope and purpose of the framework

This domain was concerned with (1) the overall aim of determining the framework's possibility to be contextualised; (2) the specific health problem (the neglected postnatal care) to be addressed; and (3) the target population to whom the framework is meant to apply. This deals with the potential health impact of the contextualised framework on postnatal mothers, families, the community and the health system as a whole.

The assessment was done on whether the overall objective(s) of the framework, namely the expected improvement in postnatal care as a result of the implementation of the contextualised framework, can be achieved. In this domain, the assessment considered whether the health question, the problem (neglected postnatal care, as identified in Kenya), is relevant within the Ethiopian context. The domain also assessed whether the framework clearly described the target population to whom the contextualised framework will apply.

The AGREE II has not set minimum domain scores or patterns of scores across domains to differentiate between high-quality and poor-quality guidelines. However, it recommends that decisions should be made by the user and guided by the context in which AGREE II is being used (AGREEII 2013:13). Therefore, in this study's context, a domain score of 75% or more was considered for all domains to indicate a high-quality framework recommended for use in the Ethiopian context.

For domain 1, the scaled score of the assessment was: midwives 93%, nurses 94%, and health officers 93%, with an average score of 93.4%. With this average score of 93.4%, the participants, therefore, were of the opinion that the objectives of the framework and the problem that needs to be solved in Ethiopia is similar to the problem in Kenya (neglected postnatal care). This was an indication that the implementation of this framework can also improve postnatal care within the Ethiopian context (refer to Table 3.26).

Table 3.26: Scope and purpose (N=422)

Domain	Profession and number of appraisers	Total number of items	Minimum possible score	Maximum possible score	Obtained score	The scaled domain score
1 (The scope and purpose)	Midwives (n=77)	3	231	1617	1518	93
	Nurses (n=296)	3	888	6216	5882	94
	Health officer (n=49)	3	147	1029	964	93
	All respondents (N=422)	3	1266	8862	8364	93.4

3.8.2 Domain 2: Stakeholder Involvement

The second domain focused on the extent to which Chelagat's framework was developed by the appropriate stakeholders and whether it addressed the views of its intended users. The assessment was made using seven items namely: 1) whether the relevant group of experts participated in the development of the framework, 2) whether the views and preferences of the target population were taken into consideration, 3) if the factors that affect postnatal care utilisation were included, 4) if

strategies for improving postnatal care were included, 5) whether the role of the community in improving postnatal care was considered, 6) if the outcome on postnatal care, if implemented, are indicated, and 7) whether the target users of the framework were clearly defined.

The scaled score of the assessment of domain 2 was based on midwives 86%, nurses 91% and health officers 91%, with an average score of 90% (refer to Table 3.27). The participants, with an average score of 90%, therefore indicated that the framework has clearly described: the relevant group of experts participated in the development of the framework, and presented the views and preferences of the target population; factors that affect postnatal care utilisation; strategies for improving postnatal care; the role of the community in improving postnatal care; the outcome on postnatal care when the framework is implemented; and target users of the framework. The finding is an indication that the implementation of this framework can, according to the participants, also improve postnatal care within the Ethiopian context.

Table 3:27: Stakeholders involvement (N=422)

Domain	Profession and number of appraisers	Total number of items	Minimum possible score	Maximum possible score	Obtained score	The scaled domain score
2 (Stakeholders involvement)	Midwives (n=77)	7	539	3773	3305	86
	Nurses (n=296)	7	2072	14,504	13385	91
	Health officers (n=49)	7	343	2401	2209	91
	All respondents (N=422)	7	2954	20678	18899	90

3.8.3 Domain 3: Rigour of development

Domain 3 assessed issues related to the process used to gather and synthesise the evidence, the methods to formulate the recommendations, and to update them. The specific assessment was therefore made on whether the developed framework: 1)

used systematic methods, 2) followed clear criteria for selecting evidence, 3) described the strengths and limitations of the body of evidence clearly, 4) described the methods used for formulating the recommendations clearly, 5) considered the health benefits, 6) considered the health side effects in making the recommendations, 7) considered the health risks in formulating the framework, 8) considered the link between the recommendations and the supporting evidence, 9) explicitly involved postnatal care experts for improvements of postnatal care, and 10) provided a procedure for updating the guideline.

For domain 3, the scaled score of the assessment was: midwives 92%, nurses 93%, and health officers 91%, with an average score of 92% (refer to Table 3.28) thus indicating that the framework was developed according to all 10 aspects listed above. This result indicated that the scientific rigour of the framework developed by Chelagat was of high quality which, in turn, indicates that the implementation of this framework will improve postnatal care within the Ethiopian context.

Table 3.28: Rigour of development (N=422)

Domain	Profession and number of appraisers	Total number of items	Minimum possible score	Maximum possible score	Obtained score	The scaled domain score
3 (Rigour)	Midwives (n=77)	10	770	5390	5038	92
	Nurses (n=296)	10	2960	20,720	19,398	93
	Health officers (n=49)	10	490	3430	3166	91
	All respondents (N=422)	10	4220	29540	27605	92

3.8.4 Domain 4: Clarity of the framework

Domain 4 is concerned with the language, structure, and format of the developed Chelagat framework. When a framework is developed for improvement in a health-related field, framework developers expect that it should provide a concrete and

precise description of, in this study's context, the strategy, how the strategy will be implemented, and what segment of the population should be involved, as informed by the body of evidence. It is important to note that, in some instances, evidence may not always be clear and there may be uncertainty about the best care option(s) or strategies.

When such doubt exists, the framework developers are expected to make evidence clear to enhance the implementation of the framework (AGREE II 2013). For the implementation of the framework, postnatal care providers and coordinators should be able to easily find the most relevant recommendations and evidence in the framework. The clarity of the framework developed by Chelagat to improve postnatal care in Kenya was assessed in this study focusing on whether the framework: 1) is specific and unambiguous, 2) the different options for the provision of postnatal care are presented in the recommendations, and 3) used key recommendations that are easily identifiable.

The scaled score of the assessment of domain 4 was: midwives 94%, nurses 93%, and health officers 91%, with the mean score of 93% (refer to Table 3.29), thus indicating that the framework was developed according to all three aspects listed above. The results of this domain indicate, according to the participants, that the framework can easily be implemented and thus can improve postnatal care within the Ethiopian context.

Table 3.29: Clarity of the framework (N=422)

Domain	Number of appraisers	Total number of items	Minimum possible score	Maximum possible score	Obtained score	The scaled domain score
4 (Clarity)	Midwives (n=77)	3	231	1617	1540	94
	Nurses (n=296)	3	888	6216	5845	93
	Health officer (n=49)	3	147	1029	954	91
	All respondents (N=422)	3	1266	8862	8339	93

3.8.5 Domain 5: Applicability of the framework

Domain 5 of the assessment was concerned with the likely barriers and facilitators to the implementation, strategies to improve uptake and resource implications of applying the developed framework. The applicability of the framework developed by Chelagat for the improvement of postnatal care in Kenya was assessed in this study specifically focusing on a 1) description of the facilitators and barriers to the application of the framework, 2) provision of advice or tools on how the framework is put into practice, 3) consideration of the potential resources identified in applying the recommendations, and 4) the presentation of monitoring and auditing criteria for the implementation of the framework into practice.

The scaled domain score of domain 5 was: midwives 93%, nurses 93% and health officers 93%, with the average domain score of 93% (refer to Table 3.30), thus indicating that the framework was developed according to all aspects listed above. The results from this domain indicate that Chelagat's framework is highly applicable and easily implemented. According to the participants, it can thus improve postnatal care within the Ethiopian context (refer to Table 3.30).

Table 3.30: Applicability framework (N=422)

Domain	Number of appraisers	Total number of items	Minimum possible score	Maximum possible score	Obtained score	The scaled domain score
5 (Applicability)	Midwives (n=77)	4	308	2156	2027	93
	Nurses (n=296)	4	1184	8288	7805	93
	Health officers (n=49)	4	196	1372	1288	93
	All respondents (N=422)	4	1688	11816	11120	93

3.8.6 Domain 6: Editorial Independence

Domain 6 of the assessment for the adaptation and contextualisation possibility of the framework was concerned with the formulation of recommendations not being unduly biased with competing interests. The assessment considered whether there were competing interests among experts participating in the development of Chelagat's framework. The scaled score of domain 6 was: midwives 94%, nurses 93%, and health officers 87%, with an average score of 94% (refer to Table 3.31).

This is an indication that the experts who were involved in the development of Chelagat's framework independently participated in the study and contributed their professional expertise. The results of this domain show that the implementation of this framework can, according to the participants, improve postnatal care within the Ethiopian context.

Table 3.31: Editorial independency (N=422)

Domain	Number of appraisers	Total number of items	Minimum possible score	Maximum possible score	Obtained score	The scaled domain score
6 (Editorial independency)	Midwives (n=77)	1	77	539	509	94
	Nurses (n=296)	1	296	2072	1955	93
	Heath officers (n=49)	1	49	343	305	87
	All respondents (N=422)	1	422	2954	2769	94

3.8.7 Overall assessment of the framework for implementation

This section addressed the overall assessment that emphasised the rating of the overall quality of the framework. It assessed whether the framework developed by Chelagat for the improvement of postnatal care in Kenya could be recommended for use in practice for the improvement of postnatal care in Ethiopia (AGREE II 2013).

Decisions made by policy-makers, programme managers, healthcare providers – in this study, specifically the recommendations pertaining to the contextualisation of Chelagat's framework – should be made based on the available valid and best evidence. A standardised and scientifically evidenced framework development process should be followed based on unbiased and reliable information, and it should primarily target the health needs of the public, including postnatal mothers (WHO 2016).

The scaled score of the assessment on this domain was: midwives 90%, nurses 93%, and health officers 88%, with an average domain score of 92% (refer to Table 3.32). This domain assessed the postnatal care providers' and coordinators' recommendations on the implementation of the framework developed by Chelagat for the improvement of postnatal care within the Kenyan context. The average domain score of 92% was indicative that the framework developed by Chelagat is recommended to be adopted to improve postnatal care in the Ethiopian context.

Table 3.32: Overall recommendation for implementation in Ethiopia context (N=422)

Item	Number of appraisers	Total number of items	Minimum possible score	Maximum possible score	Obtained score	The scaled domain score
Implementation of the framework will improve the provision of postnatal care in the Ethiopian context	Midwives (n=77)	1	77	539	495	90
	Nurses (n=296)	1	296	2072	1945	93
	Health officer (n=49)	**1**	49	343	308	88
	All respondents (N=422)	1	422	2954	2748	92

3.9 CHALLENGES FOR CONTEXUALISATION OF THE FRAMEWORK

Respondents of the current study reported different challenges that can influence the implementation of Chelagat's framework in the Ethiopian context than those identified

in other studies in Ethiopia by Tesfahun, et al. (2014:2341-2351) as well as Birmeta, et al. (2013:256).

All the comments received from respondents in the open-ended questions pertaining to the challenges were analysed and described (refer to Section 3.5) using an inductive thematic analysis approach where themes that emerged from the gathered data were firmly grounded. The process assisted the researcher in exploring and describing postnatal care providers' and coordinators' views and perceptions of the challenges that may be faced in implementing the framework in Ethiopia.

All the responses were open coded. As illustrated in Table 3.33, eight themes emerged namely, (1) Lack of physical resources, (2) Infrastructure problems, (3) Cultural concerns, (4) Capacity, (5) Inaccessibility of health services, (6) Unavailability of guidelines, (7) Communication, and (8) Monitoring and evaluation.

Table 3.33: Challenges to the implementation of the Chelagat framework in the Ethiopian context

Theme	Category	Subcategory(direct quotes)
3.9.1 Lack of physical resources	Inadequate beds and rooms	"*Some mothers are discharged early as there are no adequate rooms and beds in the health facilities".* *"Postnatal mothers have to lie down and rest on the delivery couches and chairs after they gave birth in health facilities".* *"There are occasions where a woman sleeps on the floor as a result of lack of adequate bed in some health facilities*".
	Inadequate electricity and water supply	"*Many of the health facilities in rural areas use lamps during the night time to provide skilled delivery and postnatal care services which compromise the quality of services offered to mothers".*

Theme	Category	Subcategory(direct quotes)
		"*In some health facilities, there is no water supply".*
	Unavailability of maternity waiting homes	*"The health facilities lack functional maternal waiting homes where mothers rest before and after delivery"* *"In some health facilities, though there are maternal waiting homes, they are not functional as a result of lack of water, electricity, beds and other necessary equipment".*
	Inadequate equipment and supplies	*"Health facilities do not provide quality postnatal care as they lack the necessary equipment and supplies needed for postnatal care services".* "*Postnatal care in Ethiopia is exposed to many other challenges. These included a shortage of drugs and supplies".*
3.9.2 Infrastructure problems	Inaccessibility of transportation services	*"Though there are improvements in transportation services in Ethiopia still it is a challenge for postnatal care services as many women from rural areas do not have transportation access and are forced to walk on foot for more than 2 hours when they seek health services".* *"Some of the mothers do not know how to get ambulance services for transportation".*
	Road infrastructure inaccessibility	"*The unavailability of roads and bad terrain in Ethiopia is a barrier for many women residing in rural areas of Ethiopia that need to be addressed if*

Theme	Category	Subcategory(direct quotes)
		postnatal care is to be improved". *"There are areas where women are unable to get any transportation services for postnatal care as a result of lack of road infrastructure".*
	Distance to a health facility	*"Long-distance to a health facility is a barrier for postnatal care utilisation as many women may not seek health care when the health facility is far".* *"Postnatal services should be available within short distances for a woman".*
3.9.3 Cultural concerns	Lack of culturally congruent care	"*There is no preparation of porridge in the health facilities even the coffee ceremony is not commonly practiced. However, women in Ethiopia like to have those cultural ceremonies".* *"There are no maternity waiting rooms for women after delivery to stay and rest to utilise postnatal care and they do not get the things they want in relation to their culture. These all have contributed to the low postnatal care utilisation".*
3.9.4 Capacity	Lack of continuing professional development	*"Postnatal care providers should attend continuing professional development frequently to update their skills if postnatal care services are to be improved".* *"Continuing professional development for all postnatal care providers and coordinators should be implemented as a strategy for improving postnatal care*

Theme	Category	Subcategory(direct quotes)
		services".
3.9.5 Accessibility of health services	Inaccessibility of the health facility	"*In Ethiopia, though there are improvements inaccessibility of maternal health care including postnatal care, still many women in rural areas do not have access that must be improved"* "*If postnatal care is to be improved, the postnatal care services should be accessible for all postnatal mothers".*
	Inadequate referral system	"*Referral services during postnatal care when complication encountered, is challenged in Ethiopia by many factors such as poor coordination, lack of the skill by postnatal care providers to identify complications and accessibility of transportation. These all should be improved if postnatal care is to be improved".* *"The communication on referral services among most of the health facilities rendering postnatal care services is not effective".*
3.9.6 Guidelines	Unavailability of guidelines	"*The shortage of guidelines is a serious challenge which compromises the quality of postnatal care provided to mothers and newborns".* *"Postnatal care services are fragmentally rendered as there are no guidelines in some health facilities".*
3.9.7 Communication	Lack of communication with healthcare users	"*Many women and their families in Ethiopia do not know whom to call and where to go when they need postnatal*

Theme	Category	Subcategory(direct quotes)
		care or develop any health problem. Therefore, the women or someone from their family should have the phone number of health care providers or ambulance drivers to call them when the need arises". *"Effective communication among postnatal care providers and pregnant mothers should be ensured to improve the postnatal care services".*
3.9.8 Monitoring and Evaluation	Poor Monitoring and Evaluation	*"In most of the health facilities, monitoring, and evaluation of postnatal care services are poor. However, it is an integral component of the postnatal services and needs to be improved in Ethiopia".* *"There should be strong monitoring and evaluation if postnatal care is to be improved".*

3.9.1 Lack of physical resources

Physical resources refer to the healthcare facilities mothers visit to receive postnatal care as well as the equipment and supplies used in the provision of postnatal care. The availability and distribution of these resources have an impact on the utilisation of postnatal care.

3.9.1.1 Inadequate beds and rooms

Postnatal mothers in Ethiopia are discharged from the health facility between 6 and 12 hours after delivery (Berhanu, Asefa & Giru 2016:26) due to inadequate bed capacity and rooms, as mentioned by participants:

"*Some mothers are discharged early as there are no adequate rooms and beds in the health facilities"*.

"They have to *lie down and rest on the delivery couches and chairs after they gave birth in health facilities".*

The inadequacy of beds and rooms for at least the first 24 hours after birth compromise the utilisation of postnatal care services in many of the health facilities in Ethiopia. However, it seems to be a concern in other countries as well (Onta, et al. 2014:5). Similar results were found in a study in Nepal where the lack of beds also resulted in the early or immediate discharge of women and their babies following delivery. This practice compromises the quality of postnatal care rendered for mothers and babies (Onta, Choulagai, Shrestha, Subedi, Bhandari & Krettek 2014:5).

Sometimes the lack of bed capacity forced mothers and children to sleep on the floor when only a single bed is available in the postnatal care unit (Wilunda, Quaglio, Putoto, Lochoro, Oglio, Manenti, et al. 2014:5-9; Akum 2013:6), constituting a real risk to their health. This is supported by a participant who said:

"*There are occasions where a women sleep on the floor as a result of lack of adequate bed(s) in some health facilities*".

The availability of beds and rooms needs to be addressed to ensure contextualisation of Chelagat's framework in the Ethiopian context.

3.9.1.2 Inadequate electricity and water supply

Electricity and clean running water are essential in every health facility if quality health care is to be rendered (Wilunda, et al. 2014:6). However, within the Ethiopian context, the study participants indicated:

"*Many of the health facilities in rural areas use lamps during the night time to provide skilled delivery and postnatal care services which compromise the quality of services offered to mothers".*

"*In some health facilities, there is no water supply".*

A lack and/or interruption of electricity and water supply can negatively impact the preparation of sterile equipment for postnatal care, particularly at night. It also contributes to a lack of hygiene among postnatal mothers and healthcare providers (Wilunda, et al. 2014:6).

3.9.1.3 Unavailability of maternity waiting homes

Evidence indicates that institutional delivery is associated with the utilisation of postnatal care (Tesfahun, et al. 2014:2349; KDHS 2014:133). With this concept as background, the Ethiopian FMOH launched the use of maternal waiting areas (homes) at all health facilities. Mothers coming from far can stay in these waiting homes starting from the late gestational age to encourage pregnant mothers and their families to utilise skilled delivery assistants and receive postnatal care. Participants, however, reported that:

> *"The health facilities lack functional maternal waiting homes where mothers rest before and after delivery".*

> *"In some health facilities, though there are maternal waiting homes, they are not functional as a result of lack of water, electricity, beds and other necessary equipment".*

The absence of maternity waiting homes in health facilities is also challenging in other African countries such as in Zambia (Sialubanje, Massar, van der Pijl, Kirch, Hamer & Ruiter 2015:61). Therefore, maternal waiting homes with the necessary equipment and supplies must be available at all health facilities if skilled attendance at birth and during the postnatal period is to be improved.

3.9.1.4 Inadequate equipment and supplies

The provision of quality postnatal care can only be achieved when the health facilities are supplied with the necessary equipment and supplies (Mkoka, et al. 2014:2).

According to Essendi, et al. (2015:7), the shortage of basic supplies and equipment impairs the provision of basic maternal and newborn care services during the postnatal period. According to the WHO (2014:1-22) and NICE (2014:1-7), equipment and supplies for the provision of quality postnatal care include medication, medical supplies, and diagnostic materials, among other things. Participants indicated that:

> *"Health facilities do not provide quality postnatal care as they lack the necessary equipment needed for postnatal care services".*

> "*Postnatal care in Ethiopia is exposed to the shortage of equipment such as diagnostic equipment and* essential drugs*".*

In rural health institutions, completed packages of postnatal care were not provided for mothers and newborn babies as a result of the challenges mentioned by another participant:

> "*Health facilities in rural areas lack drug supplies for management of complication of postnatal care".*

3.9.2 Infrastructure problems

Infrastructure problems, such as the availability of transportation services, road accessibility, and distances to health facilities, are factors that can impede postnatal care service utilisation (Roro, Hassen, Lemma, Gebreyesus & Afework 2014:3-5). These aspects were emphasised by participants in this study as described next.

3.9.2.1 Inaccessibility of transportation services

As indicated in a study by Gebrehiwot, Goicolea, Edin and Sebastian (2012:4), inadequate or inappropriate transport and the unavailability of ambulance services make it difficult for women to reach health facilities and thus compromise the utilisation of postnatal care. Participants also referred to this concern by indicating that:

"Though *there are improvements in transportation services in Ethiopia still it is a challenge for postnatal care services as many women from rural areas do not have transportation access and are forced to walk on foot for more than 2 hours when they seek health services".*

"Some of the mothers do not know how to get ambulance services for transportation".

3.9.2.2 Road infrastructure inaccessibility

Existing evidence indicates that road inaccessibility is one of the challenges related to transportation services in offering postnatal services (Onta, et al. 2014:4; Roro, et al. 2014:4). There are areas in Ethiopia where women could not be transported to health facilities using ambulance services due to the bad terrain and poor roads (Roro, et al. 2014:3-5). This was also indicated by some participants in the current study as they mentioned:

"*The unavailability of roads and bad terrain in Ethiopia is a barrier for many women residing in rural areas of Ethiopia that need to be addressed if postnatal care is to be improved".*

"There are areas where women are unable to get any transportation services for postnatal care".

3.9.2.3 Distance to a health facility

The distance to health facilities is challenging as women residing in remote areas have difficulty in utilising maternal health services, including postnatal care (Shehu, Ibrahim, Oche & Nwobodo 2016:98). If the walking distance to a health facility is more than 5 km, it is a known barrier for a woman to utilise postnatal care services (Tura, et al. 2014:60). This is also confirmed in the current study as some participants shared:

"*Long-distance to the health facility is a barrier for postnatal care utilistion as many women may not seek health care when the health facility is far".*

"Postnatal services should be available within short distances for women".

3.9.3 Cultural concerns

The utilisation of maternal health care, postnatal care included, is influenced by the culture that is respected by the community (Ademiluyi & Aluko-Arowolo 2015:153). Health facilities should give due attention to cultural concerns and practices in providing postnatal care for women of diverse cultural groups. The inability to perform cultural practices in health facilities is a barrier to skilled maternal health care (Alemayehu & Mekonnen 2015:1). As mentioned by some participants in this study:

"*There is no preparation of porridge in the health facilities even the coffee ceremony is not commonly practiced. However, women in Ethiopia like to have those cultural ceremonies".*

"There are no maternity waiting rooms for women after delivery to stay and rest in, to utilise postnatal care and they do not get the things they want in relation to their culture. These all have contributed to the low postnatal care utilisation."

It was revealed in this study that the absence of cultural practices in health facilities, such as porridge preparation and coffee ceremonies, are challenges. The postnatal mother wants to be discharged early to attend the cultural practices at their home, as indicated by some participants:

"*Some postnatal women want to remain at home during the postnatal period to practice their beloved culture".*

"*Women like to be discharged early to attend the cultural ceremonies at their home which is a barrier to utilise postnatal care at health facilities".*

In Ethiopia, the Ministry of Health recommended the presentation of culturally recommended diets immediately after birth at the maternal waiting rooms in the health facilities. These cultural practices motivate the mother and their family to utilise skilled maternal health care, including postnatal care. Currently, postnatal care utilisation is low because of limited or no implementation of these ceremonial practices in the maternal waiting homes at health facilities (FMOH 2014).

3.9.4 Capacity

The continuing education of healthcare providers plays a significant role in maintaining a competent workforce (KoS, MoH 2011:23). Postnatal care providers need to participate in continuing professional development to update their knowledge and skills for the provision of quality and standardised postnatal care (KoS, MoH 2011:23). Inadequate continuing professional development (Kreyberg & Helsingen 2010:27) may result in the provision of inconsistent or poor-quality care, which may contribute to complications, leading to maternal and neonatal morbidity and mortality. Participants confirmed this requirement and indicated that:

> "*Postnatal care providers should attend continuing professional development frequently to update their skills if postnatal care services are to be improved".*
>
> *"Continuing professional development for capacity building should be provided for all postnatal care providers and coordinators".*
>
> "*Postnatal care providers who have no continuing professional development have difficulty in rendering quality services".*

3.9.5 Accessibility of health services

3.9.5.1 Inaccessibility of the health facility

The accessibility of the health service is one of the factors that determine its utilisation since maternal interest alone may not ensure utilisation of the services (Kea, Tulloch, Datiko, Theobald & Kok 2018:96). However, universal access to

postnatal services is challenging for low-income countries, including Ethiopia (Gessesse 2015:100-110). Similarly, participants in the current study shared:

> "*In Ethiopia, though there is improvements inaccessibility of the maternal health care including postnatal care, still many women in rural areas do not have access that must be improved".*
>
> "*If postnatal care is to be improved, the postnatal care services should be accessible for all postnatal mothers".*
>
> *"Access to postnatal services care must be improved if postnatal care is to be improved in Ethiopia as many women in rural areas lack the access".*

3.9.5.2 Inadequate referral system

A referral system is defined as the transfer of postnatal mothers or newborns to advanced health facilities for further care when a complication arises (WHO 2013:19). Referral systems/services must be ensured to manage maternal and newborn health problems and complications that could not be managed at first-level health facilities (Mpemba, Kampo & Zhang 2015:774-783). Evidence indicated that delays in referral could cost the lives of both the mother and newborns or result in long-term obstetric complications (Hussein, Kanguru, Astin & Munjanja 2012:e1001264; Chaturvedi, et al. 2014:5). Participants raised their concerns by stating that:

> *"Referral services during postnatal care, when a complication is encountered, is challenged in Ethiopia by many factors such as poor coordination, lack of the skills by postnatal care providers to identify complications and accessibility of transportation".*
>
> *"The communication on referral services among most of the health facilities rendering postnatal care services is not effective".*

The referral system to higher levels of care must be based on the presenting health problem in mothers and newborns, as recommended by some participants:

> "*Postnatal mothers and their newborns must be assessed and referred early based on the health problem and complication they develop to reduce maternal morbidity and mortality".*
>
> *"Complications during postnatal care can be managed through timely referral and thus contributes to the prevention of maternal or neonatal deaths".*

3.9.6 Guidelines

Quality, evidence-based, and standardised postnatal care can be provided if guidelines are available and used (WHO 2013). When guidelines are not used by the postnatal care providers and coordinators, it could result in unorganised and fragmented postnatal care being provided to postnatal mothers and their newborns (Roets, et al. 2018:62-67). Guidelines pertaining to postnatal care can prevent common gaps in the provision of postnatal care, which in turn could lead to a reduction of maternal and neonatal deaths (Pelzang 2010:913-914). However, the respondents reported that the guidelines for postnatal care are not accessible at some health facilities:

> "*Though there are many challenges on postnatal care services, the shortage of guidelines is a serious challenge which compromises the quality of postnatal care provided to mothers and newborns".*
>
> "*Postnatal care services are fragmentally rendered as there are no guidelines in some health facilities".*
>
> *"All health facilities rendering postnatal care must use the recommended guidelines to improve the quality of postnatal care".*

3.9.7 Lack of communication with healthcare users

Effective telephone communication between the postnatal mother/her family to notify midwives, health extension workers, and other health professionals of labour and postnatal care can increase the utilisation of postnatal services (Lund, Hemed, Nielsen, Said, Said, Makungu & Rascha 2012:1260). Participants recommended that midwives and other postnatal care providers must provide their telephone numbers and ambulance drivers' telephone numbers to pregnant women during antenatal care so that the women or their families can call for postnatal care notification, especially if the delivery is at home. Participants reported that:

> "*Many women and their families in Ethiopia do not know whom to call and where to go when they need postnatal care or develop any health problem".*
>
> *"The women or someone from their family should have the phone number of health care providers or ambulance drivers to call them when the need arises".*
>
> "*Effective communication among postnatal care providers and pregnant mothers should be ensured to improve the postnatal care services".*

Although it is not realistic to expect the personal numbers of staff to be shared with mothers, the line of communication must be communicated to all. Therefore, which number to call to talk to a health professional, to request an ambulance service, the health extension worker, as well as the women's development army should be discussed so the mother/family can receive skilled professional services, especially in emergencies (Jackson, Tesfay, Godefay & Gebrehiwot 2016:9; Lund, et al. 2012:1260).

3.9.8 Poor monitoring and evaluation

Effective postnatal care monitoring and evaluation mechanisms are of great importance to assess the quality of postnatal care offered to mothers and their babies, responses to the interventions provided to mothers and babies, and whether the postnatal care services led to objectives being achieved (KoS, MoH 2013:26).

Monitoring is the ongoing process of reviewing interventions to determine whether they are being carried out according to plan and to assess whether there may be a need to amend so that they can achieve their intended goals (UNDP 2009:81-83).

The monitoring and evaluation of postnatal care services contribute to the identification of gaps and areas of improvement, as well as scaling-up best practices in the implementation (KoS, MoH 2013:26). However, some participants in this study indicated that the monitoring and evaluation of postnatal care services are weak and may be a challenge for the implementation of the contextualised framework in the Ethiopian context.

The respondents also recommended that monitoring and evaluating postnatal care should be improved for easier implementation of the contextualised framework and improvements in maternal and infant health. Postnatal services need to be monitored and evaluated at all levels where postnatal service provision and coordination is carried out, as indicated by participants in the current study:

> *"In most of the health facilities, monitoring, and evaluation of postnatal care services are poor. However, as it is an integral component of the postnatal services it needs to be improved in Ethiopia".*

> *"There should be strong monitoring and evaluation if postnatal care is to be improved".*

Monitoring and evaluation can encourage postnatal care team building, enhance transparency in rendering postnatal care services, and foster accountability for maternal and neonatal mortality rates. The monitoring and evaluation also highlight changes in the physical environment where postnatal services are offered that affect maternal, neonatal and child mortality (KoS, MoH 2013:26).

3.10 OPPORTUNITIES IN CONTEXTUALISATION OF THE FRAMEWORK

Participants were asked in an open-ended question to mention any opportunities for implementing Chelagat's framework in the Ethiopian context using AGREE II. The

results indicated that there were identified opportunities to implement the framework in Ethiopia. These were confirmed by the average domain score of 93%, indicating the framework can easily be implemented as a result of available opportunities, including supporting policy, the presence of a health sector transformation plan, and good governance (refer to Table 3.34).

Table 3.34: Opportunities for the implementation of the contextualised framework (N=422)

Lists of items	Number of appraisers	Total number of items	Minimum possible score	Maximum possible score	Obtained score	The scaled domain score
There are opportunities in implementing the framework in the Ethiopian context	422	1	422	2954	2744	93

The open-ended questions that addressed the possible opportunities to contextualise the framework in the Ethiopian context revealed three themes namely: (1) health policy, (2) the health transformation plan, and (3) good governance (refer to Table 3.35).

Table 3.35: Opportunities for implementing the framework in Ethiopia

Theme	Category	Subcategory
Health Policy	Good Ethiopian Health Policy (1993)	*"The Ethiopian Health Policy well addressed the issue of maternal health care as it gives due attention to the health of mothers and children".* *"The Ethiopian Health Policy gave due attention to maternal health care but the problem is its practical implementation".*

Theme	Category	Subcategory
Health transformation plan	The health transformation plan	"*The output and strategies of the Chelagat framework are very congruent to that of the Ethiopian federal ministry of health, the health sector transformation plan and thus the transformation plan will facilitate the implementation of the framework within Ethiopia"*. "*The health sector transformation plan is a good opportunity for improving maternal health care services including postnatal care".*
Governance	Good governance	*"The Ethiopian government intends to improve the good governance at all health system levels to satisfy the health needs of its citizens and improve the quality of health services including postnatal care. This is a good opportunity for implementing the framework".* *"The Ethiopian government is committed to improving maternal health care including postnatal care".*

3.10.1 Health policy

The provision of health services relies on the efficient functioning of a number of systems, including human resources, financial management, procurement, and reporting that should be emphasised in planning quality health care, including postnatal care (Wanjau, Muiruri & Ayodo 2012:117-119).

The Ethiopian Health Policy was mentioned as a good opportunity to implement Chelagat's framework as the framework will enhance the achievement of the goals of the Ethiopian Health Policy in terms of improving maternal health care, including postnatal care (Federal Democratic Republic of Ethiopia Ministry of Health 2015:64). In the Ethiopian Health Policy document, priority was given to maternal health care, including postnatal care, recommended to be offered in community-based health interventions. Participants in the current study also stated:

> "*The Ethiopian Health Policy well addressed the issue of maternal health care as it gives due attention to the health of mothers and children".*
>
> *"The Ethiopian Health Policy gave due attention to maternal health care but the problem is its practical implementation".*

3.10.2 Health transformation plan

The Ethiopian FMOH also developed the health sector transformation plan, which was implemented starting from 2016. In this document, it is indicated that postnatal care for mothers and babies is emphasised and recommended to be rendered effectively. It is indicated in the document that the postnatal period is a critical phase in the lives of mothers and newborn babies, where most maternal and infant deaths occur. Thus, it is one of the high impact interventions planned in the health sector transformation plan (Federal Democratic Republic of Ethiopia Ministry of Health 2015:64).

Participants mentioned that implementing the health sector transformation plan has a very positive effect in the postnatal care context and said:

> "*The output and strategies of the Chelagat's framework are very congruent to that of the Ethiopian federal ministry of health, the health sector transformation plan and thus the transformation plan will facilitate the implementation of the framework within Ethiopia".*

"*The health sector transformation plan is a good opportunity for improving maternal health care services including postnatal care".*

The implementation of the contextualised framework for postnatal care in the Ethiopian context also requires opportunities to easily put the framework into practice. The Ethiopian health sector transformation plan resembles the strategies listed in the developed contextualised framework for improving postnatal care (refer to Figure 4.1). The following are some of the opportunities included in the health sector transformation plan in Ethiopia; these are believed to support the implementation of the contextualised framework in the Ethiopian context.

- **Determination and political commitment**

A participant indicated:

"The Ethiopian government is highly committed to improving maternal health and this will contribute to the implementation of contextualised framework".

- **Active community engagement (formal and informal)**

A participant said:

"*The community involvement is one of the priority issues in the health sector transformation plan and it is also important for the implementation of the contextualised framework".*

- **Improved health care seeking behaviour**

A participant reflected*:*

"The health sector transformation plan gave due attention for enhancing health care seeking behavior and this will contribute to the implementation of the contextualised framework".

- **Sustained national economic development**

A participant shared*:*

"In the health sector transformation plan, economic development is a priority area and can contribute to minimise budget constraints of postnatal care".

- **Improved road infrastructure, telecom, electrification**

A participant reflected:

"The intended improvement in infrastructure, telecom, and electrification in health sector transformation plan can contribute to the implementation of the contextualised framework".

- **Improved access to education**

A participant said:

"Improvement in access to education which is indicated in health sector transformation will contribute to improvement in educational status and thus will contribute to postnatal care services utilisation".

- **Active engagement of other sectors**

A participant mentioned:

"The active involvement of other sectors for improvement of health which was indicated in Ethiopian health sector transformation is a contributing factor for improving postnatal care".

- **Health in all policy approaches, multi-sectoral collaboration**

A participant reflected:

"Multi-sectoral approach indicated in the health sector transformation can highly contribute to postnatal care service improvement in Ethiopia".

3.10.3 Good governance

The role of good governance in health systems is seen as an integral component of the effectiveness, efficiency, and quality of health care as there is increasing evidence that health system governance is critical to health systems operation and overall performance (Pelzang 2010:914). For the responsible facilities to address the local health needs of the community and minimise or mitigate the administrative complexities, the government of Ethiopia initiated health facility governance reforms by introducing boards for hospitals and governing bodies/management committees for health centres at PHCU level. These governing bodies/management committees participate in planning and implementing the healthcare services rendered to the community (FMOH 2010:27).

In Ethiopia, health system governance is one of the most important pillars of the health system that has received due attention from the Ethiopian health sector over the past decade. Participants confirmed this notion and said:

> "*The Ethiopian government intends to improve the good governance at all health system levels to satisfy the health needs of its citizens and improve the quality of health services including postnatal care. This is a good opportunity for implementing the framework".*

> "*The Ethiopian government is committed to improving maternal health care including postnatal care through the leadership of the Federal Ministry of Health (FMOH), the health sectors have various coordinating mechanisms at the federal, regional, and woreda (district) levels*".

3.11 CONCLUSION

Chapter 3 presented the methodology of Phase 1, which explained the assessment of the adaptation and contextualisation possibility, as well as the challenges and opportunities, for the implementation of the contextualised framework in the Ethiopian context.

The lack of physical resources in health facilities, infrastructure problems for postnatal care, cultural concerns, lack of capacity building, inaccessibility of health services, lack of guidelines for postnatal care, lack of communication with ambulance services, weak monitoring, and evaluation, were identified as challenges in implementing the framework.

The health policy in Ethiopia, the Ethiopian health sector transformation plan, as well as good governance were described by the respondents as presenting an opportunity for the implementation of the contextualised framework in the Ethiopian context.

The next chapter presents Phase 2 of the study, where the contextualised framework and action plan for implementation were developed.

CHAPTER 4
PHASE 2: THE CONTEXTUALISED FRAMEWORK

4.1 INTRODUCTION

Chapter 4 entails the development of the contextualised framework and the draft action plan with the embedded validation instrument for implementation. The data gathered in Phase 1, as well as the literature review, were utilised in the development of the draft contextualised framework and action plan to facilitate the implementation thereof. The study's progress, as well as a summary of the chapter's content, is illustrated in Table 4.1.

Table 4.1: Study progress and summary of chapters' content

CHAPTER	DESCRIPTION OF THE CHAPTER
1	**Overview of the study**
2	**Literature review** • Maternal mortality • Postnatal care in Ethiopia and Kenya • Chelagat's framework • Models to test the applicability
3	**1. Overarching research design** **2. Phase 1** • Research design • Methodology • Data gathering • Data analysis and interpretation of findings
4	***Phase 2*** • Literature review on: ➢ Contextualising a framework ➢ Action plan Development • Development of the contextualised framework and draft action plan for implementation

4.2 CONTEXTUALISING A FRAMEWORK

Contextualisation is described as the process whereby clinical recommendations or frameworks are extracted, synthesised, and used to create new interventions or practices from previously developed high-quality sources (Dizon, Machingaidze & Grimmer 2016:442).

In this study, contextualising refers to a specific framework (Chelagat's framework), developed in Kenya, but which was found relevant to be implemented in another setting, namely Ethiopia. The process of contextualising requires additional considerations to incorporate into the local contexts, including local service delivery issues (Dizon, et al. 2016:442), as assessed in Phase 1 of the study.

4.2.1 Advantages of contextualising frameworks

The process of developing new practice guidelines or frameworks is usually very expensive, takes a long time and requires a competent and highly qualified team of experts from specific professions such as clinicians, managers, and policy-makers (Dizon, et al. 2016:442). Consequently, the financial, human resources and opportunity costs of developing new practice guidelines or frameworks are often difficult due to budget constraints, specifically in low- and middle-income countries (LMICs) such as in Ethiopia (Dizon, et al. 2016:442).

In developing countries, contextualising a framework that has been developed, tested, and implemented elsewhere, where a scientific process was used to develop and validate that framework, might establish recommendations relevant to local contexts. Contextualising such a framework can be a cost-effective and appropriate option for minimising barriers to implementation and improving practice (Dizon, et al. 2016:442), which in this context, is improved postnatal care in Ethiopia.

4.2.2 Principles of contextualisation

In contextualising a framework from one context to another, thus from Kenya to the Ethiopian context, the ADAPTE (an international collaboration of guideline

developers, researchers, and clinicians who aim to promote the development and use of clinical practice guidelines through the adaptation of existing guidelines), as described by Harrison, Légaré, Graham and Fervers (2010:80), was utilised. The ADAPTE core principles for the contextualisation of the framework were (1) Respect for evidence-based practices; (2) Ensuring the quality of the contextualised framework through the use of reliable and consistent evidences and principles; (3) Involvement of key contributors in postnatal care practices in Ethiopia; (4) Consideration of contexts to ensure the applicability of the contextualised framework in Ethiopia; (5) The flexibility of the format of the original framework (Chelagat's framework) to accommodate another context; and the (6) Acknowledgement of source materials in contextualising the framework (Harrison, et al. 2010:80).

4.2.2.1 Respect for evidence-based practices

Scientific evidence bases from different sources, as well as the data gathered during Phase 1 of the study, formed the foundation of the contextualised framework. The production of evidence-based data is usually fundamental for researchers who want to develop or contextualise a framework. They therefore gather primary data as well as reviewing available literature to answer research questions. The available evidence base information should be derived from transparent, comprehensive sources to be credible (GRADE Working Group 2011:1311-1316).

In this study, credible sources such as Google Scholar, PubMed Journals, Directory of Open Access Journals, UNISA's repository and the UNISA library were used as databases to conduct the literature review. In the development of the contextualised framework, the information from the literature obtained through the mentioned database sources, as well as all data gathered in Phase 1 of this study, was used. While expert opinions are an essential component of framework development, evidence derived from them may not always be credible and thus needs to be evaluated against the available body of evidence (GRADE Working Group 2011:1311-1316).

The use of expert opinions without evaluating it against the available evidence may lead to the risk of presenting selective, outdated or misleading (biased) views on the

subject matter. In this study, expert opinions were gathered through qualitative research, a Delphi technique was evaluated with available evidence in the literature review, and these steps provided credible 'best available evidence' statements to generate reliable information about the problem under study (GRADE Working Group 2011:1311-1316). Moreover, the quantitative data gathered during Phase 1 of the study were interpreted against the existing evidence to enhance the credibility of the findings.

Similarly, in contextualising Chelagat's framework, a thorough literature review on postnatal care and postnatal care services was done to obtain evidence-based credible information. The study respondents were also selected based on their experience (refer to Section 3.5.4) in postnatal care services so they would offer reliable and evidence-based information about the phenomenon.

4.2.2.2 Ensuring the quality of the contextualised framework

Contextualised frameworks that lack international standards can lead to recommendations being adapted based on unscientific, unaccepted or low-quality evidence, increasing doubt about their credibility (Sonawane, Karvande, Cluzeau, Chavan & Mistry 2015:264-71). Therefore, the process of contextualising a framework for practice improvement must ensure that the methods and principles that are followed are of high quality. Rigour, trustworthiness, transparency, and dependability of the proposed processes for the local contexts must be enhanced.

The quality of the contextualised framework was maintained through scientific procedures that were implemented by analysing and interpreting the data gathered through both quantitative and qualitative methods. According to Polit and Beck (2014:598), trustworthiness is "the degree of confidence that qualitative researchers have in their data, using the strategies of credibility, dependability, confirmability, and transferability". In this study, to enhance the quality of the framework, the opinions and recommendations provided by the respondents were weighted against the contribution made to the current understanding of postnatal care, and evaluated in terms of their rigour, validity, reliability, and trustworthiness (Moule & Goodman 2014:188).

The assessment tool used for the contextualisation of the framework (AGREE II) enhanced the methodological rigour and transparency of the framework (AGREE II 2013). It provided an explicit basis for informed and transparent decision-making around the contextualisation and modification of Chelagat's framework, thereby enhancing the quality. Assessing the adaptation and contextualisation possibility of the original framework (Phase 1 of this study) from retrieved data involved an evaluation of the quality of Chelagat's framework (refer to Annexure 1). The data retrieved using AGREE II indicated that Chelagat's framework was applicable within the Ethiopian context and the results indicated a high mean score of 93% pertaining to the quality of the framework (refer to Phase 1, Section 3.8.7).

The recommendations from the respondents, in narrative form, were interpreted along with the literature control to support or contradict the findings (refer to Phase 1, Section 3.9). These were utilised in contextualising the framework and thus contributed to the improvement of the quality of the contextualised framework.

4.2.2.3 Involvement of key contributors in postnatal care practices

In principle, it is recommended that patients, policy-makers, and clinicians or service providers should be involved in the process of framework development to ensure that the framework or the guideline considered the needs of the target healthcare providers and healthcare recipients (Kredo, Gerritsen, van Heerden, Conway & Siegfried 2012:1). The involvement of key contributors or stakeholders of postnatal care services in Ethiopia (refer to Phase 1, Section 3.5.2) assisted in the identification of challenges and opportunities, as well as the applicability of Chelagat's framework being contextualised. The involvement of key contributors created a sense of ownership, which enhanced the implementation of the contextualised framework by using an action plan for easy implementation within the Ethiopian context.

In this study, during Phase 1 the highest scores were obtained (on the mean score of the AGREE II) for stakeholder involvement and the applicability of Chelagat's framework (refer Phase 1, Section 3.8.2). The assessment pertaining to the competencies, experiences, values, and perspectives of postnatal care services in the Ethiopian context was made by involving postnatal care providers and

coordinators. Therefore, key stakeholders were involved in the development of the contextualised framework within the Ethiopian context.

4.2.2.4 Consideration of contexts to ensure the applicability

As recommended by Ernstzen, Hillier and Louw (2019:134), effective and successful incorporation of fitting interventions and scaling-up of scientific health interventions requires contextualisation. Contextualisation refers to the process of adapting frameworks developed for other settings and incorporating interventions that best fit into the available physical, socio-economic, cultural, health systems, stakeholder and institutional culture(s) that, in turn, contribute to the planning, implementation, monitoring, and evaluation of the health outcomes as a result of these interventions (Dizon, et al. 2016:4-5).

The effectiveness of a framework developed in one setting may be influenced by many factors when it is contextualised for other settings. Some of the factors that can influence the effectiveness of the contextualised framework include, but are not limited to, acceptance by the community, the local policy-makers, the healthcare providers and/or patients; cultural acceptance of the services; consideration of the local contexts; availability of care; affordability and accessibility to the target people to whom it will be implemented (Alvarez, Lavis, Brouwers & Schwartz 2018:19).

In this study, the original framework was developed by Chelagat for Kenya, a country with similar socio-demographic characteristics as Ethiopia (refer to Phase 1, Section 1.2). Factors specific to Ethiopia, such as the health policy, cultural issues, health system, maternal healthcare utilisation, the budget for health care, and the available human resources, were taken into consideration in contextualising the framework for the Ethiopian context (refer to Section 4.3). There was no significant difference in those factors (refer to Section 2.7), and the framework can be similarly implemented in both countries. The factors specific to Ethiopia that were identified from the literature review, as well as from the data gathered during Phase 1 of the study, were included as **context points** in the contextualised framework for possible implementation in Ethiopia.

Context points were defined as contextual (cultural, health system, political, and other) factors that may have an impact on the implementation of the contextualised framework. In the contextualised framework, the context points were identified, organised, and included in the original components of the framework by the researcher. The context points that were identified to be included within the existing framework components were: the problem, community needs, outputs, influential factors, strategies, and assumptions. The draft version of the contextualised framework was compiled by adding the contexts in **RED BOLD UNDERLINED CAPS** (refer to Figure 4.1).

4.2.2.5 The flexibility of the format of the original framework

Contextualisation of a framework occurs when a framework developed elsewhere is also intended to be implemented in its entirety, with some amendments, to address local contexts (refer to Section 4.1). It therefore has to be related to local service delivery issues. During the contextualisation, the evidence base and the recommendations remain the same as the original (i.e. they are adopted) but are open to the inclusion of new recommendations to be effectively implemented locally (Dizon, et al. 2016:442).

Contextualised frameworks that are from original sources, in this study's context Chelagat's framework, must retain its original form but, were amended, use scientific writing principles and an action plan that is clear for implementation in the local contexts. Knowledge about contextual factors was thus essential in informing the process of framework contextualisation.

Contextualised frameworks must also be accompanied by context points to indicate the amendments made to facilitate the operationalisation of the frameworks in the local context where it is intended to be implemented (Dizon, et al. 2016:442), in this context, Ethiopia. The contextualisation process in the current study necessitated thorough knowledge about influential factors for postnatal care services, such as health facility infrastructure, cultural issues, communication and accessibility of health services. These were identified by experienced respondents in Phase 1 of the study

and from the available literature. The influential factors were made context points of the contextualised framework (refer to Sections 3.9. and 3.10).

The context points that were identified from the challenges and opportunities in Phase 1 and the available literature, are indicated in **RED BOLD UNDERLINED CAPS** in the contextualised draft framework. Therefore, as illustrated in Figure 4.1, the original framework remained as it was developed and designed by Chelagat (2015), and the context points were included to indicate the contextualisation for the Ethiopian context.

4.2.2.6 Acknowledgement of source materials

In contextualising frameworks, source materials are original and established sources of evidence-based materials from which the contextualised or adapted materials could be produced (Selby, Hunter, Rogers, Lang-Robertson, Soklaridis, Chow, et al. 2017:e016124). In the current study, a framework by Chelagat, which was developed to improve postnatal care in Kenya, was the source material and thus acknowledged throughout the development of the contextualised framework.

The two key and common defining elements of framework contextualisation are the transparency and explicitness of the process (i.e. sufficient details so that the methodology could be reproduced and potential adopters are confident that the process used to contextualise the framework is rigorous and thorough). Appropriate referencing and acknowledgement of intellectual credits to the source materials have thus been made (Selby, et al. 2017:e016124). In addition to the source material, the researcher acknowledged all other sources that were reviewed and used in the study while contextualising the framework.

4.3 THE DRAFT CONTEXTUALISED FRAMEWORK

The principles described in Section 4.2 were applied in adapting the draft contextualised framework. The context points were defined as contextual or identified recommendations that may have an impact on the implementation of the contextualised framework, and thus postnatal care in Ethiopia. Context points formed

a core part of the contextualisation process and were derived from the data analysed in Phase 1 of the study (refer to Sections 3.9 and 3.10).

The following adaptations were included: **Strategies** - continuing professional development (training updates for postnatal care providers by FMOH of Ethiopia); **Influential factors** - Supporting health policy, Constitution of Ethiopia, Commitment by the Ethiopian government to the attainment of the health sector transformation plan, good governance, improved maternal waiting homes and budget constraint in the FMOH of Ethiopia; and **Outputs** - accessible updated guidelines, available maternal waiting homes, available and effective communication with ambulance services, as well as available postnatal cultural ceremonies at a health facility. These adaptations were identified from respondents' recommendations during Phase 1 of the study, as well as from the available literature in Chapter 2 of this thesis (refer to Chapter 3, Sections 3.9 and 3.10).

To ensure that all requirements pertaining to action plan development were incorporated, the literature on action plan development guided the researcher in developing the draft action plan.

4.4 AN ACTION PLAN

An action plan can be defined as the road map designed to lead to a required designation, such as the resolution of existing health problems (Ahmed, et al. 2014:2157-6068; Rajan, et al. 2014:1). It is a way of recognising a set of activities or the process that guides the day-to-day activities necessary to achieve an organisation's goals and objectives (Nickols 2016:6).

An action plan, also called an implementation plan, contains a detailed work plan that guides the effective implementation of a comprehensive health intervention strategy as it specifies important activities that must be carried out during a designated time frame. In this study's context, an action plan to facilitate implementation referred to the developed action plan that could facilitate the implementation of the contextualised framework in the Ethiopian context.

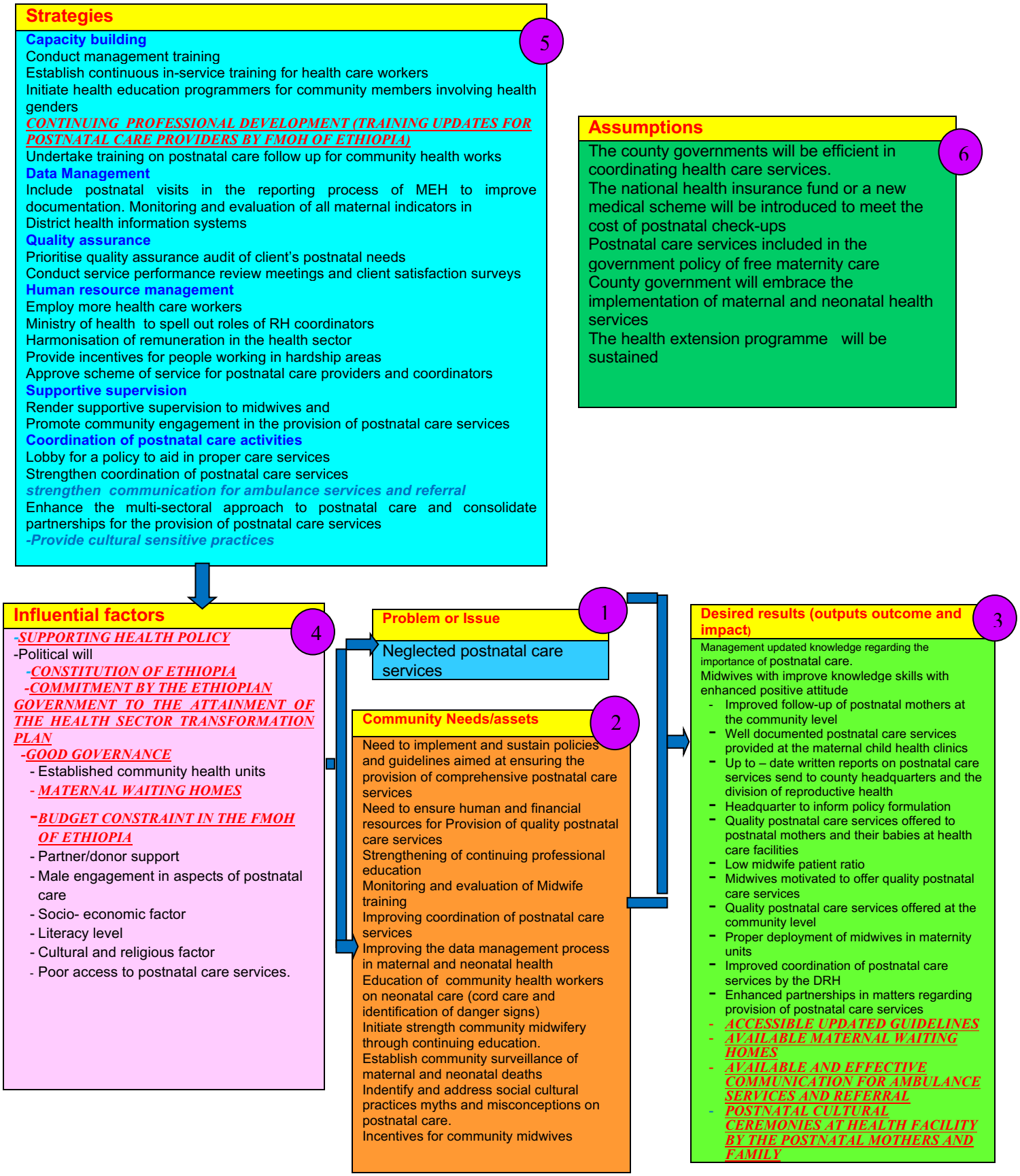

Figure 4.1: Draft contextualised framework

4.4.1 The rationale of an action plan

Public health interventions, as well as the strengthening of a country's health system, can be successfully achieved when an action plan is developed and put in place where the interventions are implemented (Rajan, et al. 2014:3). Similarly, an action plan to facilitate the implementation of the contextualised framework was needed and developed.

An action plan aids in the integration of ideas and resources to strengthen procedures and processes, ensuring that health workers and other stakeholders are focused on common goals, leading to improvements in the utilisation and quality of postnatal care (Hill & Jones 2013:11; Ahmed, et al. 2014:1; Sadeghifar, Jafari, Tofighi, Ravaghi & Maleki 2015:57). An action plan also contributes to organising and structuring all resources to get things done. The advantages of an action plan, as described by Hill and Jones (2013:11), that motivated the researcher to develop an action plan to facilitate the implementation of a contextualised framework, were:

- It provides a guide in planning the specific work needed to achieve objectives;
- It helps to justify the amount of funds needed to carry out the activities and how those funds will be utilised, thus enhancing creditability;
- It provides a guide for carrying out the required activities within the given period;
- It improves transparency as the activities will be shared with all who have the need or right to know what you are doing and why you are doing it; and
- It saves time, energy and other resources needed to carry out the activities.

4.4.2 Components of an action plan

Although there may be variations in the components of an action plan to implement specific frameworks or guidelines, depending on its purpose and the scope of implementation, the action plan must contain the following components as described by Lubbe, Roets and Van Tonder (2014:6397):

- the goal, objectives or strategy to which the activities pertain;
- the type of activities or changes that will take place;
- the responsible body to perform each activity; and
- the time frame for carrying out those activities.

In summary, an action plan should include: (1) what needs to be done (actions), (2) by whom it needs to be done (responsible bodies), and (3) when it needs to be done (time frame).

4.4.3 Principles of action plan development

The results of the literature review and data collected from the postnatal care providers and coordinators during Phase 1 of the study formed the basis for the development of an action plan for implementation. The process for action plan development followed recommended procedures.

As described by ConocoPhillips ([Sa]:1), the first principle to be considered in developing an action plan is (1) the description of the problem to be addressed. In this context, the problem is neglected postnatal care and it was thus included in the implementation action plan of the contextualised framework. It is also important to (2) engage the stakeholders in the development of the action plan to involve experts in the field of inquiry (ConocoPhillips, [Sa]:1).

In the development of the action plan, in this study postnatal care providers and coordinators were involved and provided their recommendations for improvement of postnatal care in Phase 1 of the study. Moreover, after it was developed, the action plan was validated by the postnatal care coordinators at district, regional, and national levels, ensuring stakeholders participation.

ConocoPhillips ([Sa]:1) states that (3) it is important to indicate how the action plan can be put into practice. In this study, the actions/methods to implement the contextualised framework have been indicated and components of the developed action plan were presented. It is also critical to (4) be able to identify the challenges

and opportunities of the action plan by engaging experts as required during the steps to develop the action plan. Similarly, in this study, the respondents (postnatal care providers and coordinators at different levels of the health system in Ethiopia) were asked to identify challenges and opportunities in implementing the contextualised framework in Phase 1 of the study. The identified challenges and opportunities became an input for the development of the action plan for the implementation of the contextualised framework.

Morris and Bardiche (2012:5) have similar steps as ConocoPhillips, but explain the need for (5) a clear strategy to engage healthcare teams and other stakeholders to ensure sustainable practices early and often, thereby creating value. It requires (6) the postnatal care providers and coordinators at district, regional and national levels to set a vision for future actions for postnatal care improvement (Morris & Bardiche, 2012:5; AONE, 2017:1). Moreover, the stakeholders are to (7) establish manageable steps, implement 'go no go' audits, and be transparent in measuring success; these are vital for any action plan (The Advisory Board, 2014).

When an action plan is developed, it needs to (8) ensure that clear processes/activities are in place to share performance data with the healthcare team to align improvement efforts listed in the action plan (Morris & Bardiche 2012:5).

Another important principle addresses the (9) structure of the action plan to ensure that it can be implemented. It must contain (a) an explanation of the actions required to reach specific objectives, (b) determine the most responsible person/s to manage the tasks, and (c) formulate a timeline or time frame for when specific tasks need to be completed to improve a process, system or achieve a specific outcome. In this study, the intended outcome is an improvement in postnatal care in the Ethiopian context (Mehdrad, Farzad, Jerris, Morteza & Omid, 2007:240; Sorra, et al. 2016:1; WHO 2016:1).

In the draft action plan, the responsible person/s for each action statement was indicated for the effective and efficient implementation of the contextualised framework. Similarly, the time frame for when each specific action is to be implemented was indicated in the action plan.

These principles are vital when developing an action plan to improve utilisation and quality of postnatal care in Ethiopia. The principles were thus addressed in developing the action plan to implement the contextualised framework in Ethiopia.

4.4.4 Process of the development of the draft action plan

All components of the action plan were based on specific and related aspects within the contextualised framework. The findings from the analysed data in Phase 1 of the study (challenges and opportunities) as well as available literature, were used in developing the draft action plan and are thus subject to modification during the validation process in Phase 3 of this study. The challenges and opportunities identified were incorporated in the contextualised framework and the applicable action statements to address all aspects were incorporated in the integrated document called “contextualised framework and action plan for implementation”. The framework and the action plan form one entry that was interwoven (refer to Table 4.2).

Specific objectives to be addressed under each of the identified themes, called action statements (refer to Table 4.2), were part of the action plan. The next step was to focus on the process and actions/methods needed to address each objective.

To achieve each of the actions/methods, the responsible groups/person/s were also identified and made part of the action plan. Lastly, for the facilitation of the implementation of the contextualised framework, the time frame for achieving those objectives/action statements was set and incorporated into the action plan (Lorig, Laurent, Plant, Krishnan & Ritter 2014:50-59; Sadeghifar, Jafari, Tofighi, Ravaghi & Maleki 2015:57) (refer to Table 4.2).

All comments, motivations and/or recommendations that were provided by the Delphi panellists in each of the rounds in Phase 3 were essential to improve the draft action plan until consensus was reached and the action plan was validated (refer to Table 5.2).

Based on the components described in the contextualised framework, recommendations made by the respondents during Phase 1 of the study and the consulted literature, the action plan for implementation included six focus areas namely: (1) **the problem**: which is neglected postnatal care in Ethiopia; (2) **Community needs**; (3) **Output**; (4) **Influential factors**; (5) **Strategies**; and (6) **Assumptions** (refer to Figure 4.1, Table 4.2 and Chapter 1, Section 1.5. for a detailed description). The community needs included issues such as (1) Policies and guidelines; (2) Human resources; (3) Financial resources; (4) Continuing professional education; (5) Effective monitoring; (6) Consistent evaluation; (7) Coordination of postnatal care; (8) Data management processes; (9) Community involvement; (10) Community surveillance; (11) Social and cultural practices; (12) Incentives for postnatal care providers; (13) Maternal waiting homes; (14) Effective communication; and (15) Cultural ceremonies. The **strategies** in the action plan included: (1) Capacity building; (2) Quality assurance; and (3) Supportive supervision. Some of the issues under community needs and strategies are discussed below.

4.4.4.1 Policies and guidelines

Policies and guidelines are an integral component of postnatal care and it is one of the components of the contextualised framework and action plan for implementation (refer to Section 3.7.11 for details).

4.4.4.2 Human resources

Human resources, as emphasised in the Systems Model (refer to Chapter 1, Section 1.5) and in the contextualised framework (refer to Figure 4.1), is one of the important inputs for addressing the health problem which, in this study's context, is neglected postnatal care in Ethiopia. Human resource management is an organisational role that regulates issues associated with staff, which in this context includes recruitment, performance management, organisation development, remuneration, employee motivation, and training (Nyandoro, Masanga, Munyoro & Muchopa 2016:28). In this study, it is indicated that the population to health professional ratios was high, reflecting the need to improve human resources for postnatal care (refer to Section 2.7.1.3).

4.4.4.3 Monitoring and evaluation

Effective monitoring and evaluation can contribute to the identification of good practices that can be scaled up to derive lessons from operational experience, thereby helping to improve performance. Team building, improving transparency and accountability are other important practices that can be achieved from monitoring and evaluation (United Nations Development Programme [UNDP] 2009:81-83).

Specifically, in the provision of quality postnatal care, effective monitoring and evaluation mechanisms are useful to assess the interventions and whether they are leading to the achievements of objectives; in the context of this study, these include improvements in the utilisation and quality of postnatal care rendered to mothers and newborns. The respondents of this study stated that monitoring and evaluation of postnatal care services were key components in ensuring improvements in postnatal care services, replicating best practice in postnatal care, and identifying areas for improvement. Despite the benefits of monitoring and evaluating postnatal care, its implementation in Ethiopia is poor (refer to Table 3.33) and the respondents recommended the FMOH should provide regulatory frameworks to improve monitoring and evaluation of postnatal care services.

4.4.4.4 Coordination of postnatal care activities

Postnatal care service coordination involves the art of organising and mobilising both human and non-human resources required to carry out all patient care activities for the provision of quality postnatal care. The effectiveness of coordinating postnatal care depends on the understanding between the needs of the postnatal mothers and the skills and scope of practice of the services providers (Hillemeier, Domino, Wells, Goyal, Kum, Cilenti, et al. 2015:121-127).

In this study, respondents indicated that the poor coordination of postnatal care services is evident in many health facilities where postnatal care is rendered (refer to Section 3.9.6). Respondents thus recommended the need to improve postnatal care service coordination among postnatal care providers, coordinators, other stakeholders, the community, as well as the postnatal mothers (Looman, Presler,

Erickson, Garwick, Cady, Kelly & Finkelstein 2013:293-303). The respondents were of the opinion that the coordination of postnatal care should be strengthened. Moreover, a multi-sectoral approach should be initiated and partnerships consolidated, which would facilitate the implementation of the contextualised framework to improve postnatal care in the Ethiopian context.

4.4.4.5 Data management processes

Recording and reporting of the postnatal care services rendered (documentation) by postnatal care providers is an essential component of safe, effective, and quality postnatal care service delivery; it is thus an integral part of midwifery practice (College of Registered Nurses of Nova Scotia [CRNNS] 2012:4). Postnatal care providers and coordinators are required to timely record all care activities to ensure comprehensive services are rendered to mothers (ICM 2013:14-19; Potter & Perry 2010:212; CRNNS 2012:4). Any failure to accurately record postnatal care activities is associated with the risk of inadequate or sub-standard postnatal care provision (CRNNS 2012:4). However, from the data gathered in Phase 1 of this study, 14.5% (N=422; n=61) of the respondents were of the opinion that postnatal care is not recorded and the respondents recommended the need to improve recording on postnatal care services for the implementation of the contextualised framework in the Ethiopian context (refer to Section 3.7.9).

4.4.4.6 Community involvement

Public health programmes, in this context the implementation of the contextualised framework, should involve the community for the achievement of its goal (KoS, MoH 2013:23; UNFPA, WHO & IPPF 2012:1). The community members should always be encouraged to be capacitated and consulted, thus taking part in implementing any public health programme.

Improving the quality of public health programmes can be achieved through consultation with community members; by determining what the community needs, what the community can benefit from the intervention, what has been done in the past, and what could be done to improve past ideas. It is only when the community

members are informed about the programme to be implemented that they can be part of the decision-making process, which will then lead to sustainable implementation of the health programme (KoS, MoH 2013:23; UNFPA, WHO & IPPF 2012:1).

The community should also be motivated and capacitated so that they can be advocates for improving postnatal care services, ensure a supportive environment and strengthened linkages while promoting service demand, uptake, and retention in postnatal care services. However, it was indicated in this study that community participation was minimal and recommended to be improved (refer to Section 3.7.14).

4.4.4.7 Capacity building

Capacity building can be defined as any specific action or series of actions targeted to improve individuals' or organisations' effectiveness, such as the provision of postnatal care to enhance competency and improve health outcomes (Management Science for Health [MSH] 2016).

The competency of postnatal care providers to render quality care should be ensured; therefore, capacity building is an integral component of an action plan to facilitate the implementation of the contextualised framework. As recommended by the WHO (2016), emphasis should be placed on the provision of training which will improve the competency of the service providers and thus enhance the quality of healthcare services.

The availability of training for postnatal care providers is one of the capacity-building processes that can improve the quality and utilisation of postnatal care services (WHO 2016). Congruently, in this study, the respondents also indicated the need for capacity building among postnatal care providers as an important activity to facilitate the implementation of the contextualised framework in Ethiopian health systems (refer to Section 3.7.6).

4.4.4.8 Quality of postnatal care services

Having a quality assurance mechanism in place is crucial for the improvement of the quality of postnatal care as well as the utilisation thereof (UNFPA 2014:4). Clients who have a positive perception of the quality of service tend to utilise the postnatal care service more often (Dettrick, Firth & Soto 2013:e83070).

Assuring the quality of postnatal care is crucial for the improvement of postnatal care and thus contributes to a reduction of maternal and neonatal deaths. Quality assurance allows facilities to identify gaps, good practices, and areas of improvement in the postnatal care they provide to mothers and infants. Unfortunately, in this study, some respondents indicated the quality of the postnatal care rendered to mothers and babies is poor, and it is associated with a lack of competency among postnatal care providers (refer to Section 3.7.4). This could mean that poor quality or sub-standard postnatal care practices can be repeated over and over again without being addressed or corrected.

Therefore, the respondents in Phase 1 of this study recommended the implementation of continuous quality improvement interventions based on the health delivery system and the contextualised framework to improve quality and ensure the effectiveness of postnatal care in the Ethiopian context.

4.4.4.9 Providing supportive supervision

Supportive supervision and mentorship can improve the knowledge, attitude and practices of postnatal care providers during the provision of postnatal care as pre-service training alone cannot generate clinical expertise (Narchi 2011:24). The fact that (from Phase 1) supportive supervision for postnatal care was poor in Ethiopia is a major problem, indicating that inexperienced postnatal care providers cannot be mentored to sharpen their competency and skills. This challenge may result in inconsistent or poor-quality postnatal care, which may lead to maternal and neonatal complications (refer to Table 3.18).

Therefore, it was indicated in the current study that the postnatal care coordinators at different levels of the health system in Ethiopia have to provide supportive supervision and mentorship for easy implementation of the contextualised framework, thereby helping close the gaps that exist in the provision of postnatal care.

Although not included in the framework of Chelagat (2015), the respondents in Phase 1 of the study, as well as the available literature, identified a lack of infrastructure (refer to Section 3.9.2), and lack of medical resources (refer to Section 3.9.1.4) as factors that can influence postnatal care. These factors are discussed below.

4.4.4.10 Health facility infrastructure

Health service delivery depends on the availability of basic health infrastructure (Ademiluyi & Aluko-Arowolo 2015:151-158). During Phase 1 of this study, the postnatal care providers and coordinators identified the inadequate health-related infrastructure in Ethiopia as a barrier to postnatal care services and they were of the opinion that strategies to improve infrastructure should be included in the contextualised framework (refer to Table 3.33). The government of Ethiopia, therefore, must review the health facility infrastructural needs (refer to Section 3.9.1.2), particularly safe water and electricity supply, and allocate financial resources according to these established needs to improve postnatal care.

4.4.4.11 Road infrastructure

The absence of well-maintained roads to avoid delays in reaching the health facility does not only act as a barrier to accessing health care but also affects other Systems Model inputs like human resources in the rural health facilities. Healthcare providers are not interested in providing professional services where infrastructure like roads are not available (Nyandoro et al 2016:3).

The lack of sufficient roads that can be driven on in all weather conditions contributes to the inaccessibility of healthcare as villages, towns and rural health facilities cannot be easily connected (Schoeps, Gabrysch, Niamba, Sie & Becher 2011:498). The availability of transportation systems (good road) is an input that will contribute to

improved access to health facilities that will improve postnatal care (Wilunda, Oyerinde, Putoto, Lochoro, Dall'Oglio, Manenti, et al. 2015:1).

In this study, respondents indicated that the lack of roads contributed to the inaccessibility of transportation for the community and postnatal care utilisers. The respondents indicated that as a result of the transportation challenge, most postnatal mothers spent their time waiting for transport which may, in turn, be a challenge for the implementation of the contextualised framework. Respondents thus mentioned the need to improve the transportation system in Ethiopia (refer to Table 3.33).

To improve postnatal care utilisation and minimise the impact of road inaccessibility on postnatal care, the respondents recommended (1) health facilities should be accessible within 5km of each village; and (2) improving the road infrastructure to increase road availability, are vital for the implementation of the contextualised framework (refer to Table 4.2).

4.4.4.12 Medical resources

The respondents in Phase 1 of the study suggested the need to improve medical resources such as drugs and medical supplies (refer to Section 3.9.1.4) that are required for the provision of quality postnatal care. Medical supplies are items that need to be replaced on a routine basis, such as (1) disposables (single-use items) and expendables (sometimes also called consumables); (2) items that are used up within a short time frame such as cotton wool, laboratory stains, and tape; (3) reusable items, namely catheters, sterilisable syringes; and (4) other items such as thermometers with a short life span (Dlamini 2016:140).

Equipment is capital equipment and durable items that last for several years, including beds, examination tables, sterilisers, microscopes, weighing scales and bedpans. Drugs are medications used to prevent or treat health problems during the postnatal period (Dlamini 2016:140).

a) Drugs

As indicated in the Systems Model, medical drugs for the provision of postnatal care are an integral part of the material resource (inputs).

b) Medical equipment

The availability of medical equipment in health facilities forms an essential part of postnatal care and must be accessible to health workers. The availability of medical equipment will enhance health workers' job satisfaction and patients' care satisfaction (Moran, Coyle, Pop, Boxal, Nancarrow & Young 2014:25).

Unfortunately, health systems in developing countries face shortages of medical equipment such as diagnostic types of equipment, negatively impacting service delivery in the midst of an ever-increasing population (Bonfim, Laus, Leal, Fugulin & Gaidzinski 2016:3). Respondents indicated that postnatal care is challenged by a shortage of medical equipment and recommended the need to improve the availability of the medical equipment at all health facilities (refer to Section 3.9.1.4) for the implementation of the contextualised framework, and postnatal care improvement.

4.4.5 The draft action plan for the implementation of the contextualised framework

The draft action plan for implementation with the embedded validation instrument is illustrated in Table 4.2. The table includes the identified strategies, the action statements that can be seen as the objectives needed to be reached, the actions/methods to achieve the action statements, the possible persons responsible to achieve the required results, as well as the possible time frames needed for the implementation of the actions to achieve the action statements or the required result.

To ensure that the action plan addressed all aspects of the contextualised framework and could be validated appropriately, the validation instrument was embedded to allow the panellists to see the entire document at one glance. The complete

embedded validation instrument, including the instructions as it was distributed to the panellists via email using Google forms, is attached as Annexure 6.

Step 2 of Phase 2 is concerned with the development of the **draft action plan** to facilitate the implementation of the contextualised framework (refer to Table 4.2). The overall validation process was achieved in three rounds. Figure 4.2 serves as an illustration of the different aspects of the validation process in each round until consensus was reached. It is therefore important to note that although all the specific actions are indicated in Table 4.2 (indicated as an asterisk and highlighted in red colour), they were not all validated in round 1. This was decided on to prevent the tool being too long in round 1, which could have resulted in panellists not completing the tool or not providing constructive feedback (refer to round 1 validation instrument, Annexure 5).

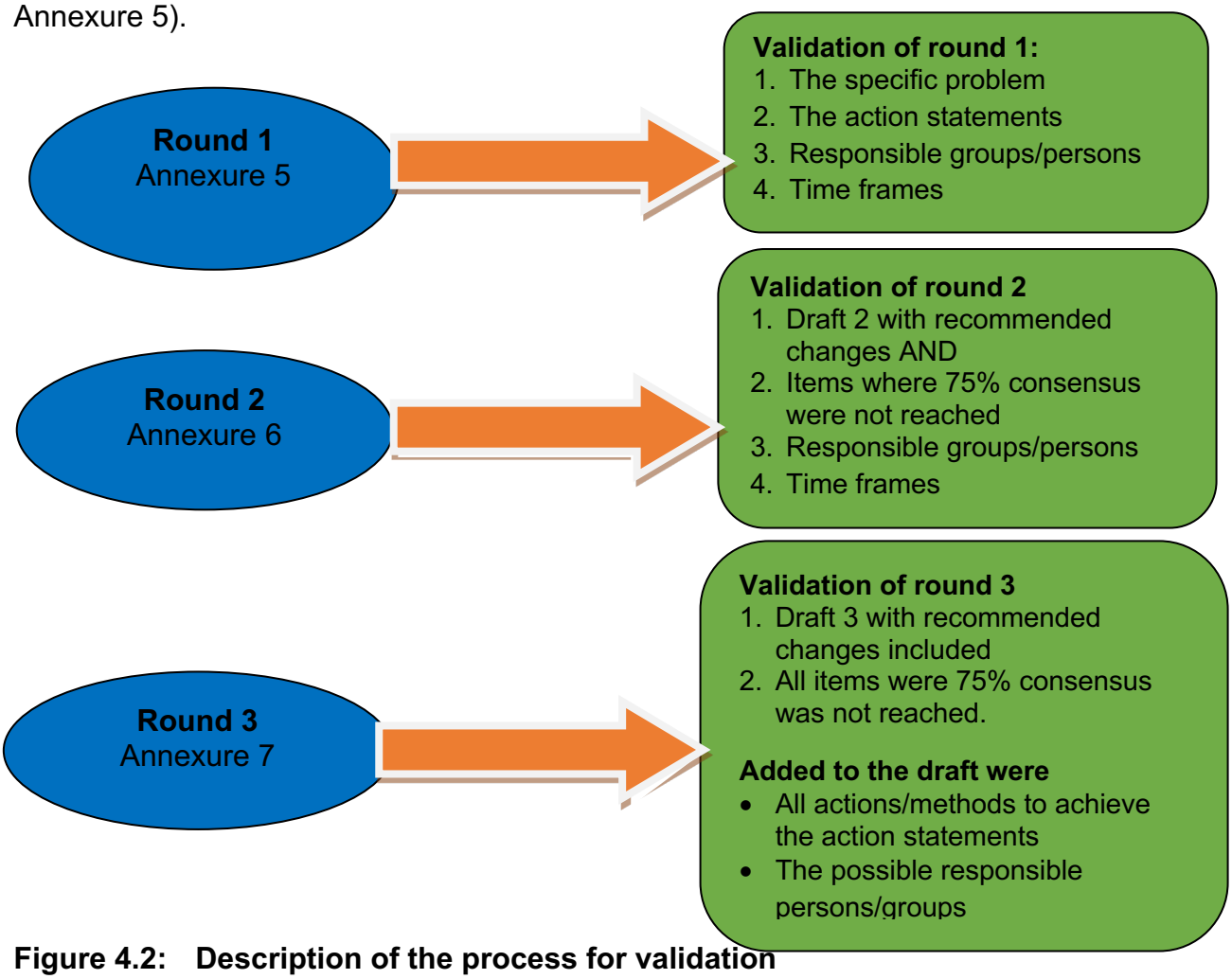

Figure 4.2: Description of the process for validation

To link the draft action plan with the implementation of the contextualised framework, colour was used to ensure that the relevance can be clearly understood.

1. The columns in **bright yellow** shading refer to the six elements in the contextualised framework, namely the problem, community needs, outputs, influential factors, strategy and assumptions, as it was illustrated in Figure 4.1 (number 1-6).
2. The columns shaded **bronze** indicate the action statement (objectives) to be addressed in the implementation of the contextualised framework.
3. The columns in **bright green** shading refer to the actions/methods to be taken to reach the objectives (the action statements).
4. The columns in **bright blue** shading refer to the person/s or structures responsible for the implementation of the action statements.
5. The columns with **soft blue** shading indicate the time frame in which the action statements must be implemented after the contextualised framework is agreed to be implemented (refer to Table 4.2).

Table 4.2: The draft action plan for implementation with an embedded validation instrument

Instructions: Evaluate every item by following the keys provided to express your agreement or disagreement and or make a click in the box next to your choice. You are kindly requested to choose one best option from the provided choices and indicate your choice to the answer by clicking in the box next to your choice.	
1. The problem: Postnatal care is a neglected aspect in health care in Ethiopia	
1.1 Strongly agree	1
1.2 Agree	2
1.3 Disagree	3
1.4 Strongly disagree	4
Comments: ……	
2. Community needs	
2.1 Action statement 1 Policies and guidelines aimed at ensuring the provision of comprehensive postnatal care services must be implemented.	
2.1.1 Strongly agree	1
2.1.2 Agree	2

2.1.3 Disagree	3
2.1.4 Strongly disagree	4
***2.1.1 Actions/Methods: Please tick next to all the options of your choice on how you think policies and guidelines aimed at ensuring the provision of comprehensive postnatal care can be implemented.**	
2.1.1.1 Ensure that all health facilities have access to postnatal care guidelines and policies	1
2.1.1.2 Distribute adequate number of guidelines and policies for all health facilities	2
2.1.1.3 Make sure that postnatal care is offered based on guidelines and policies at all health facilities	3
2.1.2 Responsible person/s: Please indicate who must take responsibility for the implementation of policies and guidelines. Make a click in the box next to your choice.	
2.1.2.1 Postnatal care programme coordinators (midwives, nurses, health officers, and doctors) at district, regional and national levels	1
2.1.2.2 Community leaders	2
2.1.2.3 Religious leaders	3
2.1.3 Time frame: Please indicate the time frame within which policies and guidelines aimed at ensuring the provision of comprehensive postnatal care services must be implemented. Make a click in the circle/box next to your choice.	
2.1.3.1 Within 1 month	1
2.1.3.2 Within 6 months	2
2.1.3.3 Within 12 months	3
Comments:……	
2.2 Action statement 2 Adequate human resources for the provision of quality postnatal care services must be ensured.	
2.2.1 Strongly agree	1
2.2.2 Agree	2
2.2.3 Disagree	3
2.2.4 Strongly disagree	4
***2.2.1 Actions/Methods: Please tick next to all the options of your choice how you think adequate human resources for postnatal care can be ensured**	
2.2.1.1 Conduct a staff workload indicator assessment at least twice a year to identify shortages	1
2.2.1.2 Recruit skilled and competent postnatal care providers to adhere to the WHO recommendation of the population to midwifery ratio of 23 midwives for 10,100	2
2.2.1.3 Instil career growth opportunities for postnatal care providers working in rural health facilities in Ethiopia	3
2.2.1.4 Negotiate with the finance department at the national level on incentives for postnatal care services providers working in rural areas of Ethiopia	4

2.2.1.5 Promote professional development training opportunities for postnatal care providers	5
2.2.1.6 Train postnatal care providers who meet the health care needs of postnatal care mothers	6
2.2.2 Responsible person/s: Please indicate who must take responsibility for ensuring human resource availability. Make a click in the box next to your choice.	
2.2.2.1 Postnatal care providers	1
2.2.2.2 Human resource management coordinators in at district, regional and national levels	2
2.2.2.3 The community	3
2.2.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which adequate human resources must be ensured. Make a click in the circle/box next to your choice.	
2.2.3.1 Within 6 months	1
2.2.3.2 Within 12 months	2
2.2.3.3 Within 24 months	3
Comments:……	
2.3. Action statement 3 Financial resources for the provision of quality postnatal care services must be ensured.	
2.3.1 Strongly agree	1
2.3.2 Agree	2
2.3.3 Disagree	3
2.3.4 Strongly disagree	4
***2.3.1 Actions/Methods: Please tick next to all the options of your choice how you think the financial resources for postnatal care can be ensured**	
2.3.1.1 Develop an action plan to secure financial resources for the delivery of ordered supplies	1
2.3.1.2 Arrange annual meetings with postnatal care coordinators at different levels of the health system and partners to secure financial resources	2
2.3.1.3 Develop strategies to ensure accurate procurement to optimally utilise the available financial resources	3
2.3.2 Responsible person/s: Please indicate who must take responsibility for ensuring financial resources. Make a click in the box next to your choice.	
2.3.2.1 Family planning service unit leaders at health facilities	1
2.3.2.2 Heads of budget and finance department at district, regional and national postnatal care coordination levels	2
2.3.2.3 Community leaders	3
2.3.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which financial resources must be ensured. Make a click in the box next to your choice.	
2.3.3.1 Within 6 months	1
2.3.3.2 Within 12 months	2
2.3.3.3 Within 18 months	3

2.3.3.4 Within 24 months	4
Comments:……	
2.4 Action statement 4 Continuing professional education must be strengthened to improve postnatal care.	
2.4.1 Strongly agree	1
2.4.2 Agree	2
2.4.3 Disagree	3
2.4.4 Strongly disagree	4
***2.4.1 Actions/Methods: Please tick next to all the options of your choice how you think continuing professional education is strengthened**	
2.4.1.1 Develop an action plan for professional development training to include the participation of all postnatal care providers	1
2.4.1.2 One professional development training schedule opportunity per year must be compulsory for every postnatal care provider	2
2.4.1.3 Attain a record of postnatal care providers who attended continuing professional education to ensure compliance	3
2.4.2 Responsible person/s: Please indicate who must take responsibility for continuing professional education. Make a click in the box next to your choice.	
2.4.2.1 The community leaders	1
2.4.2.2 In-service training service coordinators in Oromia Regional Health Bureau and Ministry of Health	2
2.4.2.3 Postnatal care team leaders at the regional health department	3
2.4.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which continuing professional education will be strengthened. Make a click in the box next to your choice.	
2.4.3.1 Within 3 months	1
2.4.3.2 Within 6 months	2
2.4.3.3 Within 9 months	3
Comments:……	
2.5 Action statement 5 Effective monitoring of postnatal care services	
2.5.1 Strongly agree	1
2.5.2 Agree	2
2.5.3 Disagree	3
2.5.4 Strongly disagree	4
***2.5.1 Actions/Methods: Please tick next to all the options of your choice how you think effective monitoring of postnatal care can be implemented**	

2.5.1.1 Conduct a quarterly inspection of the health facilities rendering postnatal care	1
2.5.1.2 Identify gaps in the quality of postnatal care rendered	2
2.5.1.3 Communicate all problems and challenges detected to the appropriate managers	3
2.5.2 Responsible person/s: Please indicate who must take responsibility for the monitoring of postnatal care services. Make a click in the box next to your choice.	
2.5.2.1 The community leaders	1
2.5.2.2 Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	2
2.5.2.3 Women development army leaders	3
2.5.2.4 Head of budget and finance at health facilities	4
2.5.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which effective monitoring must be implemented. Make a click in the box next to your choice.	
2.5.3.1 Within 1 month	1
2.5.3.2 Within 6 months	2
2.5.3.3 Within 12 months	3
Comments:……	
2.6 Action statement 6 Effective evaluation of postnatal care services	
2.6.1 Strongly agree	1
2.1.2 Agree	2
2.6.3 Disagree	3
2.6.4 Strongly disagree	4
***2.6.1 Actions/Methods: Please tick next to all the options of your choice how you think effective evaluation of postnatal care services can be implemented**	
2.6.1.1 Conduct evaluation of postnatal care services at least every 3 months	1
2.6.1.2 Improve postnatal care coordinators assessments skills thorough training	2
2.6.1.3 Share experiences among postnatal care coordinators on evaluation at least once a year at a formal postnatal care summit	3
2.6.2 Responsible person/s: Please indicate who must take responsibility for the evaluation of postnatal care services. Make a click in the box next to your choice.	
2.6.2.1 Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	1
2.6.2.2 Head of budget and finance at health facilities	2
2.6.2.3 Postnatal care team leaders at the district level	3
2.6.3 **Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which effective evaluation must be implemented. Make a click in the box next to your choice.	
2.6.3.1 Within 1 month	1

2.6.3.2 Within 6 months	2
2.6.3.3 Within 12 months	3
Comments:……	
2.7 Action statement 7 The coordination of postnatal care services must be improved.	
2.7.1 Strongly agree	1
2.7.2 Agree	2
2.7.3 Disagree	3
2.7.4 Strongly disagree	4
***2.7.1 Actions/Methods: Please tick next to all the options of your choice how you think coordination of postnatal care can be improved**	
2.7.1.1 Enhance community involvement in postnatal care through the provision of information, education, and communication (IEC)	1
2.7.1.2 Provide health education to the community to increase awareness regarding the importance of Postnatal care	2
2.7.1.3 Facilitate communication networks for postnatal care among postnatal care coordinators and the different stakeholders	3
2.7.2 Responsible person/s: Please indicate who must take responsibility for the improvement of the coordination of postnatal care services. Make a click in the box next to your choice.	
2.7.2.1 Postnatal mothers	1
2.7.2.2 Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	2
2.7.2.3 Religious leaders	3
2.7.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which coordination of postnatal care services should be improved. Make a click in the box next to your choice.	
2.7.3.1 Immediately	1
2.7.3.2 Within 6 months	2
2.7.3.3 Within 12 months	3
Comments:……	
Action statement 8 Improve data management processes such as recording and reporting of postnatal care services	
2.8.1 Strongly agree	1
2.8.2 Agree	2
2.8.3 Disagree	3
2.8.4 Strongly disagree	4
***2.8.1 Actions/Methods: Please tick next to all the options of your choice how you think data**	

management processes can be improved	
2.8.1.1 Provide technical support to postnatal care providers and coordinators to record postnatal care	1
2.8.1.2 Arrange training on ICT to improve skills of postnatal care providers and coordinators	2
2.8.1.3 Implement the use of ICT to manage records, medical drugs, and information sharing	3
2.8.1.4 Implement timely reporting methods of postnatal care services at all health facilitates	4
2.8.2 Responsible person/s: Please indicate who must take responsibility for data management in postnatal care. Make a click in the box next to your choice.	
2.8.2.1 Health management information system (HMIS) officers (Information technologists, midwives, nurses, health officers and doctors at health facilities, district, regional and national levels)	1
2.8.2.2 Head of budget and finance at health facilities	2
2.8.2.3 Postnatal care programme officers at the district level	3
2.8.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which data management must be improved. Make a click in the box next to your choice.	
2.8.3.1 Within 1 month	1
2.8.3.2 Within 6 months	2
2.8.3.3 Within 12 months	3
Comments:……	
2.9 Action statement 9 Community involvement in postnatal care services must be improved.	
2.9.1 Strongly agree	1
2.9.2 Agree	2
2.9.3 Disagree	3
2.9.4 Strongly disagree	4
***2.9.1 Actions/Methods: Please tick next to all the options of your choice how you think community involvement in postnatal care can be improved**	
2.9.1.1 Improve the postnatal care knowledge of the community through social media	
2.9.1.2 Involve community leaders with the development of educational material	1
2.9.1.3 Involve the community in planning postnatal care activities	2
2.9.2 Responsible person/s: Please indicate who must take responsibility for the improvement of community involvement in postnatal care. Make a click in the box next to your choice.	
2.9.2.1 Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	1
2.9.2.2 Head of budget and finance	2
2.9.2.3 Family planning service unit leaders at health facilities	3
2.9.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which community involvement must be improved. Make a click in the box next to your choice.	

2.9.3.1 Within 6 months	1
2.9.3.2 Within 12 months	2
2.9.3.3 Within 24 months	3
Comments:……	
2.10 Action statement 10 Establish community surveillance of maternal and neonatal deaths.	
2.10.1 Strongly agree	1
2.10.2 Agree	2
2.10.3 Disagree	3
2.10.4 Strongly disagree	4
***2.10.1 Actions/Methods: Please tick next to all the options of your choice how you think community surveillance of maternal and neonatal deaths can be established.**	
2.10.1.1 Conduct annual surveillance on maternal and neonatal deaths	1
2.10.1.2 Develop an effective reporting system of maternal and neonatal deaths	2
2.10.2 Responsible person/s: Please indicate who must take responsibility for establishing community surveillance for maternal and neonatal deaths. Make a click in the box next to your choice.	
2.10.2.1 Religious leaders	1
2.10.2.2 Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	2
2.10.2.3 Community leaders	3
2.10.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which community surveillance must be established. Make a click in the box next to your choice.	
2.10.3.1 Within 1 month	1
2.10.3.2 Within 6 months	2
2.10.3.3 Within 12 months	3
Comments:……	
2.11 Action statement 11 Identify and address social and cultural practices, myths and misconceptions on postnatal care	
2.11.1 Strongly agree	1
2.11.2 Agree	2
2.11.3 Disagree	3
2.11.4 Strongly disagree	4
***2.11.1 Actions/Methods: Please tick next to all the options of your choice how you think the cultural myths and misconceptions can be identified and addressed**	
2.11.1.1 Assess the cultural practices in the community that impact the postnatal care services	1
2.11.1.2 Conduct IEC for increasing awareness and knowledge on cultural misconceptions	2

2.11.1.3 Involve the community in addressing the cultural issues that impact on postnatal care by instilling community meetings	3
2.11.2 Responsible person/s: Please indicate who must take responsibility for identifying and addressing the social and cultural practices, myths and misconceptions on postnatal care. Make a click in the box next to your choice.	
2.11.2.1 Head of budget and finance at health facilities	1
2.11.2.2 Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	2
2.11.2.3 Institutional delivery service unit leaders at the health facilities	3
2.11.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which cultural practices, myths, and misconceptions must be addressed. Make a click in the box next to your choice.	
2.11.3.1 Within 6 months	1
2.11.3.2 Within 12 months	3
2.11.3.3 Within 24 months	3
Comments:……	
2.12 Action statement 12 Provide incentives for postnatal care providers.	
2.12.1 Strongly agree	1
2.12.2 Agree	2
2.12.3 Disagree	3
2.12.4 Strongly disagree	4
***2.12.1 Actions/Methods: Please tick next to all the options of your choice how you think the provision of incentives for postnatal care providers can be implemented.**	
2.12.1.1 Provide a certificate at an award ceremony for those identified to be the best performers	1
2.12.1.2 Instil career opportunities for those with high-performance appraisal results	2
2.12.1.3 Allocate additional professional development opportunities for those with high-performance appraisal results	3
2.12.2 Responsible person/s: Please indicate who must take responsibility for the provision of incentives for postnatal care providers. Make a click in the box next to your choice.	
2.12.2.1 Community leaders	1
2.12.2.2 The head of the district, regional, and national health departments	2
2.12.2.3 Health facility leaders	3
2.12.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which incentives for postnatal care providers must be initiated. Make a click in the box next to your choice.	
2.12.3.1 Immediately	1
2.12.3.2 Within 6 months	2

2.12.3.3 Within 12 months	3
Comments:……	
***2.13 Action statement 13** Maternal waiting rooms must be available at all health facilities for improving postnatal care	
2.13.1 Strongly agree	1
2.13.2 Agree	2
2.13.3 Disagree	3
2.13.4 Strongly disagree	4
***2.13.1 Actions/Methods: Please tick next to all the options of your choice how you think the maternal waiting rooms can be available**	
2.13.1.1 Make maternal waiting homes available at all health facilities	1
2.13.1.2 Equip the maternal waiting homes with the necessary infrastructure such as electric power, water supply, kitchen, and adequate rooms	2
2.13.1.3 Ensure that maternal waiting homes comply with culture congruent requirements by involving the community in the development thereof	3
2.13.2 Responsible person/s: Please indicate who must take responsibility for the availability of maternal waiting rooms at all health facilities. Make a click in the box next to your choice.	
2.13.2.1 Postnatal mothers	1
2.13.2.2 Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	2
2.13.2.3 Head of budget and finance at health facilities	3
2.13.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which maternal waiting rooms must be available in health facilities. Make a click in the box next to your choice.	
2.13.3.1 Within 6 months	1
2.13.3.2 Within 12 months	2
2.13.3.3 Within 24 months	3
Comments:……	
2.14 Action statement 14 Ensure effective communication for ambulance services and other postnatal care issues for improving postnatal care.	
2.14.1 Strongly agree	1
2.14.2 Agree	2
2.14.3 Disagree	3
2.14.4 Strongly disagree	4
***2.14.1 Actions/Methods: Please tick next to all the options of your choice how you think effective communication can be ensured**	
2.14.1.1 Communicate the available ambulance services to mothers via social media and printed	1

communication	
2.14.1.2 Educate the pregnant women and their families about complications of the postnatal period through IEC	2
2.14.1.3 Communicate ambulance services telephone number to all postnatal mothers	3
2.14.2 Responsible person/s: Please indicate who must take responsibility for ensuring effective communication with ambulance services. Make a click in the box next to your choice.	
2.14.2.1 Head of health facilities	1
2.14.2.2 Ambulance drivers at health facilities; community leaders; and midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	2
2.14.2.3 In-service training services directors at Oromia Regional Health Bureau	3
2.14.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which effective communication with ambulance service must be ensured. Make a click in the box next to your choice.	
2.14.3.1 Within 1 month	1
2.14.3.2 Within 6 months	2
2.14.3.3 Within 12 months	3
Comments:……	
2.15 Action statement 15 Cultural ceremonies should be practiced at health facilities to motivate mothers to use institutional delivery and postnatal care.	
2.15.1 Strongly agree	1
2.15.2 Agree	2
2.15.3 Disagree	3
2.15.4 Strongly disagree	4
***2.15.1 Actions/Methods: Please tick next to all the options of your choice how you think the practice of cultural ceremonies can be ensured**	
2.15.1.1 Develop a policy that makes provision for cultural ceremonies in health facilities	1
2.15.1.2 Allow mothers and their families to practice their cultural ceremonies	2
2.15.1.3 Have maternal waiting homes at all health facilities rendering postnatal care	3
2.15.1.4 Organise the necessary infrastructure such as electric power, water supply, and others to allow the practice of their culture	4
2.15.2 Responsible person/s: Please indicate who must take responsibility for the practice of cultural ceremonies at health facilities. Make a click in the box next to your choice.	
2.15.2.1 Postnatal care programme coordinators at FMOH	1
2.15.2.2 The community leaders; religious leaders; and midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	2
2.15.2.3 Training service coordinators at Oromia Regional Health Bureau	3

2.15.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which cultural ceremonies should be practiced in health facilities. Make a click in the box next to your choice.	
2.15.3.1 Within 3 months	1
2.15.3.2 Within 6 months	2
2.15.3.3 Within 12 months	3
Comments:……	
3. Output	
3.1 Action statement 16 The implementation of a framework for postnatal care will contribute to increase postnatal care follow-up visits for postnatal mothers at the community level.	
3.1.1 Strongly agree	1
3.1.2 Agree	2
3.1.3 Disagree	3
3.1.4 Strongly disagree	4
Comments:……	
3.2 Action statement 17 Implementation of a framework to improve postnatal care will contribute to have accurate written reports on the postnatal care services at different levels of the health system.	
3.2.1 Strongly agree	1
3.2.2 Agree	2
3.2.3 Disagree	3
3.2.4 Strongly disagree	4
Comments:……	
3.3 Action statement 18 Quality of postnatal care services offered to postnatal mothers and their babies at health facilities will be improved if the framework for the improvement of postnatal care is implemented in Ethiopia.	
3.3.1 Strongly agree	1
3.3.2 Agree	2
3.3.3 Disagree	3
3.3.4 Strongly disagree	4
Comments:……	
3.4 Action statement 19 The implementation of the framework will enhance partnership forming in matters regarding the provision of postnatal care services.	
3.4.1 Strongly agree	1
3.4.2 Agree	2

3.4.3 Disagree	3
3.4.4 Strongly disagree	4
Comments:……	
4. Influential factors:	
4.1 Action statement 20 The Ethiopian government is committed to the attainment of the health sector transformation plan which can contribute to improvement in postnatal care.	
4.1.1 Strongly agree	1
4.1.2 Agree	2
4.1.3 Disagree	3
4.1.4 Strongly disagree	4
Comments:……	
4.2 Action statement 21 Good governance in Ethiopia must contribute to the implementation of the contextualised framework and thus an improvement in postnatal care.	
4.2.1 Strongly agree	1
4.2.2 Agree	2
4.2.3 Disagree	3
4.2.4 Strongly disagree	4
Comments:……	
4.3 Action statement 22 The Ethiopian government's political wills must facilitate the implementation of the contextualised framework.	
4.3.1 Strongly agree	1
4.3.2 Agree	2
4.3.3 Disagree	3
4.3.4 Strongly disagree	4
Comments:……	
4.4 Action statement 23 Establish community health units for postnatal care improvement.	
4.4.1 Strongly agree	1
4.4.2 Agree	2
4.4.3 Disagree	3
4.4.4 Strongly disagree	4
***4.4.1 Actions/Methods: Please tick next to all the options of your choice how you think the community health units can be established**	
4.4.1.1 Strengthen the community health workers skills though training to provide preventive	1

services	
4.4.1.2 Improve the health extension worker's competency through continuing professional development to provide home-based postnatal care	2
4.4.2 Responsible person/s: Please indicate who must take responsibility for establishing community health units. Make a click in the box next to your choice.	
4.4.2.1 Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	1
4.4.2.2 Head of health facilities	2
4.4.2.3 Family planning service unit leaders at health facilities	3
4.4.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which community health units must be established. Make a click in the box next to your choice.	
4.3.3.1 Within 1 year	1
4.4.3.2 Within 2 years	2
4.4.3.3 Within 3 years	3
Comments:……	
4.5 Action statement 24 The FMOH should improve budget allocated for postnatal care to minimise the budget constraint for postnatal care services in Ethiopia	
4.5.1 Strongly agree	1
4.5.2 Agree	2
4.5.3 Disagree	3
5.5.4 Strongly disagree	4
Comments:……	
4.6 Action statement 25 Ensure Partner/donor support for postnatal care.	
4.6.1 Strongly agree	1
4.6.2 Agree	2
4.6.3 Disagree	3
4.6.4 Strongly disagree	4
***4.6.1 Actions/Methods: Please tick next to all the options of your choice how you think partner/donor support for postnatal care can be enhanced**	
4.6.1.1 Invite local and national partners to participate in technical and financial support for the postnatal care improvement	1
4.6.1.2 Develop a partnership with donors	2
4.6.1.3 Use the technical and financial support from the partners for postnatal care improvements	3
4.6.2 Responsible person/s: Please indicate who must take responsibility for the implementation of Partner/donor support for postnatal care. Make a click in the box next to your choice.	

4.6.2.1 Community leaders	1
4.6.2.2 Head of health facilities and postnatal care programme coordinators at district, regional health bureau and the national ministry of health	2
4.6.2.3 Religious leaders	3
4.6.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which partner/donor support for postnatal care must be initiated. Make a click in the box next to your choice.	
4.6.3.1 Immediately	1
4.6.3.2 Within 6 months	2
4.6.3.3 Within 12 months	3
Comments:……	
4.7 Action statement 26 Male engagement in aspects of postnatal care must be improved.	
4.7.1 Strongly agree	1
4.7.2 Agree	2
4.7.3 Disagree	3
4.7.4 Strongly disagree	4
Comments:……	
4.8 Action statement 27 Address the socio-economic factors that influence postnatal care.	
4.8.1.1 Strongly agree	1
4.8.1.2 Agree	2
4.8.1.3 Disagree	3
4.8.1.4 Strongly disagree	4
Comments:……	
4.9 Action statement 28 Improve literacy levels of postnatal mothers	
4.9.1 Strongly agree	1
4.9.2 Agree	2
4.9.3 Disagree	3
4.9.4 Strongly disagree	4
***4.9.1 Actions/Methods: Please tick next to all the options of your choice how you think the literacy level of postnatal mothers can be improved.**	
4.9.1.1 Encourage the pregnant and postnatal mothers to attend education by making promotion through mass media	1
4.9.1.2 Involve the community to motivate the pregnant and postnatal mothers to attain education	2
4.9.1.3 Involve the religious leaders to motivate the pregnant and postnatal mothers to attend	3

education	
4.9.2 Responsible person/s: Please indicate who must take responsibility for improving the literacy level of postnatal mothers. Make a click in the box next to your choice.	
4.9.2.1 Head of the district, regional education offices; and adult education coordinators at district levels	1
4.9.2.2 Postnatal care providers	2
4.9.2.3 Postnatal care coordinators	3
4.9.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which the literacy level of postnatal mothers must be improved. Make a click in the box next to your choice.	
4.9.3.1 Within one year	1
4.9.3.2 Within 2 years	2
4.9.3.3 Within 3 years	3
Comments:……	
4.10 Action statement 29 Religious factors that influence postnatal care services utilisation must be addressed.	
4.10.1 Strongly agree	1
4.10.2 Agree	2
4.19.3 Disagree	3
4.10.4 Strongly disagree	4
***4.10.1 Actions/Methods: Please tick next to all the options of your choice how you think the religious factors that impact postnatal care can be identified and addressed.**	
4.10.1.1 Conduct IEC for increasing awareness and knowledge on religious factors that impact on postnatal care	1
4.10.1.2 Improve women and community knowledge through health education to overcome religious influences	2
4.10.2 Responsible person/s: Please indicate who must take responsibility for addressing cultural and religious factors. Make a click in the box next to your choice.	
4.10.2.1 Head of budget and finance at health facilities	1
4.10.2.2 The property management unit leaders at health facilities	2
4.10.2.3 Community leaders, religious leaders, and midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	3
4.10.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which partner/donor support for postnatal care must be initiated. Make a click in the box next to your choice.	
4.10.3.1 Immediately	1
4.10.3.2 Within 6 months	2
4.10.3.3 Within 12 months	3

Comments:……	
4.11 Action statement 30 Poor access to postnatal care services must be improved.	
4.11.1 Strongly agree	1
4.11.2 Agree	2
4.11.3 Disagree	3
4.11.4 Strongly disagree	4
***4.11.1 Actions/Methods: Please tick next to all the options of your choice how you think poor access to postnatal care can be improved.**	
4.11.1.1 Increase the number of health facilities	1
4.11.1.2 Renovate the existing health facilities	2
4.11.1.3 Improve transportation services for easy access to health facilities	3
4.11.2 Responsible person/s: Please indicate who must take responsibility for addressing poor access to postnatal care services. Make a click in the box next to your choice.	
4.11.2.1 Postnatal care programme coordinators (midwives, nurses, health officers, and doctors) at district, regional and national health department levels	1
4.11.2.2 Head of budget and finance at health facilities	2
4.11.2.3 Heads of health facilities	3
4.11.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which access to postnatal care services must be improved. Make a click in the box next to your choice.	
4.11.3.1 Within 1 year	1
4.11.3.2 Within 2 years	2
4.11.3.3 Within 3 years	3
Comments:……	
5. Strategies	
5.1 Action statement 31 Capacity building for postnatal care providers and coordinators is an important strategy for postnatal care improvement.	
5.1.1 Strongly agree	1
5.1.2 Agree	2
5.1.3 Disagree	3
5.1.4 Strongly disagree	4
***5.1.1 Actions/Methods: Please tick next to all the options of your choice how you think the capacity building can be improved**	
5.1.1.1 Ensure the implementation of continuous professional education	1
5.1.1.2 Instil an attendance register to postnatal care providers for professional development training at least once a year	2

5.1.2 Responsible person/s: Please indicate who must take responsibility for the capacity building. Make a click in the box next to your choice.	
5.1.2.1 Head of health facilities	1
5.1.2.2 In-service training service coordinators at Oromia Regional Health Bureau and Ministry of Health	2
5.1.2.3 Head of regional health bureau	3
5.1.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which capacity building must be implemented. Make a click in the box next to your choice.	
5.1.3.1 Within 1 month	1
5.1.3.2 Within 6 months	2
5.1.3.3 Within 12 months	3
Comments:……	
5.2 Action statement 32 There must be a quality assurance mechanism for postnatal care services.	
5..2.1 Strongly agree	1
5.2.2 Agree	2
5.2.3 Disagree	3
5.2.4 Strongly disagree	4
***5.2.1 Actions/Methods: Please tick next to all the options of your choice how you think the quality assurance mechanism can be improved.**	
5.2.1.1 Implement standard operating procedures when rendering postnatal care	1
5.2.1.2 Provide quality counselling services to postnatal mothers	2
5.2.1.3 Provide compassionate and respectful care to enhance the postnatal mothers' satisfaction	3
5.2.2 Responsible person/s: Please indicate who must take responsibility for the quality assurance mechanism. Make a click in the box next to your choice.	
5.2.2.1 Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	1
5.2.2.2 Community leaders	2
5.2.2.3 Religious leaders	3
5.2.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which a quality assurance mechanism must be addressed. Make a click in the box next to your choice.	
5.2.3.1 Within 1 month	1
5.2.3.2 Within 6 months	2
5.2.3.3 Within 12 months	3
Comments:……	
5.3 Action statement 33 Supportive supervision should be implemented at all health facilities	

5.3.1 Strongly agree	1
5.3.2 Agree	2
5.3.3 Disagree	3
5.3.4 Strongly disagree	4
***5.3.1 Actions/Methods: Please tick next to all the options of your choice how you think supportive supervision can be improved**	
5.3.1.1 Provide training to improve supervision skills for postnatal care coordinators	1
5.3.1.2 Conduct supportive supervision on postnatal care services at least quarterly	2
5.3.1.3 Provide technical and financial support to postnatal care coordinators to do supportive supervision	3
5.3.2 Responsible person/s: Please indicate who must take responsibility for supportive supervision. Make a click in the box next to your choice.	
5.3.2.1 Head of budget and finance at health facilities	1
5.3.2.2 Postnatal care programme coordinators (midwives, nurses, health officers, and doctors) at health facility, at district, regional and national levels	2
5.3.2.3 Head of health facilities	3
5.3.3 Time frame: Please indicate the time frame, after the implementation of the action plan is launched, in which the supportive supervision must be implemented. Make a click in the box next to your choice.	
5.3.3.1 Within 1 month	1
5.3.3.2 Within 6 months	2
5.3.3.3 Within 12 months	3
Comments:……	
6. Assumptions	
6.1 Action statement 34 The Ethiopian government will be efficient in coordinating postnatal care services.	
6.1.1 Strongly agree	1
6.1.2 Agree	2
6.1.3 Disagree	3
6.1.4 Strongly disagree	4
Comments:……	
6.2 Action statement 35 Postnatal care services included in the government policy should be free maternity care	
6.2.1 Strongly agree	1
6.2.2 Agree	2
6.2.3 Disagree	3
6.2.4 Strongly disagree	4
Comments:……	

6.3 Action statement 36 The Ethiopian government will embrace the implementation of maternal and neonatal health services.	
6.3.1 Strongly agree	1
6.3.2 Agree	2
6.3.3 Disagree	3
6.3.4 Strongly disagree	4
Comments:……	
6.4 Action statement 37 The health extension programme must be sustained for the implementation of the contextualised framework in Ethiopia.	
6.4.1 Strongly agree	1
6.4.2 Agree	2
6.4.3 Disagree	3
6.4.4 Strongly disagree	4
Comments:……	

Although all the actions to achieve the action statements were already incorporated in draft 1, marked with an asterisk in red colour (refer to Table 4.2) as explained earlier, these items were excluded from the validation in the Delphi round 1 (refer to Annexure 5). The reason was to first validate the action statements, the responsible person/s as well as the time frames. This minimised the length of the first round's tool and, if an action statement was to be removed on panellists' request, it would have complicated the completion of the first round as well as the analysis of the data.

4.5 CONCLUSION

The draft developed contextualised framework, as well as the draft action plan with embedded validation instrument for implementation to contribute to the improvement of postnatal care in Ethiopia, were described.

In Chapter 5, the validation of the draft contextualised framework and action plan for implementation (Phase 3 of the study) will be discussed.

CHAPTER 5: PHASE III
VALIDATION OF THE CONTEXTUALISED FRAMEWORK AND ACTION PLAN FOR IMPLEMENTATION

Phase 3 of the study involved the validation process, discussion of the findings from the validation process as well as the validated contextualised framework and action plan to facilitate the implementation as illustrated in Table 5.1.

The validation process provided an opportunity for the Delphi panellists, selected as representative experts (refer to Section 5.2.1), to provide comments and inputs on the draft contextualised framework and action plan for implementation. This allowed the researcher to adapt and contextualise the framework and action plan until 75% consensus pertaining to all aspects was reached among panellists.

Table 5.1: Research progress and thesis layout

CHAPTER	DESCRIPTION OF THE CHAPTER
1	**Overview of the study**
2	**Literature review** • Maternal mortality • Postnatal care in Ethiopia and Kenya • Chelagat's framework • Models to test the applicability to other contexts
3	**1. Overarching research design** **2. Phase 1** • Research design • Methodology • Data gathering • Data analysis and interpretation of findings
4	***Phase 2*** • Literature review on: ➢ Contextualising a framework ➢ Action plan development • Development of the contextualised framework and draft action plan for implementation

CHAPTER	DESCRIPTION OF THE CHAPTER
5	**Phase 3** • Methodology • The validation process • Discussion of the findings • Final contextualised framework and action plan for the implementation

5.1 METHODOLOGY

In Phase 3 of the study, a qualitative approach was followed (refer to Section 1.12.3) with the Delphi technique used to gather data.

5.1.1 The Delhi technique

The Delphi technique is an interactive procedure to gather and filter conclusions using a series of data gathering and analysis techniques to reach consensus (de Mello Pereira & Alvim 2015:176). The Delphi technique was conducted among a panel of experts who are knowledgeable and experienced in the subject matter (in the context of this study, postnatal care), to progressively refine the responses to reach consensus (Keeney, et al. 2011:4). Therefore, the Delphi consensus-seeking process is a method recommended to be used to obtain the most reliable consensus of opinion of a group of experts by a series of intensive questionnaires (in this context, the validation instrument) interspersed with controlled feedback. Although there are different types of Delphi methods or techniques for use, in this study, the E-Delphi was used to share the validation instrument through email with the purposefully selected panel of experts as described by de Mello Pereira and Alvim (2015:176).

The E-Delphi technique has several advantages for researchers. It is suited for studies where consensus is needed among a panel of experts with diverse views using a series of questionnaires/instruments (Chia-Chien & Brain 2007:1). The Delphi technique also has the potential to present detailed analysis and discussions in the

subject matter on a particular issue, and it attempts to assess what could or should be done to reach consensus (Geist 2010:148).

Particularly, in this study, the E-Delphi method allowed the researcher to construct an online assessment tool called the validation instrument (refer to Annexure 10). This instrument was embedded in the contextualised framework and an action plan for implementation that allowed inputs to shape and change the contextualised framework and the action until consensus was reached. Experts were needed to provide their professional expertise, opinions, and views on the action statements, actions/methods, the responsible person/s as well as the time frame for the implementation of the contextualised framework.

While not a big problem in this study, evidence from the literature indicates that the Delphi technique has some **disadvantages**. These include: (1) A sequence of iterative time-consuming rounds may contribute to a lack of interest by panellists to participate in the study (Shariff 2015:246). In this study, despite the fact that it was time-consuming, all original panellists participated until the last round. The researcher effectively communicated with all the panellists about the objectives and contribution of the study to postnatal care in Ethiopia through an invitation letter. Therefore, all panellists had an interest in completing the Delphi validation instrument until consensus.

In this study, the researcher conducted three rounds of Delphi to reach consensus, and thus had a validated contextualised framework and action plan for implementation within the Ethiopian context. (2) The lack of clear guidelines on suggesting issues, such as the consensus cut-off point, is another disadvantage of the Delphi technique. The cut-off point of 75% for consensus was determined after reviewing the literature (Stewart, Gibson-Smith, MacLure, Mair, Alonso, Codina, et al. 2017:11). (3) Panel size and sampling techniques could have been another disadvantage of the Delphi technique (Shariff 2015:246).

Even though there is no strict recommendation on the number of rounds to be conducted, generally what is reported in many pieces of literature is between two and four rounds (Sekayi & Kennedy 2017:2755-2763). In this study, 18 panellists

participated in the Delphi process and a 100% response rate was achieved until consensus was reached in round 3.

Another disadvantage of the Delphi technique is (4) the high attrition rates due to an increased number of rounds (Shariff 2015:246). However, in this study, all panellists who were purposively selected and included in the study completed all three rounds of the Delphi.

5.1.2 Validation instrument for data gathering:

The draft action plan with the embedded validation instrument – developed based on the draft contextualised framework and action plan for implementation – was sent to panellists to provide their options (where applicable) and space for comments and recommendations (refer to Table 5.2 and Annexures 5-7). The developed framework, action plan, and embedded validation instrument were loaded on Google forms, an online survey method that the researcher used to gather data for the validation of the contextualised framework and action plan for implementation.

The panellists received the contextualised framework with the embedded validation instrument and the action plan to be validated as one document with the validation instrument embedded. The validation instrument included all important items namely: (1) action statements with Likert-scale options, (2) questions concerning the responsible bodies for the action, and (3) question items on the time frame in which the action must be implemented (refer to Annexure 6). In addition to the response options, the validation instrument had an open space where the panellists provided their views and recommendations to improve the draft contextualised framework and action plan for implementation (refer to Annexure 6).

The validation instrument, as explained, was based on all the items included in the contextualise framework. It was finalised with the inputs received in Phase 1 (refer to Sections 3.9 and 3.10) as well as the literature reviewed (refer to Chapter 2) and illustrated in Figure 4.1.

5.1.3 Population

Sixty postnatal care coordinators, who were working in different positions in Ethiopia, were the population for the Delphi technique as key contributors to the study. These coordinators included 40 district postnatal care coordinators, 10 regional postnatal care coordinators and 10 national postnatal care coordinators (refer to Section 1.12.1). They all had expertise in postnatal care services and were thus familiar with the challenges of postnatal care services in Ethiopia. They were intentionally excluded from Phase 1 to ensure the next level of expertise and new inputs and recommendations to add to the data gathered in Phase 1.

5.1.4 Sample

The Delphi panellists were purposefully selected by the researcher to involve experts in the subject matter who were familiar with the postnatal care service delivery according to the Ethiopian context. After communicating face-to-face with heads of the district, regional and national levels of the health department, the researcher identified the postnatal care coordinators and listed them.

From the lists of postnatal care coordinators obtained from the health departments at different levels of the health system, the panellists were purposefully selected by the researcher based on their experience, job description, and their responsibility in postnatal care services. Lastly, the researcher received personal emails and phone numbers for the postnatal care coordinators (panellists) from the health department heads. The researcher thus communicated with the panellists through their personal emails by sharing the recruitment letters to allow for voluntary participation.

Eighteen Delphi panellists (12 district, 3 regional, and 3 national postnatal care coordinators) were purposefully selected to volunteer to participate (refer to Table 1.1). Once the panellists were selected, the objectives of the study and its contribution to postnatal care services in Ethiopia were communicated to them. They then had the opportunity to voluntarily participate in the validation of the contextualised framework and the action plan for implementation (refer to Annexure 9).

5.1.5 Pre-testing of the validation instrument

A pre-test is defined as “a small-scale study or trial conducted, in preparation for the main study” (Polit & Beck 2010:563) and questionnaires for data gathering should be checked for clarity of instructions, clarity of the questionnaires, and relevance to ensure the reliability and validity of the data (De Vos, et al. 2011:147-152; Polit & Beck 2012:741).

Before the commencement of round 1 of the Delphi process, a pre-test was conducted to test whether the Delphi panellists understood the embedded validation instrument. It was also necessary to determine whether changes should be made so that study participants would not encounter any problems in responding to questions and to minimise difficulty in recording the data during the main study (Delport & Roestenburg 2011:195).

The validation instrument (also called a questionnaire) was pre-tested on four postnatal care services coordinators. The researcher communicated with the district, regional and national health department heads to identify the postnatal care coordinators and purposively selected three volunteer academic experts based on their knowledge on the subject matter (postnatal care services) and experience.

The pre-test respondents were those who were not selected for the main Delphi consensus-seeking process as the validation instrument changed after their inputs were received (refer to Table 5.2). Two participants from the district health department, one each from the regional and national postnatal care coordinating department were purposively selected and included in the pre-test study. The panellists who participated in the pre-test study found most of the questions clear and the language acceptable. However, participants provided suggestions for six items (validation instruments) to make them clearer and more relevant. These recommendations were addressed and the validation instrument altered before the instrument was shared with the panellists for validation of the contextualised framework and its action plan (refer to Table 5.2).

Table 5.2: Summary of the recommendations and modifications after the pre-test

Question number	Original content	Modifications made
2.8	Improve data management processes in postnatal care.	There must be improvement in data management process for postnatal care services
2.10	Establish community surveillance of maternal and neonatal deaths.	Community surveillance of maternal and neonatal deaths must be established
3.1	The implementation of the framework contributes to achieve improved follow-up of postnatal mothers at the community level.	There is a need to have a framework for postnatal care services which contributes to achieve improved follow-up of postal mothers at the community level
3.2	Implementation of the framework will contribute to up-to-date written reports on postnatal care at different level of the health system.	There is a need to have and implement a framework which will contribute to up-to-date written reports on postnatal care
3.3	Quality of postnatal care services offered to postnatal mothers and their babies at health care facilities will be improved if the framework is implemented in Ethiopia.	There must be a framework on postnatal care services which will improve quality of postnatal care services offered to postnatal mothers and their babies
3.4	The implementation of the framework will enhance partnerships in matters regarding provision of postnatal care services.	There must be a framework that must be implemented to enhance partnerships in matters regarding provision of postnatal care services

5.1.6 Ethical considerations

The applicable ethical considerations discussed in Section 3.4 have also been adhered to in this phase of the study.

Anonymity is one of the ethical principles that must be maintained in research. In this study's context, the anonymity of the panellists and the confidentiality of their inputs were ensured as suggested by Joubert and Ehrlich (2010:231).

Since panellists were selected from different health system levels, and received the recruitment letter through personal email, no names or identifiable data were received from panellists themselves. As only raw data were received from the panellists and only the revised validation instrument with no personal information was sent back through Google forms, their anonymity was ensured in this study. The panellists were anonymous in providing their genuine opinions and views on the entire validation instrument items throughout all phases of the study.

Confidentiality is referred to as a process whereby a researcher goes into a relationship of trust with a study sample; this trusting relationship was maintained throughout the Delphi process. The responses (raw data) were received from Google forms as aggregated data (percentage of responses) for the closed-ended questions, and the narrative summaries from open-ended questions were received without any identifiable information from panellists. Neither the researcher nor any other person was able to link the responses to any individual panellist.

The Delphi processes were strictly confidential and thus were not disclosed to any outside party, including other panellists (Geist 2010:148).

5.1.7 Data gathering

For those who were purposively selected, their personal emails were collected from their department heads/someone who knows their email. After receiving the email addresses of postnatal care coordinators, who volunteered to participate and who were working at different levels of the health system in Ethiopia, the recruitment letter was shared (refer to Annexure 9). The recruitment letter consisted of all the relevant information pertaining to participation, the link to obtain access to the validation instrument, as well as information on how to complete the questionnaire (refer to Annexure 8-10).

By clicking on the link, the panellists indicated their consent to participate and obtained access to the validation instrument. At the end of the instrument, they had to click the submit button, to upload their inputs onto the software program.

5.1.8 Data analysis

Feedback was received from all purposively selected panellists (N=18). The responses from all the panellists in each of the Delphi rounds were explicitly analysed, interpreted and presented. The individual Delphi panellists provided their opinions on action statements, items on the responsible person/s for the actions, and the time frame in which the actions must be implemented or completed. These closed-ended questions were analysed by the software program used by Google forms and the researcher received the analysed data from the Google forms software.

The responses for every individual option on Google forms were calculated and represented in frequencies and percentages for each option. The frequencies were calculated and the level of consensus was identified. The consensus status was decided to be 75% per cut-off point, as suggested by Keeney, et al. (2011:46) and Heiko (2012:1525-1536). The individual Delphi panellists also provided their opinions in the comment sections pertaining to the action statements, items related to the responsible person/s for the actions, and the time frame in which the actions must be implemented or completed.

The raw data from these open-ended questions were received as narratives from the Google forms software. The open-ended questions were open coded and thematically analysed (Creswell 2014:18); thus, direct statements or responses were coded and grouped into themes or categories. Recommendations by the Delphi panellists were added to the framework and the action plan components as specific context points. Context points are factors that have an impact on postnatal care services in Ethiopia and are included in the contextualised framework and the action plan for implementation.

For all rounds of the Delphi process where consensus was reached, all suggestions and recommendations, where possible, were utilised and incorporated in the second draft of the contextualised framework and the action plan. For items where consensus was not reached, the changes and recommendations were implemented into the contextualised framework and action plan for implementation, and re-sent to

all panellists for inputs in the second round. The process continued for subsequent rounds until consensus was reached.

Similarly, for items where consensus was not reached in the second Delphi round, the subsequent (third) Delphi round was conducted to reach consensus through the use of the validation instrument and analysing the responses. Thereafter, feedback was incorporated into the contextualised framework and its action plan for implementation, as suggested by Keeney, et al. (2011:11).

5.1.9 Trustworthiness

Trustworthiness is the degree of confidence a researcher has that the findings and recommendations from specific research are credible (Polit & Beck 2014:598). Trustworthiness is thus the extent to which the study findings can be valued and trusted. Trustworthiness was ensured by applying the principles of credibility, dependability, confirmability, and transferability as mentioned by Polit and Beck (2014:584).

5.1.9.1 Credibility

Credibility is concerned with the confidence in the truth of the data and the interpretation thereof (Polit & Beck 2014:599; Creswell & Clark 2011:91). In this phase (Phase 3) of the study, credibility was maintained by enhancing both the believability of the findings and making use of multiple sources of data to ensure triangulation of the research findings (Polit & Beck 2014:599).

All the panellists were coordinators of postnatal care services and programmes at district, regional and national levels of the health system in Ethiopia. They were thus experts who understood postnatal care and its challenges, as well as the relevant concepts of postnatal care. The recruitment letter (refer to Annexure 8-10) informed them about the importance of their genuine responses and opinions on the improvement of postnatal care services in Ethiopian. They had the opportunity to individually provide their opinions, views, and recommendations, therefore the credibility of the findings was enhanced.

5.1.9.2 Dependability

Dependability refers to the stability and reliability of data over time and conditions (Polit & Beck 2014:599; Creswell & Clark 2011:91), implying that the results from a specific study would be the same if it is replicated with the same participants in the same context (Polit & Beck 2014:599) with the same instrument. In this study, dependability was ensured through the provision of clear instructions to the panellists on how to complete the validation instrument and the inclusion of the pre-tested validation instrument. Clear instructions were also provided on the objectives of the study, the contribution of the panellists responses, as well as the contribution of the results from the study in improving postnatal care (refer to Annexure 8).

The analysed data from the closed-ended questions and narrative data from open-ended questions during Phase 1 were used to first adapt the draft contextualised framework. Thereafter, the action plan was developed based on the items in the framework. The validation instruments were based on the draft contextualised framework and draft action plan, which was shared with the panellists for inputs (refer to Annexure 5-7). Clear instructions and a tested validation instrument enhanced the dependability of this phase of the study.

5.1.9.3 Confirmability

Confirmability refers to the objectivity or neutrality of the research result and its interpretations (Polit & Beck 2014:585). To ensure confirmability in a qualitative study, findings from the study must always indicate the real participants' opinions, voices and the situation of the inquiry, not the researcher's interest, feelings, motivations or perspectives (Polit & Beck 2014:585).

Confirmability was achieved by providing an audit trail in which an independent reviewer (the research supervisor) verified the research process and interpretation of data to ensure that it is consistent with the literature and methodological procedures as recommended by Polit and Beck (2014:585). To enhance the confirmability of the study, the context of the research, the data collection approaches, decisions on what

data to collect, the data analysis process, and interpretation of data were documented throughout the study.

5.1.9.4 Transferability

Transferability is the extent to which findings or conclusions can be transferred to other settings or situations beyond the scope of the study's context, but similar in context (Polit & Beck 2014:585). The context of the study was described in detail and the audit trail provides an opportunity for other researchers to transfer the results to a similar context.

5.2 ROUND 1

In round 1 of the Delphi process, all 18 invited panellists participated, thus a 100% response rate (refer to Table 5.3) was achieved. Round 1 was completed in three weeks.

5.3 FINDINGS

Biographical data

The participating panellists were two health officers (public health professions) with a Master's degree in Public Health, three nurses with a Master's degree in Nursing, four midwives with a Master's degree in Midwifery, two health officers with a BSc degree in Public Health, two nurses with a BSc degree in Nursing, as well as five midwives with a BSc degree in Midwifery, as illustrated in Table 5.3. All the panellists were, therefore, in possession of at least a BSc degree. Moreover, they were considered experts (refer to Section 5.1.3) within the field of postnatal care.

Table 5.3: Professional background (N=18)

Qualification	Occupation	n=	f=%
Master's of Public health	Public health	2	11.1
MSc in nursing	Nursing	3	16.7
MSC in maternity or midwifery	Midwifery	4	22.2
BSc in public health (health officer)	Health officer	2	11.1

Qualification	Occupation	n=	f=%
BSc in nursing	Nurse	2	11.1
BSc in midwifery	Midwife	5	27.8
Total		**18**	**100**

Twelve (f=66.7%) Delphi panellists were males (refer to Table 5.4) and six (f=33.3%) were females. The large proportions of males reflect the somewhat lower representation of females in higher positions (Feysia, et al. 2012:5). This aspect needs improvement, specifically considering that women and babies are most affected by postnatal care services. This might be a concern as the voices of females were less heard in the framework and action plan that focuses strongly, but not exclusively, on women and their babies.

Table 5.4: Gender (N=18)

Gender	(n)	f=%
Male	12	66.7
Female	6	33.3
Total	**18**	**100**

The responses of all 18 panellists were analysed as described, and the findings were discussed under the headings (1) The problem, (2) Community needs, (3) Output, (4) Influential factors, (5) Strategies, and (6) Assumptions.

5.3.1 The problem

5.3.1.1 Postnatal care is a neglected aspect of health care in Ethiopia (N=18)

As indicated in Table 5.5, five panellists (f=27.8%) agreed and 10 (f=55.6%) strongly agreed that postnatal care is a neglected aspect of health care in Ethiopia. The researcher decided to combine “agree” and “strongly agree” as both options essentially reflect agreement in principle; thus, a total of 83.4% consensus was reached. The same principle applied to the “disagree” and “strongly disagree” responses in all Likert-scale questions.

Consensus was reached on this component of the contextualised framework, similar to the problem in Kenya. Therefore, Chelagat's framework, which aimed to improve postnatal care in Kenya, is relevant in Ethiopia. It is of interest that three (f=16.6%) panellists did not feel there is a problem with postnatal care in Ethiopia, despite the existing evidence (EDHS 2016:139).

Table 5.5: Panellist's views on postnatal care as a neglected health care

1.	**The problem**				
1.1.	Postnatal care is a neglected aspect of health care in Ethiopia	n=	f=	Combined	consensus
1.1.1	Strongly agree	5	27.8	83.4	Yes
1.1.2	Agree	10	55.6		
1.1.3	Disagree	3	16.6	16.6	
1.1.4	Strongly disagree	0	0		

5.3.2 Community needs

The findings pertaining to the community needs are illustrated in Table 5.6 and interpreted in the appropriate sections that follow. In the table, for some validation instruments, where panellists responded (ticked) to more than one option it was indicated by an asterisk. On a few validation instruments where some panellists did not provide their response (missing response), it was also indicated by an asterisk (*).

Table 5.6: Panellists' views on the community needs: action statements, responsible person/s and the time frame (N=18)

2.	**Community needs**				
2.1	**Action statement 1** Policies and guidelines aimed at ensuring the provision of comprehensive postnatal care services must be implemented.	n=	f=	Combined	consensus
2.1.1	Strongly agree	14	77.8	100%	Yes
2.1.2	Agree	4	22.2		
2.1.3	Disagree	0	0	0	

2.1.4	Strongly disagree	0	0		
2.1.1	Responsible person/s for the implementation of policies and guidelines				
2.1.1.1	Postnatal care programme coordinators (midwives, nurses, health officers, and doctors) at district, regional and national levels	18	100		Yes
2.1.1.2	Community leaders	0	0		
2.1.1.3	Religious leaders	0	0		
2.1.2	Time frame in which to implement policies and guidelines				
2.1.2.1	Within 1 month	3	16.7		No
2.1.2.2	Within 6 months	6	33.3		
2.1.2.3	Within 12 months	9	50		
2.2	**Action statement 2** Human resources for the provision of quality postnatal care services must be ensured				
2.2.1	Strongly agree	15	83.3	94.4%	Yes
2.2.2	Agree	2	11.1		
2.2.3	Disagree	0	0	5.6%	
2.2.4	Strongly disagree	1	5.6		
2.2.1	Responsible person/s for ensuring human resources for the provision of quality postnatal care				
2.2.1.1	Postnatal care providers	1	6.6		Yes
2.2.1.2	Human resource management heads at district, regional and national levels	18	100		
2.2.1.3	The community	0	0		
2.2.2	Time frame in which to ensure adequate human resources for the provision of quality postnatal care				
2.2.2.1	Within 6 months	7	38.9		No
2.2.2.2	Within 12 months	8	44.4		
2.2.2.3	Within 24 months	3	16.7		
2.3	**Action statement 3** Financial resources for the provision of quality postnatal care services must be ensured				
2.3.1	Strongly agree	13	72.2	100%	Yes
2.3.2	Agree	5	27.8		
2.3.3	Disagree	0	0	0	

2.3.4	Strongly disagree	0	0		
2.3.1	Responsible person/s for ensuring financial resources for the provision of quality postnatal care				
2.3.1.1	Family planning service unit leaders at health facilities	1	5.6		Yes
2.3.1.2	The heads of budget and finance at district, regional and national health departments	16	88.8		
2.3.1.3	Community leaders	1	5.6		
2.3.2	Time frame in which to ensure financial resources for the provision of quality postnatal care				
2.3.2.1	Within 6 months	7	38.8		No
2.3.2.2	Within 12 months	10	55.6		
2.3.2.3	Within 18 months	0	0		
2.3.2.4	Within 24 months	1	5.6		
2.4	**Action statement 4** Continuing professional education must be strengthened to improve postnatal care				
2.4.1	Strongly agree	15	83.3	100%	Yes
2.4.2	Agree	3	16.7		
2.4.3	Disagree	0	0	0	
2.4.4	Strongly disagree	0	0		
2.4.1	Responsible person/s for strengthening continuing professional education				
2.4.1.1	The community leaders	0	0		Yes
2.4.1.2	In-service training service coordinators in Oromia Regional Health Bureau and Ministry of Health	18	100		
2.4.1.3	Postnatal care team leaders at the regional health department	0	0		
2.4.2	Time frame in which to strengthen continuing professional education				
2.4.2.1	Within 3 months	4	22.2		No
2.4.2.2	Within 6 months	6	33.3		
2.4.2.3	Within 9 months	8	44.5		
2.5	**Action statement 5** Effective monitoring of postnatal care services is required				
2.5.1	Strongly agree	15	83.3	94.4%	Yes

2.5.2	Agree	2	11.1		
2.5.3	Disagree	1	5.6	5.6%	
2.5.4	Strongly disagree	0	0		
2.5.1	Responsible person/s for effective monitoring of postnatal care services				
2.5.1.1	The community leaders	2*	11.1		Yes
2.5.1.2	Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	18	100		
2.5.1.3	Women development army leaders	1*	5.6		
2.5.1.4	Head of budget and finance at health facilities	2*	11.1		
2.5.2	Time frame in which to ensure effective monitoring of postnatal care services				
2.5.2.1	Within 1 month	10	55.6		No
2.5.2.2	Within 6 months	6	33.3		
2.5.2.3	Within 12 months	2	11.1		
2.6	**Action statement 6** There should be consistent evaluation of postnatal care services				
2.6.1	Strongly agree	16	88.8	94.4	Yes
2.6.2	Agree	1	5.6		
2.6.3	Disagree	1	5.6	5.6%	
2.6.4	Strongly disagree	0	0		
2.6.1	Responsible person/s for consistent evaluation of postnatal care services				
2.6.1.1	Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	18	100		Yes
2.6.1.2	Head of budget and finance at health facilities	4*	22.2		
2.6.1.3	Postnatal care team leaders at the district level	3*	16.7		
2.6.2	Time frame in which to ensure effective evaluation of postnatal care services				
2.6.2.1	Within 1 month	5	27.8		No
2.6.2.2	Within 6 months	4	22.2		
2.6.2.3	Within 12 months	9	50		
2.7	**Acton statement 7** The coordination of postnatal care services must be improved				

2.7.1	Strongly agree	16	88.8	94.4%	Yes
2.7.2	Agree	1	5.6		
2.7.3	Disagree	1	5.6	5.6%	
2.7.4	Strongly disagree	0	0		
2.7.1	Responsible person/s for improving the coordination of postnatal care services				
2.7.1.1	Head of health faculties	0	0		Yes
2.7.1.2	Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	18	100		
2.7.1.3	Religious leaders	1*	5.6		
2.7.2	Time frame in which to achieve improvement in coordinating postnatal care services				
2.7.2.1	Immediately	13	72.2		No
2.7.2.2	Within 6 months	3	16.7		
2.7.2.3	Within 12 months	2	11.1		
2.8	**Action statement 8** Data management processes, such as recording and reporting of postnatal care services, must be improved				
2.8.1	Strongly agree	16	88.8	94.4%	Yes
2.8.2	Agree	1	5.6		
2.8.3	Disagree	1	5.6	5.6%	
2.8.4	Strongly disagree	0	0		
2.8.1	Responsible person/s for improving data management processes such as recording and reporting of postnatal care services				
2.8.1.1	Health management information system (HMIS) officers (Information technologists, midwives, nurses, health officers and doctors at health facilities, district, regional and national levels)	18	100		Yes
2.8.1.2	Head of budget and finance at health facilities	0	0		
2.8.1.3	Postnatal care programme officers at the district level	0	0		
2.8.2	Time frame in which to improve data management processes such as recording and reporting of postnatal care services				
2.8.2.1	Within 1 month	11	61.1		No
2.8.2.2	Within 6 months	3	16.7		

2.8.2.3	Within 12 months	4	22.2		
2.9	**Action statement 9** Community involvement in postnatal care services must be improved				
2.9.1	Strongly agree	15	83.3	100%	Yes
2.9.2	Agree	3	16.7		
2.9.3	Disagree	0	0	0	
2.9.4	Strongly disagree	0	0		
2.9.1	Responsible person/s for improving community involvement in postnatal care services				
2.9.1.1	Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	15	83.3		Yes
2.9.1.2	Head of budget and finance	1	5.6		
2.9.1.3	Family planning service unit leaders at health facilities	7*	38.9		
2.9.2	Time frame in which to improve community involvement in postnatal care services				
2.9.2.1	Within 6 months	14	77.8		Yes
2.9.2.2	Within 12 months	2	11.1		
2.9.2.3	Within 24 months	3	16.7		
2.10	**Action statement 10** Establish community surveillance of maternal and neonatal deaths				
2.10.1	Strongly agree	14	77.8	100%	Yes
2.10.2	Agree	4	22.2		
2.10.3	Disagree	0	0	0	
2.10.4	Strongly disagree	0	0		
2.10.1	Responsible person/s for establishing community surveillance of maternal and neonatal deaths				
2.10.1.1	Religious leaders	5	27.8		Yes
2.10.1.2	Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	16	88.9		
2.10.1.3	Community leaders	2*	11.1		
2.10.2	Time frame in which to establish community surveillance of maternal and neonatal deaths				
2.10.2.1	Within 1 month	7	38.9		No
2.10.2.2	Within 6 months	7	38.9		

2.10.2.3	Within 12 months	4	22.2		
2.11	**Action statement 11** Identify and address social and cultural practices, myths and misconceptions about postnatal care				
2.11.1	Strongly agree	13	72.2	94.4%	Yes
2.11.2	Agree	4	22.2		
2.11.3	Disagree	1	5.6	5.6%	
2.11.4	Strongly disagree	0	0		
2.11.1	Responsible person/s for identifying and addressing social and cultural practices, myths and misconceptions on postnatal care				
2.11.1.1	Head of budget and finance at health facilities	1	5.6		No
2.11.1.2	Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	13	72.2		
2.11.1.3	Institutional delivery service unit leaders at the health facilities	8*	44.4		
2.11.2	Time frame in which to identify and address social and cultural practices, myths and misconceptions of postnatal care				
2.11.2.1	Within 6 months	8	44.4		No
2.11.2.2	Within 12 months	7	38.9		
2.11.2.3	Within 24 months	3	16.7		
2.12	**Action statement 12** Provide incentives for postnatal care providers.				
2.12.1	Strongly agree	4	22.2	55.5%	No
2.12.2	Agree	6	33.3		
2.12.3	Disagree	7	38.9	44.5%	
2.12.4	Strongly disagree	1	5.6		
2.12.1	Responsible person/s for providing incentives for postnatal care providers (n=13).				
2.12.1.1	Community leaders	0	0		Yes
2.12.1.2	The head of the district, regional, and national health departments	12	92.3		
2.12.1.3	Health facility leaders	1*	7.7		
2.12.2	Time frame in which to provide incentives for postnatal care providers (n=13).				
2.12.2.1	Immediately	2*	15.4		No
2.12.2.2	Within 6 months	5	38.5		

2.12.2.3	Within 12 months	6	46.2		
2.13	**Action statement 13** Maternal waiting homes must be available at all health facilities				
2.13.1	Strongly agree	15	83.3	100%	Yes
2.13.2	Agree	3	16.7		
2.13.3	Disagree	0	0	0	
2.13.4	Strongly disagree	0	0		
2.13.1	Responsible person/s for the availability of maternal waiting rooms at all health facilities				
2.13.1.1	Postnatal mothers	3	16.7		No
2.13.1.2	Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	12	66.7		
2.13.1.3	Head of budget and finance at health facilities	9*	50		
2.13.2	Time frame in which to ensure the availability of maternal waiting rooms at all health facilities				
2.13.2.1	Within 6 months	7	38.9		No
2.13.2.2	Within 12 months	7	38.9		
2.13.2.3	Within 24 months	4	22.2		
2.14	**Action statement 14** Ensure effective communication with ambulance service and other postnatal care issues for improving postnatal care				
2.14.1	Strongly agree	16	88.9	100%	Yes
2.14.2	Agree	2	11.1		
2.14.3	Disagree	0	0	0	
2.14.4	Strongly disagree	0	0		
2.14.1	Responsible person/s for ensuring effective communication for ambulance service and other postnatal care issues				
2.14.1.1	Head of the health facilities	4	22.2		Yes
2.14.1.2	Ambulance drivers at health facilities; community leaders; and Midwives, Nurses, Health officers and doctors who coordinate postnatal care at district, regional and national levels	17*	94.4		
2.14.1.3	In-service training services directors at	2	11.1		

	Oromia Regional Health Bureau				
2.14.2	Time frame in which to ensure effective communication with ambulance service and other postnatal care issues				
2.14.2.1	Within 1 month	10	55.6		No
2.14.2.2	Within 6 months	2	11.1		
2.14.2.3	Within 12 months	6	33.3		
2.15	**Action statement 15** Cultural ceremonies should be practiced at health facilities to motivate mothers to utilise institutional delivery and postnatal care				
2.15.1	Strongly agree	12	66.7	88.8%	Yes
2.15.2	Agree	4	22.2		
2.15.3	Disagree	1	5.6	11.2%	
2.15.4	Strongly disagree	1	5.6		
2.15.1	Responsible person/s for practicing the cultural ceremonies				
2.15.1.1	Postnatal care programme coordinators at FMOH	2	11.8		Yes
2.15.1.2	The community leaders; religious leaders; and midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	17*	94.4		
2.15.1.3	Training service coordinators at Oromia Regional Health Bureau	2	11.8		
2.15.2	Time frame in which to practice cultural ceremonies				
2.15.2.1	Within 3 months	10	58.8		No
2.15.2.2	Within 6 months	2	11.8		
2.15.2.3	Within 12 months	5	29.4		

5.3.2.1 Action statement 1: Policies and guidelines aimed at ensuring the provision of comprehensive postnatal care services must be implemented (N=18)

Delphi panellists' opinions were sought on whether polices and guidelines must be implemented as a possible solution for neglected postnatal care in the Ethiopian context.

Fourteen (f=77.8%) panellists strongly agreed and four (f=22.2%) agreed, thus 100% consensus was reached that there is a need for the availability of polices and guidelines at each health facility similar to what was identified in Kenya (Chelagat 2015:171). From the responses to the open-ended question, the panellists also strongly recommended that postnatal care services rendered at health facilities must be supported by guidelines. One panellist indicated:

> "*We postnatal care providers have to follow guidelines when rendering postnatal care*".

a) Responsible person/s

All the panellists (N=18) strongly agreed (100% consensus) that team leaders (midwives, nurses, health officers, and doctors) at district, regional and national levels must take responsibility for implementing policies and guidelines for postnatal care services. It is important to note that although consensus was reached on responsible person/s for most of the action statements in this round, the specific person/s to take responsibility was validated in round 3 (refer to Table 5.34).

b) Time frame

Consensus was not reached on the time frame within which policies and guidelines must be implemented (refer to Table 5.6). Only nine (f=50%) panellists agreed that polices and guidelines for postnatal care must be implemented within 12 months after the contextualised framework is implemented, while others varied in their opinions pertaining to the timeline.

5.3.2.2 Action statement 2: Human resources for the provision of quality postnatal care services must be ensured (N=18)

The Delphi panellists were motivated to rate the item indicating the need to ensure human resources for the provision of quality postnatal care services. The results showed that the contextualised framework could effectively be implemented in

Ethiopia if human resources are ensured for postnatal care. The response reflected a consensus level of 94.4% (n=15) as panellists agreed on the need to ensure human resources for postnatal care in Ethiopia. The study from Chelagat in Kenya also identified human resources as a key component in improving postnatal care (Chelagat 2015:124-125).

To enhance the contextualised framework's implementation, the Delphi panellists suggested that the population to health professional ratio, as well as postnatal care providers' competency and distribution should be improved so that the quality of postnatal care for mothers living in rural and urban settings of Ethiopia will be improved. A panellist indicated:

> *"Human resource, competency and distribution need to be improved as it is a key issue for postnatal care services".*

a) Responsible person/s

Hundred percent consensus was reached among the Delphi panellists that human resource management heads at district, regional and national levels must take responsibility for ensuring skilled and competent human resources for postnatal care services (refer to Table 5.6).

b) Time frame

The panellists had diverse views on the time frame for ensuring human resources and consensus was not reached in this round. Eight (f=44.4%) panellists indicated that the strategies for ensuring human resources for postnatal care must be developed within 12 months after the implementation of the contextualised framework. Other panellists had varied opinions on the time frame as seven (f=38.9%) recommended a time frame of 6 months and the remaining three (f=16.7%) indicated the time frame of 24 months (refer to Table 5.6).

5.3.2.3 Action statement 3: Financial resources for the provision of quality postnatal care services must be ensured (N=18)

The Delphi panellists' opinions on the need to ensure financial resources in the Ethiopian context for improving the utilisation and quality of postnatal care services were assessed. A 100% (n=18; N=18) consensus was reached that there is a need to improve financial resources if postnatal care services are to be improved in Ethiopia. In line with this item, some Delphi panellists recommended that the government should increase the financial budget for easy implementation of the contextualised framework to offer quality postnatal care. As mentioned:

> "*The government needs to improve the budget for postnatal care. The financial resources are a key element in the provision of postnatal care that the government needs to give due attention otherwise it will be difficult to offer quality postnatal care".*

Financial resources improvement was also included in Chelagat's framework in terms of community needs or assets for improving postnatal care (Chelagat 2015:144).

a) Responsible person/s

The panellists reached consensus as 16 panellists (f=88.8%), indicated that the heads of budget and finance at district, regional and national health departments must take responsibility for improving financial resources for postnatal care in Ethiopia.

b) Time frame

No consensus was reached related to when the allocation of adequate financial resources for postnatal care services must be ensured, as 10 (f=55.6%) panellists recommended the time frame of 12 months, seven (f=38.8%) recommended a time frame of 6 months, and one (f=5.6%) had the opinion of 24 months after the implementation of the contextualised framework (refer to Table 5.6).

5.3.2.4 Action statement 4: Continuing professional education must be strengthened to improve postnatal care (N=18)

The need for continuing professional education for postnatal care providers and coordinators is crucial for the provision of quality maternal health care, including postnatal care (Yigzaw, Ayalew, Kim, Gelagay, Dejene, Gibson, et al. 2015:130). Continuing professional development is also an important component in Chelagat's framework related to Kenya. In this study, Delphi panellists' views and opinions were sought whether continuing professional education contributes to the improvement of postnatal care in Ethiopia.

As indicated in Table 5.6, a 100% (n=18; N=18) consensus was reached among the panellists that continuing professional education must be provided for postnatal care providers and coordinators. By implementing the contextualised framework in Ethiopia, the panellists confirmed the implementation of continuing professional education programmes as a strategy to create skilful, caring, respectful, and compassionate postnatal care providers. A panellist indicated:

> "*Postnatal care service providers need continuous in-service training to update their skills and knowledge".*

a) Responsible person/s

All panellists (n=18; N=18; f=100%) indicated that the in-service training coordinators at Oromia Regional Health Bureau and the FMOH must take responsibility for strengthening the continuing professional education among postnatal care providers and coordinators (refer to Table 5.6).

b) Time frame

Diverse opinions on the time frame in which to implement continuing professional development were reported by panellists and consensus was not reached. Eight (f=44.5%) panellists recommended that the continuing professional education on postnatal care services must be ensured within 9 months after the implementation of

the contextualised framework. Six (f=33.3%) respondents indicated 6 months, and four (f=22.2%) recommended the time frame of 3 months (refer to Table 5.6).

5.3.2.5 Action statement 5: Effective monitoring of postnatal care services is required (N=18)

Consensus (n=17; f=94.4%) was reached that there should be strong monitoring of postnatal care in the Ethiopian context. Added to this, the panellists recognised the need for monitoring influential factors for postnatal care services in Ethiopia, thereby addressing those influential factors. A panellist shared:

> *"Monitoring of postnatal care should include factors that influence postnatal care services*".

The study findings support what was included in Chelagat's framework for improving postnatal care in Kenya, namely strong monitoring of postnatal care throughout health facilities providing postnatal services.

a) Responsible person/s

As illustrated in Table 5.6, consensus was reached among all (n=18; N=18; f=100%) panellists that postnatal care service team leaders (midwives, nurses, health officers, and doctors) at district, regional and national levels must take responsibility for improving the monitoring of postnatal care services.

b) Time frame

Even though 10 (f=55.6%) panellists recommended the time frame for implementing effective monitoring for postnatal care services must be within one month after launching the contextualised framework, consensus was not reached. Six (f=33.3%) respondents had the opinion of the time frame of 6 months and two (f=11.1%) indicated 12 months (refer to Table 5.6).

5.3.2.6 Action statement 6: There should be consistent evaluation of postnatal care services (N=18)

Having effective evaluation mechanisms in postnatal care services is a strategy to assess the quality of postnatal services rendered for mothers and newborns (Dlamini 2016:93). Through consistent evaluation, health facilities or programmes can identify challenges in postnatal care services and implement the appropriate interventions to enhance the quality of postnatal care. Chelagat's framework indicated the evaluation of postnatal care as one of the integral components included under community needs or assets (Chelagat 2015:166).

The panellists' views and opinions were assessed regarding whether there must be an improvement in the existing evaluation of postnatal care services offered in the Ethiopian context. Seventeen (f=94.4%) panellists reached consensus that there must be an improvement in the evaluation of postnatal care services in the Ethiopian context.

a) Responsible person/s

All panellists (n=18; N=18) agreed and reached 100% consensus that postnatal care service team leaders (midwives, nurses, health officers, and doctors) at district, regional and national levels must take responsibility for the implementation of consistent postnatal care evaluation (refer to Table 5.6).

b) Time frame

Diverse views were reported by panellists on the time frame in which a consistent evaluation is to be implemented in postnatal care services and consensus was not reached. Nine panellists (f=50%) recommended the implementation of consistent evaluation of postnatal care services to be within 12 months after the implementation of the contextualised framework. Five (f=27.8%) and 4 (f=22.2%) of the panellists recommended the time frame of 1 month and 6 months, respectively (refer to Table 5.6).

5.3.2.7 Action statement 7: The coordination of postnatal care services must be improved (N=18)

Based on postnatal care service provision practices in Ethiopia, the Delphi panellists were asked whether there is a need to improve the coordination of postnatal care services. Of the experts, 17 (f=94.4%) panellists reached consensus that the coordination of postnatal care must be improved (refer to Table 5.6). There is, according to the panellists, a need for improvement in coordinating postnatal care in Ethiopia, as was the case in Kenya (Chelagat 2015:166).

a) Responsible person/s

All panellists (N=18; n=18) reached a 100% consensus that postnatal care service team leaders (midwives, nurses, health officers, and doctors) at district, regional and national levels must take responsibility for the improvement of the coordination of postnatal care services (refer to Table 5.6).

b) Time frame

The analysed data indicated that 13 (f=72.2%) panellists recommended that the postnatal care service team leaders must improve the coordination of postnatal care immediately after the implementation of the contextualised framework. However, a consensus was not reached as three (f=16.7%), and two (f=11.1%) of the panellists indicated the time frame of 6 months and 12 months, respectively, for the improvement of the coordination of postnatal care services (refer to Table 5.6).

5.3.2.8 Action statement 8: Data management processes, such as recording and reporting of postnatal care services, must be improved (N=18)

The responses from the panellists showed that postnatal care service utilisation and quality could potentially be improved if data management (including recording and reporting postnatal care services) is improved. Seventeen (f=94.4%) panellists reached consensus that there must be an improvement in the data management if postnatal care services are to be improved (refer to Table 5.6), which was also a

concern area to be addressed in Chelagat's framework for improving postnatal care in Kenya (Chelagat 2015:166).

One panellist emphasised the need to improve postnatal care providers' and coordinators' technical skills in data management.

> *"Postnatal care providers and coordinators need to have skills for recording and reporting postnatal care services".*

a) Responsible person/s

Hundred percent consensus (n=18, N=18) was reached as all panellists agreed that the health management information heads (information technologists, midwives, nurses, health officers, and doctors) at health facilities, district, regional and national levels must take responsibility for developing strategies to improve the data management of postnatal care.

b) Time frame

Consensus was not reached on the time frame within which recommended data management strategies for postnatal care must be implemented, although 11 (f=61.1%) panellists recommended 1 month after the implementation of the framework. The remaining panellists, four (f=22.2%), and three (f=16.7%), recommended a time frame of 12 months and 6 months, respectively (refer to Table 5.6).

5.3.2.9 Action statement 9: Community involvement in postnatal care services must be improved (N=18)

Hundred percent consensus (n=18; N=18) was reached that community involvement in postnatal care must be improved if postnatal care utilisation is to be enhanced (refer to Table 5.6). This response from the panellists reflects that community participation should be integral in postnatal care coordination in Ethiopia. The same finding was true for Kenya (Chelagat 2015:166).

a) Responsible person/s

Consensus was reached as 15 (f=83.3%) panellists agreed that postnatal care service team leaders (midwives, nurses, health officers, and doctors) at district, regional and national levels must take responsibility for developing and implementing strategies for improving community involvement in postnatal care services (refer to Table 5.6).

b) Time frame

Fourteen (f=77.8%) panellists reached consensus and recommended the strategies to improve community involvement in postnatal care must be implemented within 6 months after the implementation of the contextualised framework (refer to Table 5.6).

5.3.2.10 Action statement 10: Establish community surveillance of maternal and neonatal deaths (N=18)

Panellists were in complete (n=18; N=18) agreement that community surveillance on maternal and neonatal deaths must be established to strengthen the postnatal care services offered for postnatal mothers and newborns (refer to Table 5.6). This consensus level is an indication that the community surveillance on maternal and neonatal deaths can be an input for assessing the effectiveness, utilisation level and quality of postnatal care services. Community surveillance is also an integral component in the framework developed by Chelagat for improving postnatal care services in Kenya (Chelagat 2015:166).

a) Responsible person/s

Consensus was reached among 16 (f=88.9%) panellists that postnatal care service team leaders (midwives, nurses, health officers, and doctors) at district, regional and national levels must take responsibility for developing and implementing strategies for establishing community surveillance of maternal and neonatal deaths.

b) Time frame

The panellists provided diverse views on the time frame in which the community surveillance should be established for maternal and neonatal deaths and consensus was not reached during this round of the Delphi process. Seven (f=38.9%) panellists had the opinion that the contextualised framework must be implemented within a time frame of 1 month; whereas seven (f=38.9%) recommended a time frame of 6 months and another four (f=22.2%) panellists indicated a time frame of 12 months (refer to Table 5.6).

5.3.2.11 Action statement 11: Identify and address social and cultural practices, myths and misconceptions about postnatal care (N=18)

The panellists were asked to indicate their level of agreement on whether there is a need to identify and manage the existing cultural practices, myths, and misconceptions that can impact postnatal service utilisation and quality. Of the experts, 17 (f=94.4%) reached consensus that cultural practices and myths must be identified and managed as part of strategies for improving postnatal care services in Ethiopia (refer to Table 5.6).

This high-level consensus among panellists indicates that influential factors such as cultural misconceptions and myths can influence the utilisation of postnatal care services; in turn, it can influence the implementation of the contextualised framework as well. The identification and management of cultural practices that impact on postnatal care utilisation were also addressed in Chelagat's framework for improving postnatal care in Kenya (Chelagat 2015:166).

a) Responsible person/s

Although 13 panellists (f=72.2%) indicated that postnatal care service team leaders (midwives, nurses, health officers, and doctors) at district, regional and national levels must take responsibility for identifying and addressing the social and cultural practices, myths and misconceptions about postnatal care, consensus was not reached in this round. Eight (f=44.4%) panellists indicated that institutional delivery

service unit leaders at the health facilities must take responsibility, whereas one (f=5.6%) panellist indicated that the head of budget and finance at health facilities must take the responsibility (refer to Table 5.6).

b) Time frame

Eight (f=44.4%) panellists indicated the time frame of 6 months after implementing the contextualised framework to identify and address social and cultural practices, myths and misconceptions about postnatal care, and there was no consensus. Seven (38.9%) panellists recommended a time frame of 12 months and three (f=16.7%) indicated a time frame of 24 months (refer to Table 5.6).

5.3.2.12 Action statement 12: Provide incentives for postnatal care providers (N=18)

As illustrated in Table 5.6, 10 (f=55.5%) panellists were of the opinion that incentives should be provided for postnatal care providers, but consensus was not reached; eight (f=44.5%) panellists did not agree on the need to provide incentives for postnatal care providers. The panellists had a concern that the lack of an adequate budget by the government of Ethiopia may compromise the provision of incentives for postnatal care providers. Some panellists indicated:

> *"The Ethiopian government is unable to pay incentives for postnatal care providers as a result of inadequate budget".*

> *"The Ministry of Health is unable to pay incentives for postnatal care providers".*

a) Responsible person/s (n=13)

Even though consensus was not reached on the provision of incentives for postnatal care providers, of those who responded to this specific item, 12 (f=92.3%) panellists had the opinion that the head of the district, regional, and national health

departments must take responsibility for the provision of incentives for postnatal care providers (refer to Table 5.6).

b) Time frame

Regarding the time frame for the provision of incentives for postnatal care providers, six (f=46.2%) panellists recommended that strategies to provide incentives for postnatal care providers must be implemented within 12 months after the contextualised framework is launched. It was indicated by five (f=38.5%) panellists that incentives should be provided within 6 months, and two (f=15.4%) panellists recommended it be done immediately (refer to Table 5.6).

5.3.2.13 Action statement 13: Maternal waiting homes must be available at all health facilities (N=18)

During Phase 1 of this study, it was indicated that the lack of maternal waiting homes at health facilities was a challenge for the provision of postnatal care services. In this phase, the panellists were requested to present their level of agreement on whether the availability of maternal waiting homes will improve postnatal care services in Ethiopia. Hundred percent (n=18; N=18) consensus was reached among the panellists that the availability of maternal waiting homes in health facilities of Ethiopia will play a key role in minimising barriers to postnatal care and improve the utilisation thereof.

It was also mentioned that the maternal waiting homes in health facilities must have the necessary infrastructure and other equipment for use by postnatal mothers. Panellists indicated that:

> "*Health facility infrastructure such as electricity, clean water, and bedrooms need to be available in the maternal waiting homes*".

> "*The availability of medical drugs and supplies will improve the utilisation maternal waiting homes and postnatal care*".

a) Responsible person/s

As illustrated in Table 5.6, although 12 (f=66.7%) panellists were of the opinion that postnatal care service team leaders (midwives, nurses, health officers, and doctors) at district, regional and national levels must take responsibility for the availability of maternal waiting homes at all health facilities, consensus was not reached. Three (f=16.7%) panellists indicated that postnatal mothers must take responsibility, whereas nine (f=50%) indicated that it must be the responsibility of the head of budget and finance at health facilities.

b) Time frame

The panellists reflected diverse views on the time frame by which the maternal waiting homes must be available in the health facilities, and consensus was not reached. Seven (f=38.9.%) panellists indicated that strategies for ensuring the availability of maternal waiting homes must be developed and implemented in all health facilities within 6 months after the implementation of the contextualised framework. Another seven (f=38.9%) recommended the time frame of 12 months and the remaining four (f=22.2%) panellists indicated it must be implemented within 24 months (refer to Table 5.6).

5.3.2.14 Action statement 14: Ensure effective communication for ambulance services and other postnatal care issues for improving postnatal care (N=18)

The panel experts were asked to rate their agreement on the need for effective communication with all concerned, such as ambulance drivers and healthcare providers when the need arises. The panellists reached a 100% (n=18; N=18) consensus that effective communication among postnatal care providers, postnatal mothers, the family, and ambulance drivers should be implemented in all health facilities rendering postnatal care services (refer to Table 5.6).

a) Responsible person/s

As illustrated in Table 5.6, 17 (f=94.4%) panellists recommended that the ambulance drivers at health facilities, community leaders, postnatal care service team leaders (midwives, nurses, health officers, and doctors) at district, regional and national levels must take responsibility for ensuring effective communication with ambulance services.

b) Time frame

Ten (f=55.6%) panellists recommended strategies for effective communication for ambulance services for postnatal care must be ensured within 1 month after the implementation of the contextualised framework. However, consensus was not reached as six (f=33.3%), and two (f=11.1%) panellists recommended the time frame of 12 months and 6 months, respectively (refer to Table 5.6).

5.3.2.15 Action statement 15: Cultural ceremonies should be practiced at health facilities to motivate mothers to utilise institutional delivery and postnatal care (N=18)

Of the Delphi panellists, 16 (f=88.8%) reached consensus that cultural ceremony practices at health facilities are important in improving postnatal care and must be integrated into routine postnatal care services. This high consensus level indicates that cultural ceremonies at the health facilities motivate mothers to stay in the health facilities for the first 24 hours after delivery which, in turn, will improve the utilisation of postnatal care (refer to Table 5.6).

a) Responsible person/s

As illustrated in Table 5.6, 17 (f=94.4%) panellists reached consensus that the community leaders, religious leaders, and postnatal care service team leaders (midwives, nurses, health officers, and doctors) at district, regional and national levels must take responsibility for developing strategies that encourage the practice of cultural ceremonies at health facilities. Two (f=11.8%) panellists indicated that

postnatal care programme coordinators at the FMOH must take the responsibility and another two (f=11.8%) had the opinion that in-service training coordinators at Oromia Regional Health Bureau must take the responsibility.

b) Time frame

Only ten (f=58%) panellists recommended that strategies that encourage the practice of cultural ceremonies after delivery must be implemented in all health facilities within 3 months after the implementation of the contextualised framework, and there was thus no consensus. Two (f=11.8%) panellists indicated that the cultural ceremonies after delivery must be practiced at all health facilities within 6 months, and five (f=29.4%) panellists recommended the time frame of 12 months (refer to Table 5.6).

5.3.3 Output

The findings pertaining to the output are illustrated in Table 5.7.

Table 5.7: Panellists' views on outputs: action statements of the contextualised framework (N=18)

3	**Output**				
3.1	**Action statement 16** The implementation of a contextualise framework for postnatal care will contribute to improvement in postnatal care follow-up visits for at the community level.	n=	f=	Combined	consensus
3.1.1	Strongly agree	16	88.9	100	Yes
3.1.2	Agree	2	11.1		
3.1.3	Disagree	0	0	0	
3.1.4	Strongly disagree	0	0		
3.2	**Action statement 17** Implementation of a framework to improve postnatal care will contribute to accurately written reports on the postnatal care services at different levels of the health system.				
3.2.1	Strongly agree	12	66.7	100%	Yes
3.2.2	Agree	6	33.3		

3.2.3	Disagree	0	0	0	
3.2.4	Strongly disagree	0	0		
3.3	**Action statement 18** The quality of postnatal care services offered to postnatal mothers and their babies at health facilities in Ethiopia needs to be improved through the implementation of a contextualised framework.				
3.3.1	Strongly agree	12	66.6	94.4%	Yes
3.3.2	Agree	5	27.8		
3.3.3	Disagree	1	5.6	5.6%	
3.3.4	Strongly disagree	0	0		
3.4	**Action statement 19** The implementation of the framework will enhance partnerships forming in matters regarding the provision of postnatal care services.				
3.4.1	Strongly agree	12	66.7	100	Yes
3.4.2	Agree	6	33.3		
3.4.3	Disagree	0	0	0	
3.4.4	Strongly disagree	0	0		

5.3.3.1 Action statement 16: The implementation of a contextualised framework for postnatal care will contribute to improvement in postnatal care follow-up visits at the community level (N=18)

The panellists were asked whether there is a need to have a framework that will contribute to postnatal mothers' follow-up at the community level, thereby contributing to the improvement of postnatal care in the Ethiopian context. Hundred percent consensus was reached among the panellists (n=18; N=18) that the postnatal care follow-up at the community level will be improved if a framework is developed for improving postnatal care and implemented in all health facilities in Ethiopia (refer to Table 5.7).

5.3.3.2 Action statement 17: Implementation of a framework to improve postnatal care will contribute to accurately written reports on the postnatal care services at different levels of the health system (N=18)

Consensus was sought on whether the implementation of the contextualised framework for improving postnatal care will improve the availability of up-to-date written reports on postnatal care at different levels of the health system. It is anticipated that this factor may kerb the problem of unavailability and poor quality of up-to-date reports, as identified in Phase 1 of this study. The panel reached 100% consensus (n=18; N=18) that the implementation of the contextualised framework in the health facilities is believed to improve the reporting system of the postnatal care services (refer to Table 5.7).

The experts' consensus supported the researcher's initial notion that the contextualised framework needs to be implemented in the Ethiopian health system to curb the challenges of poor postnatal care data management, and thus achieve a lasting effect.

5.3.3.3 Action statement 18: The quality of postnatal care services offered to postnatal mothers and their babies at health facilities in Ethiopia needs to be improved through the implementation of a contextualised framework (N=18)

The panellists were asked for their level of agreement on the contribution of the contextualised framework in improving the quality of postnatal care in Ethiopia. Consensus was reached among the panellists (n=17; f=94.4%) that the contextualised framework will contribute to improving the quality of postnatal care and must be integrated and implemented with the existing health programmes in Ethiopia (refer to Table 5.7).

The high consensus level among the panellists is an indication that the implementation of the contextualised framework will contribute to improvements in postnatal care quality as it addresses factors such as the poor skills of the postnatal

care providers; and the lack of a separate room for postnatal care that compromise the quality of postnatal care services.

5.3.3.4 Action statement 19: The implementation of the framework will enhance partnerships forming in matters regarding the provision of postnatal care services (N=18)

Based on the facts included in the contextualised framework, as well as their professional experiences in the area of postnatal care services, the panellists were asked whether there is a need to improve partnerships for postnatal care services for effective implementation of the contextualised framework, as well as for improvements in the quality and utilisation of postnatal care services in Ethiopia.

The data illustrate that 100% consensus (n=18; N=18) was reached that there is a need for a strong partnership in postnatal care services; established among concerned bodies, including NGOs and other organisations (refer to Table 5.7). Added to this, it was indicated that the majority of health facilities rendering postnatal care services lack partnerships; this was reported to be a challenge for postnatal care services that must be improved:

> "*There is a need to have a strong partnership for improvement of postnatal care".*

5.3.4 Influential factors

The findings pertaining to the factors influencing postnatal care services in Ethiopia are presented in Table 5.8.

Table 5.8: Panellists' views on the influential factors: Action statements, responsible person/s and the time frame (N=18)

4	**Influential factors:**				
4.1	**Action statement 20** The Ethiopian government is committed to the attainment of the health sector transformation plan which can contribute to improvements in postnatal care.	n=	f=	Combined	consensus
4.1.1	Strongly agree	14	77.8	100%	Yes
4.1.2	Agree	4	22.2		
4.1.3	Disagree	0	0	0	
4.1.4	Strongly disagree	0	0		
4.2	**Action statement 21** Good governance in Ethiopia is a contributing factor for the implementation of the contextualised framework and thus the improvement in postnatal care.				
4.2.1	Strongly agree	12	66.7	88.9%	Yes
4.2.2	Agree	4	22.2		
4.2.3	Disagree	2	11.1	11.1%	
4.2.4	Strongly disagree	0	0		
4.3	**Action statement 22** The Ethiopian government's political will must facilitate the implementation of the contextualised framework.				
4.3.1	Strongly agree	11	61.1	83.3	Yes
4.3.2	Agree	4	22.2		
4.3.3	Disagree	3	16.7	16.7%	
4.3.4	Strongly disagree	0	0		
4.4	**Action statement 23** Establish community health units for postnatal care improvement.				
4.4.1	Strongly agree	10	55.6	77.8%	Yes
4.4.2	Agree	4	22.2		
4.4.3	Disagree	4	22.2	22.2	
4.4.4	Strongly disagree	0	0		
4.4.1	Responsible person/s for establishing community health units for postnatal care (n=16)				

4.4.1.1	Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	14	87.5		Yes
4.4.1.2	Head of health facilities	2	12.25		
4.4.1.3	Family planning service unit leaders at health facilities	4*	25		
4.4.2	Time frame in which to establish community health units for postnatal care (n=16)				
4.4.2.1	Within 1 year	11*	68.7		No
4.4.2.2	Within 2 years	5	31.3		
4.4.2.3	Within 3 years	0	0		
4.5	**Action statement 24** The FMOH should improve the budget allocated for postnatal care to minimise the budget constraint for postnatal care services in Ethopia.				
4.5.1	Strongly agree	12	66.7	77.8%	Yes
4.5.2	Agree	2	11.1		
4.5.3	Disagree	4	22.2	22.2%	
4.5.4	Strongly disagree	0	0		
4.6	**Action statement 25** Ensure Partner/donor support for postnatal care.				
4.6.1	Strongly agree	8	44.4	88.9%	Yes
4.6.2	Agree	8	44.4		
4.6.3	Disagree	2	11.1	11.1%	
4.6.4	Strongly disagree	0	0		
4.6.1	Responsible person/s for ensuring Partner/donor support for postnatal care (n=17)				
4.6.1.1	Community leaders	3	17.6		Yes
4.6.1.2	Head of health facilities and postnatal care programme coordinators at district, regional health bureau and the National Ministry of Health	15	88.2		
4.6.1.3	Religious leaders	3*	17.6		
4.6.2	Time frame in which to ensure partner/donor support for postnatal care.				
4.6.2.1	Immediately	9	52.9		No
4.6.2.2	Within 6 months	6	35.3		
4.6.2.3	Within 12 months	2**	11.8		
4.7	**Action statement 26**				

	Male engagement in aspects of postnatal care must be improved (n=17)				
4.7.1	Strongly agree	14	82.4	100%	Yes
4.7.2	Agree	3	17.6		
4.7.3	Disagree	0	0	0	
4.7.4	Strongly disagree	0	0		
4.8	**Action statement 27** Address the socio-economic factors that influence postnatal care (n=17).				
4.8.1	Strongly agree	12	70.6	94.1%	Yes
4.8.2	Agree	4	23.5		
4.8.3	Disagree	1	5.9	5.9%	
4.8.4	Strongly disagree	0	0		
4.9	**Action stamen 28** Improve the literacy levels of postnatal mothers (n=17)				
4.9.1	Strongly agree	12	70.6	88.2%	Yes
4.9.2	Agree	3	17.6		
4.9.3	Disagree	2	11.8	11.8%	
4.9.4	Strongly disagree	0	0		
4.9.1	Responsible person/s for improving literacy levels of postnatal mothers				
4.9.1.1	Head of the district, regional education offices; and adult education coordinators at district levels	14	77.8		Yes
4.9.1.2	Postnatal care providers	6	37.5		
4.9.1.3	Postnatal care coordinators	1	6.3		
4.9.2.	Time frame in which to improve literacy levels of postnatal mothers				
4.9.2.1	Within one year	6	37.5		No
4.9.2.2	Within 2 years	4	25		
4.9.2.3	Within 3 years	6	37.5		
4.10	**Action statement 29** Address the religious factors that influence postnatal care services utilisation (n=17).				
4.10.1	Strongly agree	10	58.8	94.1%	Yes
4.10.2	Agree	6	35.3		
4.10.3	Disagree	1	5.9	5.9%	
4.10.4	Strongly disagree	0	0		
4.10.1	Responsible person/s for addressing religious factors that influence postnatal care services (N=18)				

4.10.1.1	Head of budget and finance at health facilities	1	5.6		Yes
4.10.1.2	The property management unit leaders at health facilities	2	11.11		
4.10.1.3	Community leaders, religious leaders, and midwives, nurses, Health officers and doctors who coordinate postnatal care at district, regional and national levels	15	83.3		
4.10.2.	Time frame in which to address religious factors that influence postnatal care services (n=16)				
4.10.2.1	Immediately	7	43.8		No
4.10.2.2	Within 6 months	1	6.3		
4.10.2.3	Within 12 months	8	50		
4.11.	**Action statement 30** Poor access to postnatal care services must be improved (n=17)				
4.11.1	Strongly agree	13	76.5	100%	Yes
4.11.2.	Agree	4	23.5		
4.11.3	Disagree	0	0	0	
4.11.4.	Strongly disagree	0	0		
4.11.1	Responsible person/s for an action (n=16)				
4.11.1.1	Postnatal care programme coordinators (midwives, nurses, health officers, and doctors) at district, regional and national health department levels	16	100		Yes
4.11.1.2	Head of budget and finance at health facilities	2	12.5		
4.11.1.3	Heads of health facilities	2	12.5		
4.11.2	Time frame in which to improve poor access to postnatal care services.				
4.11.2.1	Within 1 year	8	47.1		No
4.11.2.2	Within 2 years	5	29.4		
4.11.2.3	Within 3 years	4	23.5		

5.3.4.1 Action statement 20: The Ethiopian government is committed to the attainment of the health sector transformation plan which can contribute to improvements in postnatal care (N=18)

The Delphi panellists' consensus was sought on the contribution of the Ethiopian health sector's transformation plan (identified in Phase 1 of the study as an opportunity – refer to Section 3.10.2) for the implementation of the contextualised framework and improvement in postnatal care services. The panel reached 100% (n=18; N=18) consensus that the health sector transformation plan is a good opportunity and is appropriate in overcoming the challenges of postnatal care services delivery (refer to Table 5.8). Panellists reflected that it creates a conducive environment to break through the challenges of postnatal care service delivery, and thus achieve a lasting effect in terms of postnatal care improvement.

5.3.4.2 Action statement 21: Good governance in Ethiopia is a contributing factor for the implementation of the contextualised framework and thus the improvement in postnatal care (N=18)

The result from Phase 1 indicated that good governance is an opportunity for effective implementation of the contextualised framework. The good governance identified from Phase 1 of the study was included in the contextualised framework and the panel of experts was asked whether good governance would assist in the improvement of postnatal care utilisation and quality in Ethiopia. As illustrated in the data, consensus was reached among (n=16; f=88.9%) panellists that the good governance in Ethiopia was plausible, while two (f=11.1%) panellists did not agree (refer to Table 5.8).

5.3.4.3 Action statement 22: The Ethiopian government's political will must facilitate the implementation of the contextualised framework (N=18)

As identified in Phase 1 and included in the contextualised framework, the Delphi panellists were also asked if an existing political will in Ethiopia could facilitate the implementation of the contextualised framework for improving postnatal care.

As illustrated in Table 5.8, consensus was reached among panellists (n=15; f=83.3%) that the Ethiopian political will stipulates an appropriate intervention mechanism to improve the utilisation and quality of postnatal care through implementing the contextualised framework. The consensus that political will contributes to halting barriers of postnatal care provision and utilisation was useful, and it will therefore make the implementation of the contextualised framework successful.

5.3.4.4 Action statement 23: Establish community health units for postnatal care improvement (N=18)

The level of agreement on the need for the establishment of community health units was sought from the Delphi panellists. The results indicated that the panellists reached consensus (n=14; f=77.8%) that the community health units must be implemented in the Ethiopian context. Four (f=22.2%) panellists were in disagreement.

a) Responsible person/s (n=16)

Of the 16 panellists who responded to this specific item, 14 (f=87.5%) were of the opinion that postnatal care service team leaders (midwives, nurses, health officers, and doctors) at district, regional and national levels must take responsibility for developing and implementing strategies to establish community health units. Therefore, consensus was reached. Two (f=12.25%) panellists indicated that the head of health facilities must take responsibility (refer to Table 5.8).

b) Time frame (n=16)

Consensus was not reached as 11 (f=68.7%) panellists recommended that strategies for establishing community health units for improving postnatal care must be implemented within 1 year after the implementation of the contextualised framework. Five (F=5; f=31.3%) panellists recommended a time frame of 2 years (refer to Table 5.8).

5.3.4.5 Action statement 24: The FMOH should improve the budget allocated for postnatal care to minimise the budget constraints for postnatal care services in Ethiopia (N=18)

The experts were asked to provide their opinion on whether there is a need to improve the budget allocated for postnatal care services. As illustrated in Table 5.8, consensus was reached (n=14; f=77.8%) that the government of Ethiopia should improve the budget for postnatal care services so that the resources required for the provision of quality postnatal care services can easily be available. The strong and positive response by the experts indicates their agreement on the need to improve the budget for postnatal care, which is one of the integral components of the contextualised framework.

5.3.4.6 Action statement 25: Ensure partner/donor support for postnatal care (N=18)

The experts' opinions were sought on whether partner/donor support will contribute to improvements in postnatal care in Ethiopia and the implementation of the contextualised framework. As illustrated in Table 5.8, the panellists reached consensus (n=16; f=88.9%) that there is a need to have partner/donor support for postnatal care services. Only two panellists (f=11.1%) disagreed with the contribution of donor support in improving postnatal care services. The experts' consensus authenticated a wider perspective on the donor involvement approach as an effective way to improve postnatal care services in the Ethiopian context.

a) Responsible person/s

As illustrated in Table 5.8, the panellists agreed (n=15; f=83.3%) that the heads of health facilities and postnatal care programme team leaders at the district, regional health bureau and national FMOH must take responsibility for enhancing partner/donor support in all activities related to postnatal care. Three (f=17.6%) panellists were of the opinion that community leaders must take responsibility for this action.

b) Time frame

Consensus was not reached as diverse views and recommendations were received from the panellists on the time frame for ensuring partner/donor support to improve postnatal care services. Nine (f=52.9%) panellists recommended that strategies for enhancing partner/donor support for postnatal care must be initiated immediately after the implementation of the contextualised framework. Six (f=35.3%), and two (f=11.8%) panellists respectively recommended a time frame of 6 months and 12 months (refer to Table 5.8).

5.3.4.7 Action statement 26: Male engagement in aspects of postnatal care must be improved (n=17)

In the contextualised framework, the involvement of males in postnatal care is one of the integral components similar to the framework developed by Chelagat to improve postnatal care in Kenya. Thus, the experts' opinions were sought on whether there is a need for improving male involvement in postnatal care services in the Ethiopian context.

The panel reached a 100% consensus (F=17; n=17) that male involvement in postnatal care services is crucial in implementing the contextualised framework, thereby improving postnatal care services in the Ethiopian context (refer to Table 5.8). Such strong agreement among experts on the importance of involving males in postnatal care services will be very useful in implementing the contextualised framework and is in line with the researcher's premise that the contextualised framework will improve postnatal care.

5.3.4.8 Action statement 27: Address the socio-economic factors that influence postnatal care (n=17)

As indicated in the literature review, socio-economic factors have a big impact on the utilisation of postnatal care services. In this study, the socio-economic factors were included in the contextualised framework as a factor to be addressed. Accordingly, the panellists were asked to rate their level of agreement on the importance of

addressing socio-economic factors in implementing the contextualised framework in Ethiopia. As stipulated in Table 5.8, consensus was reached among panellists (F=16; f=94.1%; n=17) that there is a need to address the socio-economic challenges of postnatal care services.

5.3.4.9 Action stamen 28: Improve the literacy levels of postnatal mothers (n=17)

The literature review of this thesis indicated that maternal education is one of the factors that affect the utilisation of postnatal care services. Similarly, in the contextualised framework it has been indicated that maternal education is one of the focus areas to be enhanced for improving postnatal care utilisation. Accordingly, the Delphi panellists were also asked to rate their level of agreement on whether there is a need to improve the literacy status of postnatal mothers. Consensus was reached (F=15; f=88.2%) that there is a need to improve maternal literacy levels (refer to Table 5.8).

a) Responsible person/s (N=18)

Fourteen (f=77.8%) panellists reached consensus that the heads of the district and regional education offices, as well as the adult education programme team leaders at district levels, must take responsibility for developing and implementing strategies for improving the literacy levels of postnatal mothers (refer to Table 5.8). Six (f=37.5%) panellists indicated postnatal care providers must take the responsibility, whereas one (f=6.3%) stated that postnatal care coordinators must take the responsibility (refer to Table 5.8).

b) Time frame (n=16)

Consensus was not reached as very diverse views from the panellists were observed in terms of the time frame in which the literacy status of postnatal mothers must be improved in this round. Among the 16 panellists who responded to this specific question, six (f=37.5%) recommended that the strategies for improving postnatal mothers' literacy level must be implemented within 1 year after the implementation of

the contextualised framework. Four (f=25%) recommended the time frame of 2 years and another six (f=37.5%) indicated 3 years (refer to Table 5.8).

5.3.4.10 Action statement 29: Address the religious factors that influence postnatal care service utilisation (n=17)

The experts were asked whether it is important to identify and address religious factors that influence the utilisation of postnatal care services. Consensus (n=17; F=16; f=94.1%) was reached among the panellists that religious factors that influence postnatal care utilisation must be assessed. The consensus was very useful and in line with the insight of this study as the contextualised framework was also aimed at identifying and addressing religious factors that influence postnatal care service utilisation in Ethiopia (refer to Table 5.8).

a) Responsible person/s (N=18)

Consensus was reached among 15 (f=83.3%) panellists that community leaders, religious leaders, and postnatal care service team leaders at the district, regional and national levels must take responsibility for identifying and addressing religious factors that impact postnatal care.

b) Time frame (n=16)

Consensus was not reached on the time frame within which religious factors must be identified and addressed. Of those who responded to this item, 16 (F=8; f=50%) panellists recommended that the strategies for identifying and addressing religious factors that impact postnatal care services must be implemented within 12 months after the implementation of the contextualised framework. Seven (f=43.8%) stated it should be done immediately, and 1 (f=6.3%) indicated the time frame of 6 months (refer to Table 5.8).

5.3.4.11 Action statement 30: Poor access to postnatal care services must be improved (n=17)

The panellists' opinions on the importance of addressing poor access to postnatal care in the Ethiopian context were assessed. Seventeen panellists responded to this specific question and of those who responded, all (n=17; F=17; f=100%) were in agreement (thus 100% consensus) that poor access to postnatal care must be improved if the postnatal care service utilisation is to be improved in Ethiopia (refer to Table 5.8). Added to this, to enhance the implementation of the contextualised framework, the Delphi panellists suggested that the walking distance for receiving postnatal care should be reduced to less than 5km as recommended in the literature (WHO & World Bank 2015:6) and mentioned by a panellist:

> "*The health facilities for postnatal care must be accessible. The walking distance to access health care must also be less than 5 km".*

In line with this, some Delphi panellists recommended increments in the accessibility of health facilities by building new health facilities within 5km of each village.

> *"There must be the construction of additional health facilities where postnatal care is offered".*

a) Responsible person/s (n=16)

Among the 16 panellists who responded to this question item, 100% consensus was reached (n=16; F=16) that postnatal care service team leaders (midwives, nurses, health officers, and doctors) at district, regional and national levels must take responsibility for improving poor access to postnatal care services (refer to Table 5.8).

b) Time frame (n=17)

Consensus was not reached among the panellists regarding the time frame for improving poor access to postnatal care. Of those who responded to this question,

eight (f=47.1%) panellists recommended that the strategies for addressing poor access to postnatal care must be implemented within 1 year after implementation of the contextualised framework. Five (f=29.4%) panellists indicated the time frame of 2 years, and four (f=23.5%) stated 3 years (refer to Table 5.8).

5.3.5 Strategies

The findings pertaining to the strategies for improving postnatal care through the implementation of the contextualised framework are presented in Table 5.9 and its interpretation follows.

Table 5.9: Panellists' views on the strategies: Action statements, responsible person/s and the time frame (N=18)

5	**Strategies**				
5.1	**Action statement 31** Capacity building for postnatal care providers and coordinators is an important strategy for postnatal care improvement.	n=	f=	Combined	consensus
5.1.1	Strongly agree	15	83.3	100%	Yes
5.1.2	Agree	3	16.7		
5.1.3	Disagree	0	0	0	
5.1.4	Strongly disagree	0	0		
5.1.1	Responsible person/s for implementing capacity building of postnatal care providers and coordinators (n=17)				
5.1.1.1	Head of health facilities	0	0		Yes
5.1.1.2	In-service training service coordinators at Oromia Regional Health Bureau and ministry of health	17*	100		
5.1.1.3	Head of regional health bureau	0	0		
5.1.2	Time frame in which to implement capacity building of postnatal care providers and coordinators				
5.1.2.1	Within 1 month	2	11.1		No
5.1.2.2	Within 6 months	5	27.8		
5.1.2.3	Within 12 months	11	61.1		

5.2	**Action statement 32** There should be a quality assurance mechanisms for postnatal care services.				
5.2.1	Strongly agree	14	77.8	100%	Yes
5.2.2	Agree	4	22.2		
5.2.3	Disagree	0	0	0	
5.2.4	Strongly disagree	0	0		
5.2.1	Responsible person/s for implementing quality assurance mechanisms for postnatal care services.				
5.2.1.1	Midwives, nurses, health officers and doctors who coordinate postnatal care at district, regional and national levels	18	100		Yes
5.2.1.2	Community leaders	0	0		
5.2.1.3	Religious leaders	0	0		
5.2.2	Time frame in which to implement quality assurance mechanisms for postnatal care services.				
5.2.2.1	Within 1 month	5	27.8		No
5.2.2.2	Within 6 months	5	27.8		
5.2.2.3	Within 12 months	8	44.4		
5.3.	**Action statement 33** Supportive supervision should be implemented at all health facilities.				
5.3.1	Strongly agree	15	83.3	100%	Yes
5.3.2	Agree	3	16.7		
5.3.3	Disagree	0	0		
5.3.4	Strongly disagree	0	0		
5.3.1	Responsible person/s for implementing supportive supervision (n=17)				
5.3.1.1	Head of budget and finance at health facilities	2**	11.8		Yes
5.3.1.2	Postnatal care programme coordinators (midwives, nurses, health officers, and doctors) at health facility, at district, regional and national levels	17*	100		
5.3.1.3	Head of health facilities	1	5.9		
5.3.2	Time frame in which to implement supportive supervision				
5.3.2.1	Within 1 month	4	22.2		No
5.3.2.2	Within 6 months	9	50		
5.3.2.3	Within 12 months	5	27.8		

5.3.5.1 Action statement 31: Capacity building for postnatal care providers and coordinators is an important strategy for postnatal care improvement (N=18)

The body of evidence indicates that health care providers' capacity significantly impacts the quality of services provided to clients (KoS, MoH 2011:23). In this section of the validation instrument, the panellists' views and opinions on whether capacity building is an important strategy for enhancing the utilisation and quality of postnatal care services in Ethiopia were assessed. The panel reached 100% consensus (n=18; N=18) that capacity building of the postnatal care providers must get due attention if postnatal care quality is to be improved (refer to Table 5.9).

a) Responsible person/s (n=17)

The data illustrated that 100% agreement was reached among those who responded to this specific question item (n=17; F=17; f=100%), that in-service training coordinators at Oromia Regional Health Bureau and Ministry of Health must take responsibility for developing strategies for capacity building (refer to Table 5.9).

b) Time frame (N=18)

Consensus was not reached on the time frame in which capacity building of postnatal care providers and coordinators should be improved. Eleven (f=61.1%) panellists had the opinion that the capacity-building strategies for postnatal care providers and coordinators must be implemented within 12 months after the implementation of the contextualised framework. Five (f=27.8%) of the panellists were of the onion that capacity building for postnatal care providers and coordinators should be implemented within 6 months, whereas two (f=11.1%) of the panellists recommended the time frame of 1 month (refer to Table 5.9).

5.3.5.2 Action statement 32: There should be quality assurance mechanisms for postnatal care services (N=18)

To validate the contextualised framework within the Ethiopian context, the experts were asked for their agreement on the recommendation for postnatal care quality assurance mechanisms. As illustrated in the data, 100% (n=18; N=18) consensus was reached that quality assurance mechanisms must be implemented for postnatal care services. It can be a paradigm shift in thinking about implementing the contextualised framework in Ethiopia that can, in turn, contribute to the improvement of postnatal care in all health facilities rendering postnatal care.

a) Responsible person/s

Consensus was reached among all (n=18; N=18) panellists (f=100%) on the responsible person/s. Therefore, it was determined that postnatal care service team leaders (midwives, nurses, health officers, and doctors) at district, regional and national levels must take responsibility for the improvement of the quality assurance mechanisms for postnatal care services.

b) Time frame

Consensus was not reached as the panellists reflected diverse views on the time frame for ensuring the quality of postnatal care services. Eight (f=44.4%) panellists recommended that strategies for quality assurance mechanisms must be implemented within 12 months after the implementation of the contextualised framework. Five (f=27.8%) panellists indicated the time frame of 1 month, and another five (f=27.8%) said 6 months (refer to Table 5.9).

5.3.5.3 Action statement 33: Supportive supervision should be implemented at all health facilities (N=18)

It was indicated in the findings from Phase 1 that 144 (f=34.1%) respondents did not have supportive supervision on postnatal care services in their health facilities. With this background information and the developed contextualised framework, the

experts were asked if there is a need to implement supportive supervision in all health facilities rendering postnatal care in Ethiopia.

As indicated in the data, 100% consensus (n=18; N=18) was reached. From these findings, it is evident that all health facilities and postnatal care coordinating offices should promote continuous supportive supervision (refer to Table 5.9).

a) Responsible person/s (n=17)

Of those who responded to this specific item (n=17; F=17; f=100%), all panellists (f=100%) were of the opinion that postnatal care service team leaders (midwives, nurses, health officers, and doctors) at district, regional and national levels must take responsibility for developing and implementing strategies for consistent supportive supervision of postnatal care in health facilities (refer to Table 5.9).

b) Time frame (N=18)

Consensus was not reached as only nine (f=50%) panellists recommended that strategies for consistent supportive supervision for postnatal care services must be implemented within 6 months after the implementation of the contextualised framework. Four (f=22.2%) panellists indicated the time frame of 1 month, and five (f=27.8%) panellists were of the opinion that consistent supportive supervision for postnatal care must be implemented within 12 months (refer to Table 5.9).

5.3.6 Assumptions

The assumptions pertaining to the implementation of the contextualised framework in Ethiopia are presented in Table 5.10 and the interpretation thereof follows.

Table 5.10: Panellists' views on assumptions: Acton statements in contextualising the framework (N=18)

6.	**Assumptions**				
6.1	Action statement 34 The Ethiopian government will be efficient in coordinating postnatal care services	n=	f=	Combined	consensus
6.1.1	Strongly agree	7	38.9	88.9%	Yes
6.1.2	Agree	9	50		
6.1.3	Disagree	2	11.1	11.1%	
6.1.4	Strongly disagree	0	0		
6.2	Action statement 35 Postnatal care services included in the government policy should be free maternity care				
6.2.1	Strongly agree	13	72.2	88.9%	Yes
6.2.2	Agree	3	16.7		
6.2.3	Disagree	1	5.5	11.1%	
6.2.4	Strongly disagree	1	5.5		
6.3	Action statement 36 The Ethiopian government will embrace the implementation of maternal and neonatal health services				
6.3.1	Strongly agree	10	55.6	100%	Yes
6.3.2	Agree	8	44.4		
6.3.3	Disagree	0	0	0	
6.3.4	Strongly disagree	0	0		
6.4	**Action statement 37** The health extension programme must be sustained for the implementation of the contextualised framework in Ethiopia				
6.4.1	Strongly agree	10	55.6	94.4	Yes
6.4.2	Agree	7	38.9		
6.4.3	Disagree	1	5.6	5.6%	
6.4.4	Strongly disagree	0	0		

5.3.6.1 Action statement 34: The Ethiopian government will be efficient in coordinating postnatal care services (N=18)

The panellists were asked to provide their opinions on the efficiency of the Ethiopian government to coordinate postnatal care services. The panel reached consensus (n=16; f=88.9%) that the Ethiopian government is capable of efficiently coordinating the provision of postnatal care services (refer to Table 5.10).

5.3.6.2 Action statement 35: Postnatal care services included in the government policy should be free (N=18)

In the literature part of this thesis, it is indicated that one of the factors that impact the utilisation of postnatal care is the ability among postnatal mothers to pay for the services they receive. In this round, the Delphi panellists were asked to share their opinion about free maternity services for the improvement of postnatal care services. As illustrated in Table 5.10, consensus was reached among the panellists (n=16; f=88.9%) that the maternity services, including postnatal care, should be free of charge.

5.3.6.3 Action statement 36: The Ethiopian government will embrace the implementation of maternal and neonatal health services (N=18)

The panellists' views were assessed on whether the Ethiopian government can effectively provide maternal and child healthcare services. All of the panellists (n=18; N=18) agreed (thus a 100% consensus) that the Ethiopian government has the potential to provide quality maternal and child health care, including postnatal care (refer to Table 5.10).

5.3.6.4 Action statement 37: The health extension programme must be sustained for the implementation of the contextualised framework in Ethiopia

In Phase 1 of this study, some respondents provided their views that the exiting health sector transformation plan is an opportunity for the implementation of the

contextualised framework in the Ethiopian context. In the health sector transformation plan, the health extension programme was identified as a key strategy in promoting health and preventing diseases; thus, it is vitally important as it plays a key role in educating mothers about possible danger signs during the postnatal period. In this round, the panellists were asked whether the consistent implementation of the health extension programme can contribute to the implementation of the contextualised framework and thereby improve postnatal care.

The panellists reached consensus (n=17; f=94.4%) that the health extension programme can facilitate the implementation of the contextualised framework and thus improve postnatal care service utilisation in Ethiopia (refer to Table 5.10).

5.4 FINDINGS: ROUND 2

Based on the inputs from the panellists during round 1, the validation instrument was amended and the new version was prepared for round 2. All items where consensus was reached where indicated as **'consensus'** in the validation instrument, as illustrated in Annexure 6. The panellists were asked only to respond to the relevant items where consensus was not reached.

The validation instrument was again loaded on the Google forms online survey, as was the case in round 1. It was sent to the 18 panellists by sharing the recruitment letter (refer to Annexure 9) with clear instructions on what is expected in the second round.

Round 2 yielded a 100% response rate and the researcher was satisfied as the attrition rate reported in the literature seemed to be challenging (Shariff 2015:246). However, this was not a challenge in this study as no panellists were lost in the second round. In round 2, consensus was reached for all items except one, namely the time frame for establishing community surveillance, as illustrated in Table 5.19.

Only the findings of those items where consensus was not reached in round 1 are described below.

5.4.1 Action statement 1: Policies and guidelines aimed at ensuring the provision of comprehensive postnatal care services must be implemented

5.4.1.1 Time frame in which to implement policies and guidelines (N=18)

The panellists reached consensus (n=17; f=94.4%) that polices and guidelines for postnatal care services must be implemented within 12 months after the implementation of the contextualised framework (refer to Table 5.11).

Table 5.11: Time frame in which to implement policies and guidelines

Time frame in which to implement policies and guidelines	Responses		Consensus
	n=	f=%	
Within 1 month	1	5.6	**Yes**
Within 6 months	0	0	
Within 12 months	17	94.4	

5.4.2 Action statement 2: Human resources for the provision of quality postnatal care services must be ensured

5.4.2.1 Time frame in which to ensure adequate human resources (n=17)

Only 17 of the 18 panellists responded to this question and consensus was reached (F=15; f=88.2%) that human resources for postnatal care services must be ensured within 12 months after the implementation of the contextualised framework (refer to Table 5.12).

Table 5.12: Time frame in which to ensure adequate human resources (n=17)

Time frame in which to ensure adequate human resources	Responses		Consensus
	F	f=%	
Within 6 months	0	0	**Yes**
Within 12 months	15	88.2	
Within 24 months	2	11.8	

5.4.3 Action statement 3: Financial resources for the provision of quality postnatal care services must be ensured

5.4.3.1 Time frame in which to ensure adequate financial resources (N=18)

Consensus was reached (n=14; f=77.8%) that the financial resources for postnatal care must be ensured within 12 months after the implementation of the contextualised framework (refer to Table 5.13).

Table 5.13: Time frame in which to ensure adequate financial resources (N=18)

Time frame in which to ensure adequate financial resources	Responses		Consensus
	n	f=%	
Within 6 months	1	5.5	**Yes**
Within 12 months	14	77.8	
Within 18 months	3	16.7	
Within 24 months	0	0	

5.4.4 Action statement 4: Continuing professional education must be strengthened to improve postnatal care

5.4.4.1 Time frame in which to strengthen continuing professional education (N=18)

The panel reached a consensus level of 14 (f=77.8%) that continuing professional education must be implemented within 9 months after the implementation of the contextualised framework (refer to Table 5.14).

Table 5.14: Time frame in which to strengthen continuing professional education (N=18)

Time frame in which to strengthen continuing professional education	Responses		Consensus
	n	f=%	
Within 1 month	4	22.2	**Yes**
Within 6 months	0	0	
Within 9 months	14	77.8	

5.4.5 Action statement 5: Effective monitoring of postnatal care services is required

5.4.5.1 Time frame in which to ensure effective monitoring of postnatal care services (N=18)

The panellists reached consensus (n=14; f=77.8%) that strong monitoring of postnatal care services must be implemented within 1 month after the implementation of the contextualised framework (refer to Table 5.15).

Table 5.15: Time frame in which to ensure effective monitoring of postnatal care services (N=18)

Time frame in which to ensure effective monitoring of postnatal care services	Responses		Consensus
	n	f=%	
Within 1 month	14	77.8	**Yes**
Within 6 months	1	5.5	
Within 12 months	3	16.7	

5.4.6 Action statement 6: There should be consistent evaluation of postnatal care services

5.4.6.1 Time frame in which to implement consistent evaluation (N=18)

Based on the presented recommendation options for the time frame, consensus was reached (n=16; f=88.9%) that the consistent evaluation of postnatal care services must be implemented within 12 months after the implementation of the contextualised framework (refer to Table 5.16).

Table 5.16: Time frame in which to implement consistent evaluation (N=18)

Time frame in which to implement consistent evaluation	Responses		Consensus
	n	f=%	
Within 1 month	0	0	
Within 6 months	2	11.1	**Yes**
Within 12 months	16	88.9	

5.4.7 Action statement 7: The coordination of postnatal care services must be improved

5.4.7.1 Time frame in which to improve the coordination of postnatal care service (N=18)

Of the experts, 16 (f=88.9%) reached consensus that postnatal care service coordination must be improved immediately after the implementation of the contextualised framework, while two (f=11.1%) recommended the time frame of 6 months for its implementation (refer to Table 5.17).

Table 5.17: Time frame in which to improve the coordination of postnatal care service (N=18)

Time frame in which to improve the coordination of postnatal care service	Responses		Consensus
	n	f=%	
Immediately	16	88.9	**Yes**
Within 6 months	2	11.1	
Within 12 months	0	0	

5.4.8 Action statement 8: Data management processes, such as recording and reporting of postnatal care services, must be improved

5.4.8.1 Time frame in which to improve data management processes (N=18)

Based on the presented options on the time frame for improving data management, in the second round, 15 (f=83.3%) panellists agreed that the data management for postnatal care must be improved within 1 month after the implementation of the contextualised framework within the Ethiopian context. Two (f=11.1%) panellists recommended the time frame of 6 months and one (f=5.6%) recommended the time frame of 12 months (refer to Table 5.18).

Table 5.18: Time frame in which to improve data management processes (N=18)

Time frame in which to improve data management processes	Responses		Consensus
	n	f=%	
Within 1 month	15	83.3	Yes
Within 6 months	2	11.1	
Within 12 months	1	5.6	

5.4.9 Action statement 10: Establish community surveillance of maternal and neonatal deaths

5.4.9.1 Time frame in which to establish community surveilance of maternal and neonatal deaths (n=17)

Consensus was not reached in this round on the time frame for establishing community health surveillance. Of the experts who responded to this question item, 17 (F=11; f=64.7%) agreed on the time frame of 6 months for the establishment of community health surveillance to improve postnatal care in the Ethiopian context. Four (f=23.5%) panellists recommended the time frame of 1 month, and two (f=11.8 %) recommended 12 months (refer to Table 5.19).

Table 5.19: Time frame in which to establish community surveilance of maternal and neonatal deaths (n=17)

Time frame in which to establish community surveilance of maternal and neonatal deaths	Responses		Consensus
	F	f=%	
Within 1 month	4	23.5	No
Within 6 months	11	64.7	
Within 12 months	2	11.8	

5.4.10 Action statement 11: Identify and address social and cultural practices, myths and misconceptions about postnatal care

5.4.10.1 Time frame in which to identify and address social and cultural practices, myths and misconceptions of postantal care (N=18)

Consensus was reached among the panellists (n=16; f=88.9%) that cultural practices, myths, and misconceptions must be addressed within 6 months after the implementation of the contextualised framework (refer to Table 5.20).

Table 5.20: Time frame in which to identify and address social and cultural practices, myths and misconceptions of postantal care (N=18)

Time frame in which to identify and address social and cultural practices, myths and misconceptions of postantal care	Responses		Consensus
	n	f=%	
Within 6 months	16	88.9	**Yes**
Within 12 months	2	11.1	
Within 24 months	0	0	

5.4.11 Action statement 12: Provide incentives for postnatal care providers

5.4.11.1 Provision of incentives for postnatal care providers (n=15)

Among those who responded to this question item (n=15), consensus was reached (F=13; f=86.6%) that incentives should be provided for the postnatal care providers (refer to Table 5.21).

Table 5.21: Provision of incentives for postnatal care providers (n=15)

There should be a need to provide incentives for postnatal care providers	Responses		Combined	Consensus
	F	f=%		
Strongly agree	5	33.3	86.6%	**Yes**
Agree	8	53.3		
Disagree	1	6.7	13.4%	
Strongly disagree	1	6.7		

5.4.11.2 Time frame in which to provide incentives for postnatal care providers (n=16)

Of the panellists who responded to this question item (n=16), consensus was reached (F=14; f=87.5%) that incentives should be provided for postnatal care providers within 12 months after the implementation of the contextualised framework (refer to Table 5.22).

Table 5.22: Time frame in which to provide incentives for postnatal care providers (n=16)

Time frame in which to provide incentives for postnatal care providers	Responses		Consensus
	F	f=%	
Immediately	1	6.3	**Yes**
Within 6 months	1	6.3	
Within 12 months	14	87.5	

5.4.12 Action statement 13: Maternal waiting homes must be available at all health facilities

5.4.12.1 Time frame in whch to ensure the availability of maternal waiting rooms at health facilities (N=18)

The data illustrate that 16 (f=88.9%) panellists reached consensus that maternal waiting homes should be available at all health facilities providing postnatal care within 12 months after the implementation of the contextualised framework (refer to Table 5.23).

Table 5.23: Time frame in whch to ensure the availability of maternal waiting rooms at health facilities (N=18)

Time frame in whch to ensure the availability of maternal waiting rooms at health facilities	Responses		Consensus
	n	f=%	
Within 6 months	2	11.1	**Yes**
Within 12 months	16	88.9	
Within 24 months	0	0	

5.4.13 Action statement 14: Ensure effective communication for ambulance service and other postnatal care issues

5.4.13.1 Time frame for effective communication for ambulance services (N=18)

Consensus was reached among 16 (f=88.8%) panellists that effective communication with ambulance services should be implemented within 1 month after the implementation of the contextualised framework (refer to Table 5.24).

Table 5.24: Time frame for the implementation of effective communication for ambulance (N=18)

Time frame for the implementation of effective communication for ambulance	Responses		Consensus
	n	f=%	
Within 1 month	16	88.8	**Yes**
Within 6 months	1	5.6	
Within 12 months	1	5.6	

5.4.14 Action statement 15: Cultural ceremonies should be practiced at health facilities to motivate mothers to utilise institutional delivery and postnatal care

5.4.14.1 Time frame in which to practice cultural ceremonies (N=18)

The panel reached consensus (n=16; f=88.8%) that the time frame for the implementation of cultural ceremony practices at the health facilities should be within 3 months after the implementation of the contextualised framework (refer to Table 5.25).

Table 5.25: Time frame in which to practice cultural ceremonies (N=18)

Time frame in which to practice cultural ceremonies	Responses		Consensus
	n	f=%	
Within 3 months	16	88.8	Yes
Within 6 months	2	11.2	
Within 12 months	0	0	

5.4.15 Action statement 23: Establish community health units for postnatal care improvement

5.4.15.1 Time frame in which to establish community health units for postnatal care (N=18)

The panellists reached consensus (n=17; f=94.4%) that the community health units should be implemented within 1 year after the implementation of the contextualised framework (refer to Table 5.26).

Table 5.26: Time frame in which to establish community health units for postnatal care (N=18)

Time frame in which to establish community health units for postnatal care	Responses		Consensus
	n	f=%	
Within 1 year	17	94.4	Yes
Within 2 years	1	5.6	
Within 3 years	0	0	

5.4.16 Action statement 25: Ensure partner/donor support for postnatal care.

5.4.16.1 Time frame in which to ensure partner/donor support for postnatal care (N=18)

There was consensus among the panellists (n=14; f=77.8%) that including postnatal care partners in postnatal care services is vital, and they indicated their involvement must be strengthened immediately after the implementation of the contextualised framework to improve the utilisation and quality of postnatal services in Ethiopia (refer to Table 5.27).

Table 5.27: Time frame in which to ensure partner/donor support for postnatal care (N=18)

Time frame in which to ensure partner/donor support for postnatal care	Responses		Consensus
	n	f=%	
Immediately	14	77.8	**Yes**
Within 6 months	2	11.1	
Within 12 months	2	11.1	

5.4.17 Action statement 28: Improve the literacy levels of postnatal mothers

5.4.17.1 Time frame in which to improve literacy levels of postnatal mothers (N=18)

Consensus was reached among 14 (f=77.8%) panellists that the maternal literacy status must be improved within 3 years after the implementation of the contextualised framework (refer to Table 5.28).

Table 5.28: Time frame in which to improve literacy levels of postnatal mothers (N=18)

Time frame in which to improve literacy levels of postnatal mothers	Responses		Consensus
	n	f=%	
Within 1 year	4	22.2	**Yes**
Within 2 years	0	0	
Within 3 years	14	77.8	

5.4.18 Action statement 29: Address the religious factors that influence postnatal care service utilisation

5.4.18.1 Time frame in which to address religious factors that influence postnatal care services (N=18)

There was consensus among 15 (f=83.3%) panellists that the religious factors that impact the utilisation of postnatal care services in Ethiopia must be identified and

addressed within 12 months after the implementation of the contextualised framework (refer to Table 5.29).

Table 5.29: Time frame in which to address religious factors that influence postnatal care services (N=18)

Time frame in which to address religious factors that influence postnatal care services	Responses		Consensus
	n	f=%	
Immediately	1	5.6	**Yes**
Within 6 months	2	11.1	
Within 12 months	15	83.3	

5.4.19 Action statement 30: Poor access to postnatal care services must be improved

5.4.19.1 Time frame in which to improve access to postnatal care (N=18)

Consensus was reached among the Delphi panellists (n=15; f=83.3%) that poor access to postnatal care must be improved within the time frame of 1 year after the implementation of the contextualised framework (refer to Table 5.30).

Table 5.30: Time frame in which to improve access to postnatal care (N=18)

Time frame in which to improve access to postnatal care	Responses		Consensus
	n	f=%	
Within 1 year	15	83.3	**Yes**
Within 2 years	3	16.7	
Within 3 years	0	0	

5.4.20 Action statement 31: Capacity building for postnatal care providers and coordinators is an important strategy for postnatal care improvement

5.4.20.1 Time frame in which to implement capacity building of postnatal care providers and coordinators (N=18)

Of the Delphi panellists, 15 (f=83.3%) agreed that capacity building must be implemented within the time frame of 12 months after the implementation of the contextualised framework (refer to Table 5.31).

Table 5.31: Time frame in which to implement capacity building of postnatal care providers and coordinators (N=18)

Time frame in which to implement capacity building of postnatal care providers and coordinators	Responses		Consensus
	n	f=%	
Within 1 month	1	5.6	**Yes**
Within 6 months	2	11.1	
Within 12 months	15	83.3	

5.4.21 Action statement 32: There should be quality assurance mechanisms for postnatal care services

5.4.21.1 Time frame in which to implement quality assurance mechanisms for postnatal care service (N=18)

The panellists reached consensus (n=16; f=88.9%) that quality assurance mechanisms for postnatal care must be implemented within 12 months after the implementation of the contextualised framework (refer to Table 5.32).

Table 5.32: Time frame in which to implement quality assurance mechanisms for postnatal care service (N=18)

Time frame in which to implement quality assurance mechanisms for postnatal care service	Responses		Consensus
	n	f=%	
Within 1 month	2	1.1	**Yes**
Within 6 months	0	0	
Within 12 months	16	88.9	

5.4.22 Action statement 33: Supportive supervision should be implemented at all health facilities

5.4.22.1 The time frame in which to implenent supportive supervision (N=18)

Consensus was reached among panellists (n=16; f=88.9%) that supportive supervision for postnatal care services must be implemented in all health facilities in

Ethiopia within 6 months after the implementation of the contextualised framework (refer to Table 5.33).

Table 5.33: Time frame in which to implement supportive supervision (N=18)

The time frame in which to implenent supportive supervision	Responses		Consensus
	n	f=%	
Within 1 month	2	11.1	**Yes**
Within 6 months	16	88.9	
Within 12 months	0	0	

5.5 FINDINGS: ROUND 3

During rounds 1 and 2 of the Delphi processes, consensus was reached on all of the action statements, the possible responsible person/s for implementing the actions, as well as the time frames for implementing the actions, except for one item; the time frame for establishing community surveillance.

Although consensus was reached that action statement **26:** Male engagement in postnatal care must be improved, as well as Action statement **27**: Address the socio-economic factors that influence postnatal care, must be included, participants made some recommendations.

> *"To improve male involvement in postnatal care, government and non-government organisation must take responsibility".*

> *"Male involvement should be promoted by different bodies including the community".*

> *"There should be a time frame for the improvement of male involvement in maternal health care including postnatal care".*

> *"The improvement of socio-economic factors requires the involvement of different sectors, as the health system alone cannot address it".*

"Organisations from different sectors should take responsibility for identifying and addressing the socio-economic factors that affect postnatal care services".

"Improvement of the socio-economic factors that influence postnatal care services should not be delayed; means it needs urgent intervention".

Based on the literature review to support or contradict these recommendations and its relevance, it was decided in round 3 to include the actions/methods to achieve the action statements, the responsible person/s, as well as the time frame, and share them with the panellists for validation.

Round 3 also included **two additional action statements namely**, **(1) action statement 34: Health facility infrastructure must be secured for improvement of postnatal care and (2) action statement 35: The provision of appropriate medical drugs and supplies.** These two statements were also added after the panellists' recommendations in rounds 1 and 2, as quoted below:

"In the absence of health facility infrastructure like we observe in some rural areas of Ethiopia, it is difficult to improve postnatal care utilisation".

"Infrastructure is crucial for postnatal care improvement that needs due attention in Ethiopia".

"Health facilities sometimes lack medical drugs and supplies which makes the provision of quality services difficult".

"Even though there are some improvements in the provision of medical drugs and supplies in Ethiopia, still it is a challenge for postnatal care as there is scarcity".

The total number of action statements in round 3, therefore, increased to 39. **The validation of the two action statements in round 3 also included** 1) the actions/methods for implementation, (2) the responsible person/s, and (3) time frame for the action statement to be implemented.

As described in Chapter 4 (Figure 4.2), all the action/methods items that were marked with an asterisk and highlighted in red (refer to Table 4.2) were validated in round 3. The validation in round 3 therefore focused on:

1. The time frame for the establishment of community surveillance, as consensus was not reached in rounds 1 and 2.
2. The specific methods needed to implement the validated action statements.
3. The specific persons responsible for implementation, because in round 1 only "groups" of relevant persons (such as nurses, midwives, health officers, and medical doctors) were validated, as explained.
4. Action statements, responsible person/s and time frames for action statements 34 and 35, as they were not included in round 1 or 2.

The contextualised framework, the adapted action plan for implementation, as well as the embedded validation instrument were loaded on the Google forms online survey. The panellist again received the recruitment letter (refer to Annexure 10) with the link to give them access to the instructions and the validation instrument.

The panellists were asked only to respond to question items where consensus was not reached. All aspects (action statements and time (frames) were clearly indicated on the validation instrument and whether consensus was reached in the previous rounds.

The validation of round 3 did have some missed responses as some panellists did not respond to all the questions. The N remained 18 for all aspects, and where only some panellists responded to a specific question, the response rate will be indicated as "n" and the frequency of the specific response received, F (frequency). This will also be clearly indicated in the text below and the table to ensure clarity. Only the added action statements and the aspects explained above will be illustrated in tables.

5.5.1 Action statement 1: Policies and guidelines aimed at ensuring the provision of comprehensive postnatal care services must be implemented

a) Actions/Methods for ensuring the implementation of policies and guidelines for the provision of comprehensive postnatal care (n=18)

As illustrated in Table 5.34, consensus was reached on the specific actions/methods to be taken to reach the expected outcome, as explained in action statement 1.

Table 5.34: Actions/methods for ensuring the implementation of policies and guidelines (n=17)

No	**Actions/Methods for** ensuring the implementation of policies and guidelines provision of comprehensive postnatal care	Responses		Consensus
		F=	f=	
1	Ensure that all health facilities have access to postnatal care guidelines and policies	16	94.1	Yes
2	Distribute an adequate number of guidelines and policies for all health facilities	15	88.2	
3	Make sure that postnatal care is offered based on guidelines and policies at all health facilities	15	88.2	

b) Responsible person/s for ensuring the implementation of policies and guidelines (N=18)

The panellists reached 100% consensus (n=18; N=18) that a team of postnatal care service providers at district, regional and national levels appointed by their postnatal care co-workers must take responsibility for implementing policies and guidelines for postnatal care (refer to Table 5.35).

Table 5.35: Responsible person/s for ensuring the implementation of policies and guidelines (N=18)

No	**Responsible person/s for** ensuring the implementation of policies and guidelines provision of comprehensive postnatal care	Responses		Consensus
		n=	f=	
1	A selected postnatal care provider at every health facility *(selected by their peers)*	1	5.6	Yes
2	Postnatal care programme officers at the regional level	1	5.6	
3	A team of postnatal care service providers at district, regional and national level appointed by their co-workers	18	100	

5.5.2 Action statement 2: Human resources for the provision of quality postnatal care services must be ensured

a) Actions/Methods for ensuring adequate human resources for postnatal care (N=18)

As indicated in Table 5.36, consensus was reached among the panellists on all specific options presented to them on how to ensure human resources for the provision of quality postnatal care.

Table 5.36: Actions/methods to ensures adequate human resources (N=18)

No	**Actions/Methods to ensures** adequate human resources for postnatal care	Responses		Consensus
		n=	f=	
1	Conduct a staff workload indicator assessment at least twice a year to identify shortages	17	94.4	Yes
2	Recruit skilled and competent postnatal care providers to adhere to the WHO recommendation of the population to midwifery ratio of 23 midwives for every 10,100 women	18	100	
3	Instil career growth opportunities for postnatal care providers working in rural health facilities	17	94.4	
4	Negotiate with the finance department at the national level on incentives for postnatal care service providers	16	88.9	

No	**Actions/Methods to ensures** adequate human resources for postnatal care	Responses		Consensus
	working in rural areas of Ethiopia			
5	Promote professional development training opportunities for postnatal care providers	17	94.4	
6	Train postnatal care providers who meet the healthcare needs of postnatal mothers	17	94.4	

b) Responsible person/s for ensuring adequate human resources for postnatal care (N=18)

Hundred percent consensus was reached among the panellists (n=18; N=18) that an appointed team of human resource managers at district, regional and national levels must take responsibility for ensuring adequate human resources for postnatal care (refer to Table 5.37).

Table 3.37: Responsible person/s for ensuring adequate human resources (N=18)

No	**Responsible person/s** for ensuring human resource availability	Responses		Consensus
		n=	f=	
1	Human resource management officers at the health facilities	1	5.6	
2	Human resource management officers at the district level	1	5.6	Yes
3	An appointed team of human resource managers at district, regional and national levels *(appointed by the heads of the health departments at the various levels)*	18	100	

5.5.3 Action statement 3: Financial resources for the provision of quality postnatal care services must be ensured

a) Actions/Methods for ensuring the financial resources for postnatal care (N=18)

Consensus was reached among the panellists on the different options presented as specific methods to improve the financial resources for postnatal care (refer to Table 5.38).

Table 5.38: Actions/methods for ensuring the financial resources for postnatal care (N=18)

No	**Actions/Methods** for ensuring the financial resources for postnatal care	Responses		Consensus
		n=	**f=**	
1	Develop and implement an action plan to secure financial resources for the delivery of ordered supplies	18	100	Yes
2	Arrange annual meetings with postnatal care coordinators at different levels of the health system to secure financial resources	17	94.4.	
3	Develop and implement procedures to ensure accurate procurement to optimally utilise the available financial resources	17	94.4.	

b) Responsible person/s for ensuring the financial resources (N=18)

There was consensus (n=17; f=94.4%) among the panellists that an ad hoc committee selected from the officials responsible for the postnatal service delivery budget at district, regional and national levels must take responsibility for ensuring financial resources for postnatal care (refer to Table 5.39).

Table 5.39: Responsible person/s for ensuring the financial resources (N=18)

No	**Responsible person/s** for ensuring the financial resources	Responses		Consensus
		n=	**f=**	
1	A selected team of postnatal care programme officers at district level (*selected by peers*)	1	5.6	Yes
2	The heads of budget and finance at district, regional and national levels associated with postnatal care coordination	2	11.1	
3	An ad hoc committee selected from the officials responsible for the postnatal service delivery budget at district, regional and national levels *(appointed by the health departments at the various levels)*	17	94.4	

5.5.4 Action statement 4: Continuing professional education must be strengthened to improve postnatal care

a) Actions/Methods for strengthening continuing professional education (N=18)

As illustrated in Table 5.40, consensus was reached on specific actions to be taken to strengthen continuing professional education.

Table 5.40: Actions/methods for strengthening continuing professional education (N=18)

No	**Actions/Methods** for strengthening continuing professional education	Responses		Consensus
		n=	**f=**	
1	Develop an action plan for professional development training to ensure the participation of all postnatal care providers	18	100	Yes
2	One professional development training schedule opportunity per year must be compulsory for every postnatal care provider	15	83.3	
3	Attain a record of postnatal care providers who attended continuing professional education to ensure compliance	17	94.4	

b) Responsible person/s for strengthening continuing professional education (N=18)

Consensus was reached among the panellists (n=17; f=94.4%) that a committee, appointed by the head of Oromia Regional Health Bureau and postnatal care coordinators at the National Ministry of Health, must take responsibility for strengthening continuing professional education (refer to Table 5.41).

Table 5.41: Responsible person/s for strengthening continuing professional education (N=18)

No	**Responsible person/s** for strengthening continuing professional education	Responses		Consensus
		n=	**f=**	
1	In-service training programme officers at the district level	1	5.6	Yes
2	Postnatal care programme officers at the Ministry of Health	1	5.6	
3	An appointed committee *(appointed by the head of Oromia Regional Health Bureau and postnatal care coordinator at the National Ministry of Health)* selected from the in-service training coordinators at Oromia Regional Health Bureau and the Ministry of Health	17	94.4.	

5.5.5 Action statement 5: Effective monitoring of postnatal care services is required

a) Actions/Methods for implementing effective monitoring of postnatal care (N=18)

As indicated in Table 5.42, the panellists reached consensus on all specific methods presented to implement effective postnatal care monitoring.

Table 5.42: Actions/methods for implementing effective monitoring of postnatal care (N=18)

No	**Actions/Methods** for implementing effective monitoring of postnatal care	Responses		Consensus
		n=	**f=**	
1	Conduct a quarterly inspection of the health facilities rendering postnatal care	18	100	Yes
2	Compile quarterly quality assurance reports for submission to the Ministry of Health.	16	88.9	
3	Identify gaps in the quality of postnatal care being rendered	17	94.4	
4	Communicate all challenges detected to the appropriate managers	17	94.4	

b) Responsible person/s for implementing effective monitoring of postnatal care (N=18)

There was consensus among the panellists (n=17; f=94.4%) that an appointed team of programme officers working at the district, regional and national levels must take responsibility in implementing effective postnatal care monitoring (refer to Table 5.43).

Table 5.43: Responsible person/s for implementing effective monitoring (N=18)

No	**Responsible person/s for** implementing effective monitoring of postnatal care	Responses		Consensus
		n=	**f=**	
1	Directors of the health facilities	2	11.1	Yes
2	All postnatal care programme officers at the district level	2	11.1	
3	An appointed team of programme officers working at the district, regional and national levels (*selected by their peers within the various levels*)	17	94.4	

5.5.6 Action statement 6: There should be consistent evaluation of postnatal care services

a) Actions/Methods for implementing consistent evaluation of postnatal care (N=18)

As illustrated in Table 5.44, consensus was reached among the panellists on specific actions presented for implementing consistent evaluation of postnatal care services.

Table 5.44: Actions/methods for implementing consistent evaluation (N=18)

No	**Actions/Methods** for implementing consistent evaluation of postnatal care	Responses		Consensus
		n=	**f=**	
1	Conduct an evaluation of the quality of postnatal care services at least every 3 months	17	94.4	Yes
2	Improve postnatal care coordinators' assessment skills through training programmes	17	94.4	
3	Share the quality assessment results and experiences with postnatal care coordinators at least once a year at a formal postnatal care summit	17	94.4	

b) Responsible person/s: for the implementation of consistent postnatal care evaluation (N=18)

Consensus was reached among the panellists (n=17; f=94.4%) that an appointed team of postnatal care programme officers, working at district, regional and national levels, appointed by their peers at the various levels, must take responsibility for implementing consistent postnatal care evaluation (refer to Table 5.45).

Table 5.45: Responsible person/s for the implementation of consistent postnatal care evaluation (N=18)

No	**Responsible person/s** for the implementation of consistent postnatal care evaluation.	Responses		Consensus
		n=	**f=**	
1	Director of every individual health facility offering postnatal care services	2	11.1	Yes
2	Postnatal care programme officers at district and national level	2	11.1	
3	An appointed team of programme officers working at the district, regional and national levels (*appointed by their peers at the various levels)*	17	94.4	

5.5.7 Action statement 7: The coordination of postnatal care services must be improved

a) Actions/Methods for improving coordination of postnatal care (N=18)

As indicated in Table 5.46, the panellists reached consensus on the four proposed actions to improve the coordination of postnatal care services.

Table 5.46: Actions/methods for improving coordination of postnatal care (N=18)

No	**Actions/Methods** for improving coordination of postnatal care	Responses		Consensus
		n=	**f=**	
1	Enhance community involvement in postnatal care by increasing community participation	18	100	Yes
2	Provide health education to the community to increase awareness regarding the importance of postnatal care	17	94.4	
3	Facilitate communication networks among postnatal care coordinators and the different stakeholders	17	94.4	
4	Implement the use of mobile phones and social media to provide information on the importance of postnatal care	17	94.4	

b) Responsible person/s for the improvement of the coordination (N=18)

Consensus was reached among the panellists (n=17; f=94.4%) that an appointed team of postnatal care programme officers, working at the district, regional and national levels, must take responsibility for improving the coordination of postnatal care services (refer to Table 5.47).

Table 5.47: Responsible person/s for the improvement of the coordination (N=18)

No	**Responsible person/s** for the improvement of the coordination of postnatal care services	Responses		Consensus
		n=	**f=**	
1	All postnatal care programme officers at district and regional levels	2	11.1	Yes
2	Directors of health facilities	3	16.7	
3	An appointed team of postnatal care programme officers working at the district, regional and national levels (*appointed by their direct managers at the various levels)*	17	94.4	

5.5.8 Action statement 8: Data management processes, such as recording and reporting of postnatal care services, must be improved

a) Actions/Methods for improving the data management processes for postnatal care services (N=18)

Consensus was reached among the panellists on the specific actions to improve the data management processes for postnatal care (refer to Table 5.48).

Table 5.48: Actions/methods for improving the data management processes (N=18)

No	**Actions/Methods for improving the data management processes**	Responses		Consensus
		n=	**f=**	
1	Provide technical support to postnatal care providers and coordinators to record postnatal care data	18	100	

No	**Actions/Methods for improving the data management processes**	Responses		Consensus
2	Arrange ICT training to improve the technical skills of postnatal care providers and coordinators	17	94.4	Yes
3	Implement the use of ICT to manage records, medical drugs, and information sharing	17	94.4	
4	Implement a timely reporting system for postnatal care service delivery at all health facilitates offering postnatal care	17	94.4	

b) Responsible person/s for developing strategies to improve data management (N=18)

As indicated in Table 5.49, the panellists reached consensus (n=16; f=88.9%) that an appointed team of the health management information heads, working at health facilities, district, regional and national levels, must take responsibility for improving postnatal care data management.

Table 5.49: Responsible person/s for developing strategies to improve data management (N=18)

No	**Responsible person/s** for developing strategies to improve the data management of postnatal care	Responses		Consensus
		n=	**f=**	
1	All postnatal care programme officers at the district level	2	11.1	
2	Directors of health facilities	2	11.1	
3	An appointed team of health management information heads working at health facilities, district, regional and national levels (*appointed by the heads of the postnatal care coordinating offices at the different levels*)	16	88.9	Yes

5.5.9 Action statement 9: Community involvement in postnatal care services must be improved

a) Actions/Methods for improving community involvement in postnatal care (N=18)

Consensus was reached among the panellists on the specific actions for improving community involvement in postnatal care (refer to Table 5.50).

Table 5.50: Actions/methods for improving community involvement in postnatal care (N=18)

No	**Actions/Methods** for improving community involvement in postnatal care	Responses		Consensus
		n=	**f=**	
1	Improve the postnatal care knowledge of the community through social media	17	94.4	Yes
2	Involve community leaders in the development of educational material	17	94.4	
3	Select community members to participate in communicating educational material and messages to the community	17	94.4	
4	Involve the community in planning postnatal care activities	18	100	

b) Responsible person/s for implementing the actions for the improvement of community involvement in postnatal care (N=18)

As illustrated in Table 5.51, consensus was reached (n=16; f=88.9%) among the panellists that an ad hoc committee of postnatal care programme officers (at district level) appointed by their peers and community members selected by the district postnatal coordinating offices should take reponsibilty for improving community involvement in postnatal care.

Table 5.51: Responsible person/s improvement of community involvement in postnatal care (N=18)

No	**Responsible person/s** for developing strategies to improve the data management of postnatal care	Responses		Consensus
		n=	**f=**	
1	All postnatal care programme officers at the district level	2	11.1	Yes
2	Directors of health facilities	2	11.1	
3	An ad hoc committee of postnatal care programme officers (at district level) appointed by their peers as well as appointed community members selected by the district postnatal coordinating offices	16	88.9	

5.5.10 Action statement 10: Establish community surveillance of maternal and neonatal deaths

a) Actions/Methods for establishing community surveillance of maternal and neonatal deaths (N=18)

The data indicated that the panellists agreed on the specific actions or methods to establish community surveillance related to maternal and neonatal deaths (refer to Table 5.52).

Table 5.52: Actions/methods for establishing community surveillance of maternal and neonatal deaths (N=18)

No	**Actions/Methods for establishing community surveillance of maternal and neonatal deaths**	Responses		Consensus
		n=	**f=**	
1	Conduct annual surveillance on maternal and neonatal deaths	18	100	Yes
2	Develop an effective reporting system of maternal and neonatal deaths	16	88.9	

b) Responsible person/s for establishing community surveillance for maternal and neonatal deaths (N=18)

As illustrated in Table 5.53, the panellists reached 100% (n=18; N=18) consensus that an appointed team of postnatal care programme officers, working at the district, regional and national levels, must take responsibility for establishing community surveillance for maternal and neonatal deaths.

Table 5.53: Responsible person/s for establishing community surveillance for maternal and neonatal deaths (N=18)

No	**Responsible person/s** for establishing community surveillance for maternal and neonatal deaths	Responses		Consensus
		n=	**f=**	
1	Directors of health facilities	3	16.7	Yes
2	Postnatal care programme officers at district and regional levels	2	11.1	
3	An appointed team of postnatal care programme officers working at the district, regional and national levels *(appointed by heads of the postnatal coordinating offices at the various levels*)	18	100	

5.5.11 Action statement 11: Identify and address social and cultural practices, myths and misconceptions about postnatal care

a) Actions/Methods for identifying and addressing the social and cultural practices, myths and misconceptions (N=18)

The data illustrated that consensus was reached among the panellists on all possible specific actions proposed for identifying and addressing social and cultural practices, myths and misconceptions about postnatal care (refer to Table 5.54).

Table 5.54: Actions/methods for identifying and addressing the social and cultural practices, myths and misconceptions (N=18)

No	**Actions/Methods** for identifying and addressing the social and cultural practices, myths and misconceptions on postnatal care	Responses		Consensus
		n=	**f=**	
1	Assess the cultural practices in the community that impact on postnatal care services	18	100	Yes
2	Conduct information education and communication (IEC) for increasing awareness and knowledge on cultural misconceptions	17	94.4	
3	Involve the community in identifying the cultural issues that impact on postnatal care by facilitating meetings between the healthcare workers and the community	17	94.4	
4	Involve the community in addressing the cultural issues that impact postnatal care by facilitating community meetings	17	94.4	

b) Responsible person/s for identifying and addressing the social and cultural practices, myths and misconceptions on postnatal care (N=18)

The data illustrated that consensus was reached among the panellists (n=17; f=94.4%) that an ad hoc committee of postnatal care programme officers (at district level), as well as appointed community members, must take responsibility for identifying and addressing social and cultural practices, myths and misconceptions that impact postnatal care (refer to Table 5.55).

Table 5.55: Responsible person/s for identifying and addressing the social and cultural practices, myths and misconceptions (N=18)

No	**Responsible person/s** for identifying and addressing the social and cultural practices, myths and misconceptions on postnatal care	Responses		Consensus
		n=	**f=**	
1	Directors of health facilities	3	16.7	
2	Postnatal care programme officers at district and regional	3	16.7	

No	**Responsible person/s** for identifying and addressing the social and cultural practices, myths and misconceptions on postnatal care	Responses		Consensus
		n=	**f=**	
	levels			Yes
3	An ad hoc committee of postnatal care programme officers (at district level*) appointed by their peers* as well as appointed community members *selected by the district postnatal coordinating offices*	17	94.4	

5.5.12 Action statement 12: Provide incentives for postnatal care providers

a) Actions/Methods for the provision of incentives for postnatal care providers (N=18)

As illustrated in Table 5.56, consensus was reached among the panellists on the specific actions to be implemented for the provision of incentives for postnatal care providers.

Table 5.56: Actions/methods for the provision of incentives for postnatal care providers (N=18)

No	**Actions/Methods** for the provision of incentives for postnatal care providers	Responses		Consensus
		n=	**f=**	
1	Provide a certificate at an award ceremony for those identified to be the best performers	18	100	
2	Instil career opportunities for those with high-performance appraisal results	17	94.4	Yes
3	Allocate additional professional development opportunities for those with high-performance appraisal results	17	94.4	

b) Responsible person/s for the provision of incentives for postnatal care providers (N=18)

The data illustrated a 100% consensus (n=18; N=18) that an ad hoc committee of programme officers working at the regional health department must take responsibility for the provision of incentives for postnatal care providers (refer to Table 5.57).

Table 5.57: Responsible person/s for the provision of incentives for postnatal care providers (N=18)

No	**Responsible person/s** for the provision of incentives for postnatal care providers	Responses		Consensus
		n=	**f=**	
1	All the postnatal care programme officers at the district level	2	11.1	Yes
2	A team of postnatal care programme officers at a regional level, selected by their peers to liaise with the national department of health	3	16.7	
3	An ad hoc committee of programme officers working at regional health departments (*appointed by the head of the regional health department)* to liaise with the national health department for the implementation of the incentives	18	100	

5.5.13 Action statement 13: Maternal waiting homes must be available at all health facilities

a) Actions/Methods for the availability of maternal waiting rooms (N=18)

Consensus was reached among the panellists on the specific actions proposed for the availability of maternal waiting homes (refer to Table 5.58).

Table 5.58: Actions/methods for the availability of maternal waiting rooms (N=18)

No	**Actions/Methods** for the availability of maternal waiting homes	Responses		Consensus
		n=	**f=**	
1	Provide areas that can serve as maternal waiting homes at all health facilities	18	100	Yes
2	Equip the maternal waiting homes with the necessary infrastructure such as electricity, water supply, kitchens, and adequate rooms	17	94.4	
3	Ensure that maternal waiting homes comply with culture congruent requirements by involving the community in the development thereof	17	94.4	

b) Responsible person/s for the availability of maternal waiting rooms (N=18)

As illustrated in Table 5.59, consensus was reached among the panellists (n=17; f=94.4%) that appointed postnatal care programme officers working at the district, regional and national levels, as well as selected community members, must take responsibility for the availability of maternal waiting rooms.

Table 5.59: Responsible person/s for the availability of maternal waiting rooms (N=18)

No	**Responsible person/s** for the availability of maternal waiting rooms	Responses		Consensus
		n=	**f=**	
1	Postnatal care providers at health facilities	2	11.1	Yes
2	Postnatal care programme officers at district and regional levels	2	11.1	
3	Appointed postnatal care programme officers working at the district, regional and national levels (*appointed by the postnatal care coordinating offices)* at the various levels as well as selected community members appointed by the directors of the health facilities	17	94.4	

5.5.14 Action statement 14: Ensure effective communication for ambulance services and other postnatal care issues

a) Actions/Methods for ensuring effective communication for ambulance services and other postnatal care issues (N=18)

As illustrated in Table 5.60, consensus was reached on the specific actions to be taken to ensure effective communication for ambulance services and address other postnatal care issues.

Table 5.60: Actions/methods for ensuring effective communication for ambulance services and other postnatal care issues (N=18)

No	**Actions/Methods** for ensuring effective communication for ambulance services and other postnatal care issues	Responses		Consensus
		n=	**f=**	
1	Communicate the contact details of all available ambulance services to mothers via social media and printed communication	18	100	Yes
2	Develop an effective communication system to ensure ambulance service accessibility	17	94.4	
3	Ensure the availability of ambulance services at all health facilities	17	94.4	

b) Responsible person/s for ensuring effective communication for ambulance services and other postnatal care issues (N=18)

The data illustrated consensus among the panellists (n=17; f=94.4%) that an ad hoc committee consisting of ambulance drivers, community leaders, as well as postnatal care programme officers working at the health facilities must take responsibility for ensuring effective communication for postnatal care ambulance services (refer to Table 5.61).

Table 5.61: Responsible person/s for ensuring effective communication for ambulance services (N=18)

No	**Responsible person/s** for ensuring effective communication for ambulance services for postnatal care issues	Responses		Consensus
		n=	**f=**	
1	Directors of health facilities	4	22.2	Yes
2	All postnatal care programme officers at district and regional levels	3	16.7	
3	An ad hoc committee consisting of ambulance drivers, community leaders (*selected by the directors of the health facilities),* as well as postnatal care programme officers working at the health facilities *(appointed by their peers and the directors of the health facilities)*	17	94.4	

5.5.15 Action statement 15: Cultural ceremonies should be practiced at health facilities to motivate mothers to utilise institutional delivery and postnatal care

a) Actions/Methods for ensuring the practice of cultural ceremonies (N=18)

As illustrated in Table 5.62, the panellists reached consensus on specific actions to be taken in ensuring the practice of cultural ceremonies at the health facilities.

Table 5.62: Actions/methods for ensuring the practice of cultural ceremonies (N=18)

No	**Actions/Methods** for ensuring the practice of cultural ceremonies	Responses		Consensus
		n=	**f=**	
1	Develop a policy that makes provision for cultural ceremonies in health facilities	18	100	Yes
2	Allow mothers and their families to practice their cultural ceremonies	17	94.4	
3	Have maternal waiting homes at all health facilities rendering postnatal care	16	88.9	
4	Equip the health facilities with the necessary	14	77.8	

No	**Actions/Methods** for ensuring the practice of cultural ceremonies	Responses		Consensus
	infrastructure such as electricity, water supply, and adequate rooms to allow for the practice of their culture			

b) Responsible person/s for developing strategies that ensure the practice of cultural ceremonies (n=16)

The data illustrated consensus (F=14; f=87.5%) among the panellists that an ad hoc committee consisting of selected community and religious leaders, as well as programme officers working at district level, must take responsibility for ensuring the practice of cultural ceremonies for postnatal mothers at all health facilities (refer to Table 5.63).

Table 5.63: Responsible person/s for developing strategies that ensure the practice of cultural ceremonies (n=16)

No	**Responsible person/s** for developing strategies that ensure the practice of cultural ceremonies	Responses		Consensus
		F=	**f=**	
1	All postnatal care providers	3	18.8	Yes
2	Postnatal care programme officers at district and regional levels	5	31.3	
3	An ad hoc committee consisting of selected community and religious leaders, as well as the programme officers working at district level (*appointed by the heads of district health departments)* to liaise with the regional and national health departments	14	87.5	

5.5.16 Action statement 23: Establish community health units for postnatal care improvement

a) Actions/Methods establishing community health units for postnatal care improvement N=18)

Consensus was reached among the panellists on the specific actions to be taken in establishing community health units for postnatal care improvement (refer to Table 5.64).

Table 5.64: Actions/methods for establishing community health units for postnatal care improvement (N=18)

No	**Actions/Methods** establishing community health units for postnatal care improvement	Responses		Consensus
		n=	**f=**	
1	Strengthen the community health workers' skills though training to provide preventive services	14	78	Yes
2	Improve the health extension workers' competency through continuing professional development to provide home-based postnatal care	15	83	

b) Responsible person/s for establishing community health units for postnatal care improvement (N=18)

There was consensus (n=14; f=77.8%) among the panellists that an appointed team of postnatal care coordinators at district level must take responsibility for establishing community health units for postnatal care improvement (refer to Table 5.65).

Table 5.65: Responsible person/s for establishing community health units (N=18)

No	**Responsible person/s** for establishing community health units for postnatal care improvement.	Responses		Consensus
		n=	**f=**	
1	Postnatal care providers	2	11.1	Yes
2	Directors of health facilities	3	16.7	
3	An appointed team of postnatal care coordinators at district levels *(appointed by the head of health offices)*	14	77. 8	

5.5.17 Action statement 25: Ensure Partner/donor support for postnatal care

a) Actions/Methods for ensuring partner/donor support for postnatal care (N=18)

As illustrated in Table 5.66, the panellists reached consensus on the specific actions to be implemented in ensuring partner/donor support for postnatal care (refer to Table 5.66).

Table 5.66: Actions/methods for ensuring partner/donor support for postnatal care (N=18)

No	**Actions/Methods** for ensuring partner/donor support for postnatal care	Responses		Consensus
		n=	**f=**	
1	Invite local and national partners to participate in technical and financial support for the postnatal care improvement	17	94.4	Yes
2	Negotiate partnerships with donors	18	100	
3	Use the technical and financial support from the partners for postnatal care improvements	17	94.4	

b) Responsible person/s for ensuring partner/donor support for postnatal care services (N=18)

There was consensus among the panellists (n=17; f=94.4%) that an ad hoc committee consisting of directors of health facilities and postnatal care programme officers working at the district level must take responsibility in ensuring partner/donor support for postnatal care services (refer to Table 5.67).

Table 5.67: Responsible person/s for ensuring partner/donor support for postnatal care services (N=18)

No	**Responsible person/s** for ensuring partner/donor support for postnatal care services	Responses		Consensus
		n=	**f=**	
1	Appointed team of postnatal care officers at the national level *selected by their peers*	4	22.2	Yes
2	Appointed team of postnatal care officers at the regional level *selected by their peers*	3	16.7	
3	An ad hoc committee consisting of the directors of health facilities and postnatal care programme officers working at district level *(appointed by heads the district postnatal care coordinating offices)*	17	94.4	

5.5.18 Action statement 26: Male engagement in aspects of postnatal care must be improved

a) Actions/Methods for improving male engagement in aspects of postnatal care (N=18)

As illustrated in Table 5.68, consensus was reached among the panellists on the specific actions to be taken for improving male engagement in postnatal care.

Table 5.68: Actions/methods for improving male engagement in aspects of postnatal care (N=18)

No	**Actions/Methods** for improving male engagement in aspects of postnatal care	Responses		Consensus
		n=	**f=**	
1	Increase males' awareness of the benefits of postnatal care through mass media	18	100	Yes
2	Improve male involvement through discussions with community leaders	17	94.4	
3	Improve male involvement through discussions with religious leaders	17	94.4	

b) Responsible person/s for improving male engagement in postnatal care (N=18)

The panel reached consensus (n=17; f=94.4%) that an ad hoc committee consisting of community and religious leaders, as well as postnatal care coordinators at district and regional levels, must take responsibility for improving male engagement in postnatal care (refer to Table 5.69).

Table 5.69: Responsible person/s for improving male engagement in postnatal care (N=18)

No	**Responsible person/s** for improving male engagement in postnatal care	Responses		Consensus
		n=	**f=**	
1	Selected community leaders *(selected by directors of health facilities)*	3	22.2	Yes
2	Selected religious leaders (selected by directors of health facilities)	3	16.7	
3	An ad hoc committee consisting of community and religious leaders appointed by district postnatal care coordinating offices, as well as postnatal care coordinators at district and regional levels *(appointed by the various health departments)*	17	94.4	

c) Time frame in which male engagement in postnatal care must be improved (N=18)

As illustrated in Table 5.70, consensus was reached among the panellists (n=17; f=94.4) that male engagement in postnatal care must be improved within 6 months after the implementation of the contextualised framework.

Table 5.70: Time frame in which male engagement in postnatal care must be improved (N=18)

No	**Time frame** in which male engagement in postnatal care must be improved	Responses		Consensus
		n=	**f=**	
1	Within 6 months	17	94.4	Yes
2	Within 12 months	1	5.6	
3	Within 18 months	0	0	

5.5.19 Action statement 27: Address the socio-economic factors that influence postnatal care

a) Actions/Methods for addressing the socio-economic factors that influence postnatal care (N=18)

As illustrated in Table 5.71, consensus was reached among the panellists on specific actions to be implemented in addressing the socio-economic factors that influence postnatal care.

Table 5.71: Actions/methods for addressing the socio-economic factors that influence postnatal care (N=18)

No	**Actions/Methods** for addressing the socio-economic factors that influence postnatal care	Responses		Consensus
		n=	**f=**	
1	Encourage women to postpone marriage until 18 years	18	100	Yes
2	Implement strategies to prevent teenage pregnancies	17	94.4	
3	Advocate for the improvement of employment opportunities for women (job opportunities)	17	94.4	

b) Responsible person/s for addressing the socio-economic factors that influence postnatal care (N=18)

The panellists reached consensus (n=17; f=94.4%) that an ad hoc committee consisting of postnatal care coordinators, the women's development army, as well as community leaders, must take responsibility in addressing the socio-economic factors that influence postnatal care (refer to Table 5.72).

Table 5.72: Responsible person/s for addressing the socio-economic factors (N=18)

No	**Responsible person/s** for addressing the socio-economic factors that influence postnatal care	Responses		Consensus
		n=	**f=**	
1	Selected women development army *(selected by peers)*	4	22.2	
2	Appointed postnatal care coordinators at district level	2	11.1	

No	**Responsible person/s** for addressing the socio-economic factors that influence postnatal care	Responses		Consensus
	(selected by the heads of district health department)			Yes
3	An ad hoc committee consisting of postnatal care coordinators, women's development army, as well as the community leaders *(selected by the district health department)*	17	94.4	

c) Time frame in which the socio-economic factors that influence postnatal care can be addressed (N=18)

The panellists reached 100% consensus (n=17; F=17) that the socio-economic factors that influence postnatal care must be addressed within 2 years after the implementation of the contextualised framework (refer to Table 5.73).

Table 5.73: Time frame in which the socio-economic factors that influence postnatal care can be addressed (n=17)

No	**Time frame** in which the socio-economic factors that influence postnatal care can be addressed (n=17)	Responses		Consensus
		F=	**f=**	
1	Within 2 years	17	100	
2	Within 3 years	0	0	
3	Within 4 years	0	0	Yes

5.5.20 Action statement 28: Improve the literacy levels of postnatal mothers

a) Actions/Methods for improving the literacy level of postnatal mothers (n=17)

Consensus was reached among the panellists on specific actions to be taken in improving the literacy levels of postnatal mothers (refer to Table 5.74).

Table 5.74: Actions/methods for improving the literacy level of postnatal mothers (n=17)

No	**Actions/Methods** for improving the literacy level of postnatal mothers (n=17)	Responses		Consensus
		F=	**f=**	
1	Encourage pregnant and postnatal mothers to improve their level of education by through mass media	17	100	Yes
2	Involve the community in motivating pregnant and postnatal mothers to attain an education	14	82.4	
3	Involve the religious leaders in motivating pregnant and postnatal mothers to improve their level of education	15	88.2	

b) Responsible person/s for developing and implementing strategies for improving the literacy level of postnatal mothers (n=17)

As illustrated in Table 5.75, the panellists reached consensus (F=16; f=94.1%) that an appointed team of community and religious leaders, and the district and regional education offices programme officers, must take responsibility for improving the literacy level of postnatal mothers.

Table 5.75: Responsible person/s for improving the literacy level of postnatal mothers (n=17)

No	**Responsible person/s** for developing and implementing strategies for improving the literacy level of postnatal mothers (n=17)	Responses		Consensus
		F=	**f=**	
1	All adult education programme officers at the district level	3	17.6	Yes
2	All adult education programme officers at the regional level	3	17.6	
3	An appointed team of community and religious leaders (*appointed by the head of the district postnatal care coordinating offices*) and district and regional education offices programme officers *(appointed by the heads of the various education offices)*	16	94.1	

5.5.21 Action statement 29: Address the religious factors that influence postnatal care services utilisation

a) Actions/Methods for identifying and addressing religious factors (N=18)

As illustrated in Table 5.76, the panellists reached consensus on the proposed specific actions for identifying and addressing religious factors that impact postnatal care.

Table 5.76: Actions/methods for identifying and addressing religious factors (N=18)

No	**Actions/Methods** for identifying and addressing religious factors that impact postnatal care can be identified and addressed	Responses		Consensus
		n=	**f=**	
1	Conduct IEC to increase awareness and knowledge on religious factors that impact on postnatal care utilisation	18	100	Yes
2	Improve women's and the community's knowledge through health education to overcome religious influences	17	94.4	

b) Responsible person/s for identifying and addressing religious factors (N=18)

As illustrated in the data, consensus was reached (n=16; f=88.9%) among the panellists that an ad hoc committee, consisting of community and religious leaders, as well as district postnatal care programme officers, must take responsibility for identifying and addressing religious factors that impact postnatal care (refer to Table 5.77).

Table 5.77: Responsible person/s for identifying and addressing religious factors (N=18)

No	**Responsible person/s** for identifying and addressing religious factors that impact postnatal care	Responses		Consensus
		n=	**f=**	
1	An ad hoc committee consisting of community leaders *appointed by directors of health facilities*	4	22.2	Yes
2	An ad hoc committee consisting of religious leaders *appointed by directors of health facilities*	2	11.1	
3	An ad hoc committee consisting of community and religious leaders, as well as district postnatal care programme officers *(appointed by the head of the district postnatal care coordinating offices)*	16	88.9	

5.5.22 Action statement 30: Poor access to postnatal care services must be improved

a) Actions/Methods for improving poor access to postnatal care (N=18)

As illustrated in Table 5.78, the panellists reached consensus on the proposed specific actions for improving poor access to postnatal care.

Table 5.78: Actions/methods for improving poor access to postnatal care (N=18)

No	**Actions/Methods** for improving poor access to postnatal care	Responses		Consensus
		n=	**f=**	
1	Increase the number of health facilities	18	100	Yes
2	Renovate the existing health facilities	17	94.4	
3	Improve transportation services for easy access to health facilities	17	94.4	

b) Responsible person/s for improving poor access to postnatal care services (n=17)

Consensus was reached among the panellists (F=16; f=94.1%) that an appointed team of postnatal care programme officers working at the district, regional and national levels must take responsibility for improving poor access to postnatal care services (refer to Table 5.79).

Table 5.79: Responsible person/s for improving poor access to postnatal care services (n=17)

No	**Responsible person/s** for improving poor access to postnatal care services	Responses		Consensus
		F=	**f=**	
1	Directors of health facilities to liaise with the district health department	3	17.6	Yes
2	All postnatal care programme officers at the district level to liaise with the regional health department	4	23.5	
3	An appointed team of postnatal care programme officers working at the district, regional and national levels *(appointed by the heads of postnatal coordinating offices at the various levels)* to liaise with federal (national) Ministry of Health	16	94.1	

5.5.23 Action statement 31: Capacity building for postnatal care providers and coordinators is an important strategy for postnatal care improvement

a) Actions/Methods for improving capacity building (N=18)

The panellists reached consensus on specific actions/methods to be implemented as a strategy for improving capacity building among postnatal care providers (refer to Table 5.80).

Table 5.80: Actions/methods for improving capacity building (N=18)

No	**Actions/Methods** for improving capacity building	Responses		Consensus
		n=	**f=**	
1	Ensure the implementation of continuous professional education	17	94.4	Yes
2	Instil an attendance register of postnatal care providers for professional development training at least once a year	18	100	

b) Responsible person/s for ensuring capacity building (N=18)

Consensus was reached among the panellists (n=16; f=88.9%) that an ad hoc committee of in-service training coordinators at the regional health bureau and Ministry of Health must take responsibility in ensuring capacity building (refer to Table 5.81).

Table 5.81: Responsible person/s for ensuring capacity building (N=18)

No	**Responsible person/s** for ensuring capacity building.	Responses		Consensus
		n=	**f=**	
1	Directors of health facilities	3	16.7	Yes
2	All postnatal care programme officers at district and regional levels	4	22.2	
3	An ad hoc committee from in-service training coordinators at the regional health bureau and Ministry of Health *(appointed by heads of the regional health bureau and the National Ministry of Health)*	16	88.9	

5.5.24 Action statement 32: There should be quality assurance mechanisms for postnatal care services

a) Actions/Methods for implementing quality assurance mechanisms (N=18)

As illustrated in Table 5.82, the panellists reached consensus on the specific actions to be taken for implementing postnatal care quality assurance mechanisms.

Table 5.82: Actions/methods for implementing quality assurance mechanisms (N=18)

No	**Actions/Methods** for implementing quality assurance mechanisms	Responses		Consensus
		n=	**f=**	
1	Implement standard operating procedures when rendering postnatal care	18	100	Yes
2	Provide quality counselling services to postnatal mothers	17	94.4	
3	Provide compassionate and respectful care to enhance postnatal mothers' satisfaction	17	94.4	
4	Provide effective "whistle blow" opportunities to complain about the quality of care rendered	17	94.4	

b) Responsible person/s for the improvement of the quality assurance mechanism (N=18)

The panellists reached consensus (n=17; f=94.4) that an appointed team of programme officers working at district, regional and national levels must take responsibility for the improvement of the quality assurance mechanism (refer to Table 5.83).

Table 5.83: Responsible person/s for the improvement of the quality assurance mechanism (N=18)

No	**Responsible person/s** for the improvement of the quality assurance mechanism.	Responses		Consensus
		n=	**f=**	
1	All postnatal care providers	3	16.7	Yes
2	All postnatal care programme officers at district and regional levels	4	22.2	
3	An appointed team of programme officers working at district, regional and national levels *(appointed by the head of postnatal care coordinating offices at the various levels)*	17	94.4	

5.5.25 Action statement 33: Supportive supervision should be implemented at all health facilities

a) Actions/Methods for improving supportive supervision (N=18)

As illustrated in Table 5.84, the panellists reached consensus on the proposed specific actions for the implementation of supportive supervision for postnatal care.

Table 5.84: Actions/methods for improving supportive supervision (N=18)

No	**Actions/Methods** for improving supportive supervision	Responses		Consensus
		n=	**f=**	
1	Provide training to improve supervision skills for postnatal care coordinators	17	94.4	Yes
2	Conduct supportive supervision on postnatal care services at least quarterly	18	100	
3	Provide technical and financial support to postnatal care coordinators to conduct supportive supervision	17	94.4	

b) Responsible person/s for developing and implementing actions for consistent supportive supervision (N=18).

Consensus was reached among the panellists (n=17; 94.4%) that an appointed team of postnatal care services programme officers working at the district, regional and national levels must take responsibility for implementing actions towards consistent supportive supervision (refer to Table 5.85).

Table 5.85: Responsible person/s for consistent supportive supervision (N=18)

No	**Responsible person/s** for developing and implementing actions for consistent supportive supervision	Responses		Consensus
		n=	**f=**	
1	Directors of health facilities	4	22.2	Yes
2	All postnatal care programme officers at district and regional levels	3	16.7	
3	An appointed team of postnatal care service programme	17	94.4	

No	**Responsible person/s** for developing and implementing actions for consistent supportive supervision	Responses		Consensus
	officers working at the district, regional and national levels (*appointed by the head of postnatal care coordinating offices at the various levels)*			

5.5.26 Action statement 34: Health facility infrastructure must be secured for the improvement of postnatal care

All (n=18; N=18) the panellists agreed that health facility infrastructure must be secured for the improvement of postnatal care (refer to Table 5.86).

Table 5.86: Health facility infrastructure must be secured for improvement of postnatal care (N=18)

No	Health facility infrastructure must be secured for improvement of postnatal care	Responses		Consensus
		n=	**f=**	
1	Strongly agree	18	100	Yes
2	Agree	0	0	
3	Disagree	0	0	
4	Strongly disagree	0	0	

a) Actions/Methods for improving the health facility infrastructures (N=18)

As illustrated in Table 5.87, the panellists reached consensus on all the proposed specific actions to be taken for improving health facility infrastructures.

Table 5.87: Actions/methods for improving the health facility infrastructures (N=18)

No	**Actions/Methods** for improving the health facility infrastructures	Responses		Consensus
		n=	**f=**	
1	Prepare an audit report on the quality and availability of infrastructure	17	94.4	Yes
2	Renovate the existing infrastructure of facilities	17		

No	**Actions/Methods** for improving the health facility infrastructures	Responses		Consensus
3	Submit the audit reports to the Ministry of Health through the district health department	18	100	
4	Prepare a separate and adequate room/space for postnatal care at all health facilities	17	94.4	
5	Provide all health facilities with safe water and functioning hydroelectric power	17	94.4	
6	Link all health facilities with a 24 hour functional referral system	15	83.3	

b) Responsible person/s for ensuring health facility infrastructure (N=18)

As illustrated in the data, consensus was reached among the panellists (n=17; f=94.4%) that an appointed team of postnatal care programme officers working at the district, regional and national level must take responsibility for ensuring health facility infrastructure (refer to Table 5.88).

Table 5.88: Responsible person/s for ensuring health facility infrastructure (N=18)

No	**Responsible person/s** for ensuring health facility infrastructure	Responses		Consensus
		n=	**f=**	
1	Selected postnatal care programme officers at district and regional level (*selected by their peers within each level*)	4	22.2	Yes
2	All postnatal care programme officer at the national level	3	16.7	
3	An appointed team of postnatal care programme officers working at the district, regional and national level (*appointed by the head of postnatal care coordinating offices at the various levels)*	17	94.4	

c) Time frame in which health facility infrastructures must be secured (N=18)

The panellists reached consensus (n=14; f=77.8%) that health facility infrastructures must be secured within 2 years after the implementation of the contextualised framework (refer to Table 5.89).

Table 5.89: Time frame in which health facility infrastructures must be secured (N=18)

No	**Time frame** in which health facility infrastructures must be secured	Responses		Consensus
		n=	**f=**	
1	Within 1 year	4	22.2	
2	Within 2 years	14	77.8	
3	Within 3 years	0	0	Yes

5.5.27 Action statement 35: Appropriate medical drugs and supplies for postnatal services must be ensured

As illustrated in Table 5.90, the panel reached 100% consensus (n=14; f=77.78% strongly agree; n=4; f=22.22% agree) that the provision of appropriate medical drugs and supplies must be ensured for postnatal services (refer to Table 5.90).

Table 5.90: Provision of appropriate medical drugs and supplies for the postnatal services must be ensured (N=18)

No	Health facility infrastructure must be secured for improvement of postnatal care	Responses		Consensus
		n=	**f=**	
1	Strongly agree	4	22.2	
2	Agree	14	77.8	
3	Disagree	0	0	Yes
4	Strongly disagree	0	0	

a) Actions/Methods for improving medical drugs and supplies for postnatal care (N=18)

As illustrated in Table 5.91, the panellists reached consensus on the specific actions to be taken for improving the medical supplies and drugs for postnatal care.

Table 5.91: Actions/methods for improving medical drugs and supplies for postnatal care (N=18)

No	**Actions/Methods** for improving the medical drugs and supplies for postnatal care	Responses		Consensus
		n=	**f=**	
1	Ensure procurement and availability of all the necessary drugs for the provision of postnatal care	17	94.4	Yes
2	Enhance the postnatal care providers' skills in maintaining the stock balance on essential drugs	17	94.4	
3	Establish and sustain strong partnerships with national and international medical drug producers	15	83.3	

b) Responsible person/s for ensuring medical drugs and supplies (N=18)

Consensus was reached (n=16; f=88.9%) among the panellists that an appointed team of postnatal care programme officers working at the district, regional and national level must take responsibility for ensuring sufficient medical drugs and supplies for postnatal care (refer to Table 5.92).

Table 5.92: Responsible person/s for ensuring medical drugs and supplies (N=18)

No	**Responsible person/s** for ensuring medical drugs and supplies	Responses		Consensus
		n=	**f=**	
1	Directors of health facilities	3	16.7	Yes
2	All postnatal care programme officers at district and regional levels	3	16.7	
3	An appointed team of postnatal care programme officers	16	88.9	

No	**Responsible person/s** for ensuring medical drugs and supplies	Responses		Consensus
	working at the district, regional and national level (*appointed by the heads of postnatal care coordinating offices at the various levels)*			

c) Time frame in which the availability of medical drugs and supplies must be ensured

As illustrated in Table 5.93, the panellists reached consensus (n=16; f=88.9%) that the availability of medical drugs and supplies must be ensured within 1 year after the implementation of the contextualised framework.

Table 5.93: Time frame in which the availability of medical drugs and supplies must be ensured (N=18)

No	**Time frame** in which the availability of medical drugs and supplies must be ensured.	Responses		Consensus
		n=	**f=**	
1	Within 1 year	16	88.9	Yes
2	Within 2 years	2	11.1	
3	Within 3 years	0	0	

The responses and recommendations received during the third round of the Delphi process strengthened existing relevant literature. Moreover, scientific plausibility was established and assisted with the finalisation of the final contextualised framework (refer to Figure 5.1) and the action plan (refer to Table 5.94) for the implementation thereof.

5.6 VALIDATED CONTEXUALISED FRAMEWORK

All the recommendations provided through open-ended questions during the three rounds of the Delphi technique were similar to the one received and incorporated in the contextualised framework in Phase 1 using the AGREE II tool, and the questionnaire to gather data on postnatal care services in the Ethiopian context.

Therefore, to avoid duplication of information, the contextualised framework remained as it was (refer to Figure 5.1).

5.7 VALIDATED ACTION PLAN FOR THE IMPLEMENTATION OF THE CONTEXUALISED FRAMEWORK

As explained, the action plan for the implementation of the contextualised framework was validated by analysing the responses and recommendations by panellists during the three rounds of the Delphi technique. The final and validated action plan (refer to Table 5.94) for implementation of the contextualised framework will have to be used as an addendum to the framework to ensure the framework can effectively be implemented in the Ethiopian context.

In the validated action plan, each of the action statements has its actions/methods to achieve the action statements, the responsible person/s, as well as the time frame in which those actions should be taken. However, for some action statements, as indicated in Table 5.94, there were no actions/methods, responsible person/s, and time frame as those items were only incorporated to assess the level of the panellists' agreement to validate the contextualised framework for implementation in the Ethiopia context.

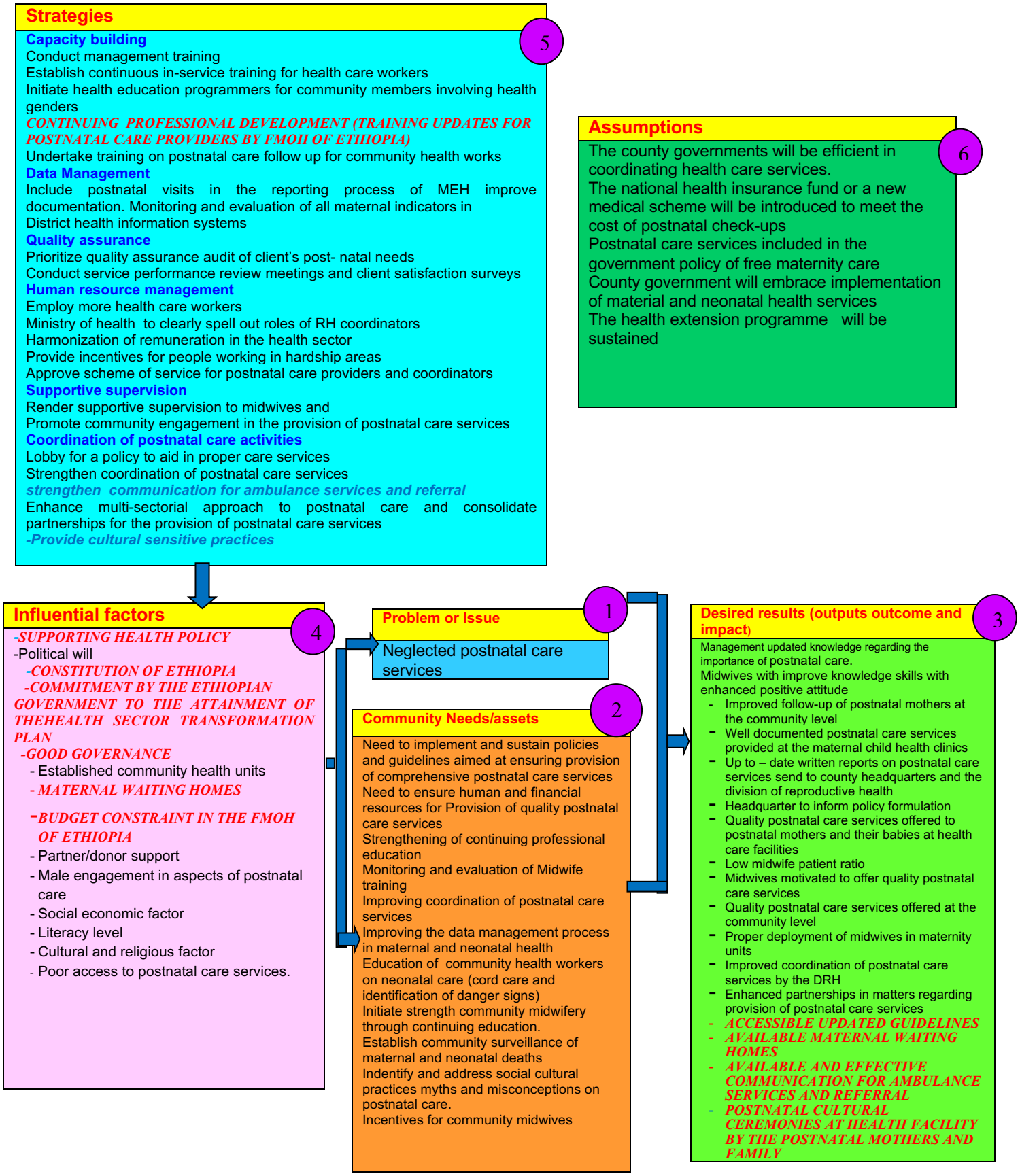

Figure 5.1: A validated contextualised framework

Table 5.94: Validated action plan to facilitate the implementation of the contextualised framework

THE PROBLEM			
Postnatal care is a neglected aspect of health care in Ethiopia			
COMMUNITY NEEDS			
Action statements	**Actions /Methods**	**Responsible person/s**	**Time frame**
Action statement 1 Policies and guidelines aimed at ensuring the provision of comprehensive postnatal care services must be implemented.	1. Ensure that all health facilities have access to postnatal care guidelines and policies. 2. Distribute an adequate number of guidelines and policies for all health facilities. 3. Make sure that postnatal care is offered based on guidelines and policies at all health facilities.	A team of postnatal care service providers at district, regional and national level appointed by their co-workers.	12 months after the contextualised framework is implemented.
Action statement 2 Human resources for the provision of quality postnatal care services must be ensured.	1. Conduct a staff workload indicator assessment at least twice a year to identify shortages. 2. Recruit skilled and competent postnatal care providers to adhere to the WHO recommendation of the population to midwifery ratio of 23 midwives for every 10,100 women. 3. Instil career growth opportunities for postnatal care providers working in rural health facilities. 4. Negotiate with the finance department at the national level on incentives for postnatal care service providers	An appointed team of human resource managers at district, regional and national levels *(appointed by the heads of the health departments at the various levels)*	Within 12 months after the implementation of the contextualised framework.

	working in rural areas of Ethiopia. 5. Promote professional development training opportunities for postnatal care providers. 6. Train postnatal care providers who meet the healthcare needs of postnatal mothers.		
Action statement 3 Financial resources for the provision of quality postnatal care services must be ensured.	1. Develop and implement an action plan to secure financial resources for the delivery of ordered supplies. 2. Arrange annual meetings with postnatal care coordinators at different levels of the health system to secure financial resources. 3. Develop and implement procedures to ensure accurate procurement to optimally utilise the available financial resources.	An ad hoc committee selected from the officials responsible for the postnatal service delivery budget at district, regional and national levels *(appointed by the health departments at the various levels).*	Within 12 months after the implementation of the contextualised framework.
Action statement 4 Continuing professional education must be strengthened to improve postnatal care	1. Develop an action plan for professional development training to ensure the participation of all postnatal care providers. 2. One professional development training schedule opportunity per year must be compulsory for every postnatal care provider. 3. Attain a record of postnatal care providers who attended continuing professional	An appointed committee *(appointed by the head of Oromia Regional Health Bureau and postnatal care coordinator at the National Ministry of Health)* selected from the in-service training coordinators at Oromia Regional Health Bureau and the Ministry of Health.	Within 9 months after the implementation of the contextualised framework.

	education to ensure compliance.		
Action statement 5 Effective monitoring of postnatal care services is required	1. Conduct a quarterly inspection of the health facilities rendering postnatal care. 2. Compile quarterly quality assurance reports for submission to the Ministry of Health. 3. Identify gaps in the quality of postnatal care being rendered. 4. Communicate all challenges detected to the appropriate managers.	An appointed team of programme officers working at the district, regional and national levels (*selected by their peers within the various levels*).	Within 1 month after the implementation of the contextualised framework.
Action statement 6 There should be consistent evaluation of postnatal care services	1. Conduct an evaluation of the quality of postnatal care services at least every 3 months. 2. Improve postnatal care coordinators' assessment skills through training programmes. 3. Share the quality assessment results and experiences with postnatal care coordinators at least once a year at a formal postnatal care summit.	An appointed team of programme officers working at the district, regional and national levels (*appointed by their peers at the various levels).*	Within 12 months after the implementation of the contextualised framework.
Action statement 7 The coordination of postnatal care services must be improved.	1. Enhance community involvement in postnatal care by increasing community participation. 2. Provide health education to the community to increase awareness regarding the importance of postnatal care. 3. Facilitate communication networks among postnatal care	An appointed team of postnatal care programme officers working at the district, regional and national levels (*appointed by their direct managers at the various levels)*.	Immediately after the implementation of the contextualised framework.

	coordinators and the different stakeholders. 4. Implement the use of mobile phones and social media to provide information on the importance of postnatal care.		
Action statement 8 Data management processes, such as recording and reporting of postnatal care services, must be improved.	1. Provide technical support to postnatal care providers and coordinators to record postnatal care data. 2. Arrange ICT training to improve the technical skills of postnatal care providers and coordinators. 3. Implement the use of ICT to manage records, medical drugs, and information sharing. 4. Implement a timely reporting system for postnatal care service delivery at all health facilitates offering postnatal care.	An appointed team of health management information heads working at health facilities, district, regional and national levels (*appointed by the heads of the postnatal care coordinating offices at the different levels*).	Within 1 month after the implementation of the framework.
Action statement 9 Community involvement in postnatal care services must be improved.	1. Improve the postnatal care knowledge of the community through social media. 2. Involve community leaders in the development of educational material. 3. Select community members to participate in communicating educational material and messages to the community. 4. Involve the community in planning postnatal care activities.	An appointed team of postnatal care programme officers working at the district, regional and national levels *(appointed by heads of the postnatal coordinating offices at the various levels*).	Within 6 months after the implementation of the contextualised framework.
Action statement 10	1. Conduct annual	An appointed team of	Within 12

Establish community surveillance of maternal and neonatal deaths.	surveillance on maternal and neonatal deaths. 2. Develop an effective reporting system of maternal and neonatal deaths.	postnatal care programme officers working at the district, regional and national levels *(appointed by heads of the postnatal coordinating offices at the various levels*).	months after the contextualised framework is implemented.
Action statement 11 Identify and address social and cultural practices, myths and misconceptions about postnatal care.	1. Assess the cultural practices in the community that impact on postnatal care services. 2. Conduct IEC for increasing awareness and knowledge on cultural misconceptions. 3. Involve the community in identifying the cultural issues that impact on postnatal care by facilitating meetings between the healthcare workers and the community. 4. Involve the community in addressing the cultural issues that impact postnatal care by facilitating community meetings.	An ad hoc committee of postnatal care programme officers (at district level*) appointed by their peers* as well as appointed community members *selected by the district postnatal coordinating offices.*	Within 6 months after the implementation of the contextualised framework.
Action statement 12 Provide incentives for postnatal care providers.	1. Provide a certificate at an award ceremony for those identified to be the best performers. 2. Instil career opportunities for those with high-performance appraisal results. 3. Allocate additional professional development opportunities for those with high-	An ad hoc committee of programme officers working at regional health departments (*appointed by the head of the regional health department)* to liaise with the national health department for the implementation of the	Within 12 months after implementation of the contextualised framework.

	performance appraisal results	incentives	
Action statement 13 Maternal waiting homes must be available at all health facilities.	1. Provide areas that can serve as maternal waiting homes at all health facilities. 2. Equip the maternal waiting homes with the necessary infrastructure such as electricity, water supply, kitchens, and adequate rooms. 3. Ensure that maternal waiting homes comply with culture congruent requirements by involving the community in the development thereof.	Appointed postnatal care programme officers working at the district, regional and national levels (*appointed by the postnatal care coordinating offices)* at the various levels as well as selected community members appointed by the directors of the health facilities.	Within 12 months after the implementation of the contextualised framework.
Action statement 14 Ensure effective communication for ambulance services and other postnatal care issues.	1. Communicate the contact details of all available ambulance services to mothers via social media and printed communication. 2. Develop an effective communication system to ensure ambulance service accessibility. 3. Ensure the availability of ambulance services at all health facilities.	An ad hoc committee consisting of ambulance drivers, community leaders (*selected by the directors of the health facilities),* as well as postnatal care programme officers working at the health facilities *(appointed by their peers and the directors of the health facilities*).	Within 1 month after the implementation of the contextualised framework.
Action statement 15 Cultural ceremonies should be practiced at health facilities to motivate mothers to utilise institutional delivery and postnatal	1. Develop a policy that makes provision for cultural ceremonies in health facilities. 2. Allow mothers and their families to practice their cultural ceremonies. 3. Have maternal waiting	An ad hoc committee consisting of selected community and religious leaders, as well as the programme officers working at district level (*appointed*	Within 3 months after the implementation of the contextualised framework.

care.	homes at all health facilities rendering postnatal care. 4. Equip the health facilities with the necessary infrastructure such as electricity, water supply, and adequate rooms to allow for the practice of their culture.	*by the heads of district health departments)* to liaise with the regional and national health departments.	
OUTPUT			
Action statement 16 The implementation of a contextualised framework for postnatal care will contribute to improvement in postnatal care follow-up visits for at the community level.			
Action statement 17 Implementation of a framework to improve postnatal care will contribute to accurately written reports on the postnatal care services at different levels of the health system.			
Action statement 18 The quality of postnatal care services offered to postnatal mothers and their babies at health facilities in Ethiopia needs to be improved			

through the implementation of a contextualised framework.			
Action statement 19 The implementation of the framework will enhance partnerships forming in matters regarding the provision of postnatal care services.			
INFLUENTIAL FACTORS			
Action statement 20 The Ethiopian government is committed to the attainment of the health sector transformation plan which can contribute to improvements in postnatal care.			
Action statement 21 Good governance in Ethiopia is a contributing factor for the implementation of the contextualised framework and thus the improvement in postnatal care.			
Action statement 22 The Ethiopian government's political will must facilitate the			

implementation of the contextualised framework.			
Action statement 23 Establish community health units for postnatal care improvement.	1. Strengthen the community health workers' skills though training to provide preventive services 2. Improve the health extension workers' competency through continuing professional development to provide home-based postnatal care	An appointed team of postnatal care coordinators at district levels *(appointed by the head of health offices)*	
Action statement 24 The FMOH should improve the budget allocated for postnatal care to minimise the budget constraints for postnatal care services in Ethiopia			
Action statement 25 Ensure partner/donor support for postnatal care.	1. Invite local and national partners to participate in technical and financial support for the postnatal care improvement. 2. Negotiate partnerships with donors. 3. Use the technical and financial support from the partners for postnatal care improvements.	An ad hoc committee consisting of the directors of health facilities and postnatal care programme officers working at district level (*appointed by heads the district postnatal care coordinating offices).*	Immediately after the implementation of the contextualised framework.
Action statement 26 Male engagement in aspects of postnatal care must be	1. Increase males' awareness of the benefits of postnatal care through mass media.	An ad hoc committee consisting of community and religious leaders appointed by district	Within 6 months after the contextualised

improved.	2. Improve male involvement through discussions with community leaders. 3. Improve male involvement through discussions with religious leaders.	postnatal care coordinating offices, as well as postnatal care coordinators at district and regional levels (*appointed by the various health departments).*	framework is implemented.
Action statement 27 Address the socio-economic factors that influence postnatal care.	1. Encourage women to postpone marriage until 18 years. 2. Implement strategies to prevent teenage pregnancies. 3. Advocate for the improvement of employment opportunities for women (job opportunities).	An ad hoc committee consisting of postnatal care coordinators, women's development army, as well as the community leaders *(selected by the district health department).*	Within 2 years after the implementation of the contextualised framework.
Action statement 28 Improve the literacy levels of postnatal mothers.	1. Encourage pregnant and postnatal mothers to improve their level of education by through mass media. 2. Involve the community in motivating pregnant and postnatal mothers to attain an education. 3. Involve the religious leaders in motivating pregnant and postnatal mothers to improve their level of education.	An appointed team of community and religious leaders (*appointed by the head of the district postnatal care coordinating offices*) and district and regional education offices programme officers *(appointed by the heads of the various education offices).*	Within 3 years after the implementation of the contextualised framework.
Action statement 29 Address the religious factors that influence postnatal care service utilisation.	1. Conduct IEC to increase awareness and knowledge on religious factors that impact on postnatal care utilisation. 2. Improve women's and	An ad hoc committee consisting of community and religious leaders, as well as district postnatal care programme officers (*appointed by the head of*	Within 12 months after the implementation of the contextualised

	the community's knowledge through health education to overcome religious influences.	*the district postnatal care coordinating offices).*	framework.
Action statement 30 Poor access to postnatal care services must be improved.	1. Increase the number of health facilities. 2. Renovate the existing health facilities. 3. Improve transportation services for easy access to health facilities.	An appointed team of postnatal care programme officers working at the district, regional and national levels (*appointed by the heads of postnatal coordinating offices at the various levels)* to liaise with federal (national) Ministry of Health.	Within 1 year after the implementation of the contextualised framework.
STRATEGIES			
Action statement 31 Capacity building for postnatal care providers and coordinators is an important strategy for postnatal care improvement.	1. Ensure the implementation of continuous professional education. 2. Instil an attendance register of postnatal care providers for professional development training at least once a year.	An ad hoc committee from in-service training coordinators at the regional health bureau and Ministry of Health (*appointed by heads of the regional health bureau and the National Ministry of Health).*	Within 12 months after the implementation of the contextualised framework.
Action statement 32 There should be quality assurance mechanisms for postnatal care services.	1. Implement standard operating procedures when rendering postnatal care. 2. Provide quality counselling services to postnatal mothers. 3. Provide compassionate and respectful care to enhance postnatal mothers' satisfaction. 4. Provide effective "whistle blow" opportunities to complain about the quality of	An appointed team of programme officers working at district, regional and national levels (*appointed by the head of postnatal care coordinating offices at the various levels).*	Within 12 months after the implementation of the contextualised framework.

	care rendered.		
Action statement 33 Supportive supervision should be implemented at all health facilities.	1. Provide training to improve supervision skills for postnatal care coordinators. 2. Conduct supportive supervision on postnatal care services at least quarterly. 3. Provide technical and financial support to postnatal care coordinators to conduct supportive supervision.	An appointed team of postnatal care service programme officers working at the district, regional and national levels (*appointed by the head of postnatal care coordinating offices at the various levels).*	Within 6 months after the implementation of the contextualised framework.
Action statement 34 Health facility infrastructure must be secured for the improvement of postnatal care.	1. Prepare an audit report on the quality and availability of infrastructure. 2. Renovate the existing infrastructure of facilities. 3. Submit the audit reports to the Ministry of Health through the district health department. 4. Prepare a separate and adequate room/space for postnatal care at all health facilities. 5. Provide all health facilities with safe water and functioning hydroelectric power. 6. Link all health facilities with a 24 hour functional referral system.	An appointed team of postnatal care programme officers working at the district, regional and national level (*appointed by the head of postnatal care coordinating offices at the various levels).*	Within 2 years after the implementation of the contextualised framework.
Action statement 35 Appropriate medical drugs and supplies for postnatal services must be ensured.	1. Ensure procurement and availability of all the necessary drugs for the provision of postnatal care. 2. Enhance the postnatal care providers' skills in	An appointed team of postnatal care programme officers working at the district, regional and national level (*appointed by the*	Within 1 year after the implementation of the contextualised framework.

	maintaining the stock balance on essential drugs. 3. Establish and sustain strong partnerships with national and international medical drug producers.	*heads of postnatal care coordinating offices at the various levels).*	
ASSUMPTIONS			
Action statement 36 The Ethiopian government will be efficient in coordinating postnatal care services.			
Action statement 37 Postnatal care services included in the government policy should be free.			
Action statement 38 The Ethiopian government will embrace the implementation of maternal and neonatal health services.			
Action statement 39 The health extension programme must be sustained for the implementation of the contextualised framework in Ethiopia.			

5.8 CONCLUSION

This chapter discussed Phase 3 of the study, which was the validation of the contextualised framework and the action plan for implementation that took place over three rounds of E-Delphi. The chapter addressed objective 6 of the study. The validated contextualised framework and an action plan to facilitate implementation were presented in Figure 5.1 and Table 5.94, respectively. The validation instruments were prepared based on the draft contextualised framework, the action plan to facilitate the implementation of the contextualised framework, data gathered during Phase 1, as well as the available literature.

The following chapter presents the conclusion, recommendation, and limitations of the study.

CHAPTER 6
CONCLUSIONS, RECOMMENDATIONS, AND LIMITATIONS

6.1 INTRODUCTION

This chapter presents the conclusions derived from the study, as well as the recommendations that the researcher deems practical in implementing the action plan to facilitate the contextualised framework for improving postnatal care in Ethiopia. Some limitations, as well as the way forward, will be mentioned.

Table 6.1: Research progress and thesis layout

CHAPTER	DESCRIPTION OF THE CHAPTER
1	**Overview of the study**
2	**Literature review** • Maternal mortality • Postnatal care in Ethiopia and Kenya • Chelagat's framework • Models to test applicability to other contexts
3	**1. Overarching research design** **2. Phase 1** • Research design • Methodology • Data gathering • Data analysis and interpretation of findings
4	***Phase 2*** • Literature review on: ➢ Contextualising a framework ➢ Action plan Development • Development of the draft contextualised framework and draft action plan for implementation

CHAPTER	DESCRIPTION OF THE CHAPTER
5	**Phase 3** • Methodology • The validation process • Discussion of the findings • Final contextualised framework and action plan for the implementation
6 	**Conclusions, recommendations, and limitations**

6.2 CONCLUSIONS

This sequential mixed-method study aimed to contextualise a framework for the improvement of postnatal care in Ethiopia, and develop an action plan to facilitate its implementation. The study was conducted over three phases. Phase 1 was aimed at assessing the adaptation possibility of Chelagat's framework, the challenges, as well as the opportunities that might be faced when implementing it in the Ethiopian context. Phase 2 included the development of a contextualised framework and action plan for implementation, using data gathered during Phase 1, as well as the available literature. Phase 2 concluded with the draft contextualised framework and action plan to facilitate the implementation thereof in the Ethiopian context with the aim to improve postnatal care.

Phase 3 involved the validation of the contextualised framework and the action plan for implementation using the E-Delphi technique. The objectives of the study were achieved as discussed next.

6.2.1 Assess Chelagat's developed framework for applicability within the Ethiopian context

The adaptation and contextualisation possibility of Chelagat's framework in the Ethiopian context was assessed through quantitative data gathered from 422 postnatal care providers and coordinators during Phase 1 of the study. More than

90% (the scaled domain score of 92; N=422) of the respondents indicated that the contextualised framework would improve postnatal care within the Ethiopian context (refer to Table 3.32).

6.2.2 Identify possible challenges for the implementation of the framework in the Ethiopian context

The analysed data from Phase 1 of the study revealed challenges that can impact the implementation of the contextualised framework and should be addressed. The identified challenges were categorised into eight themes, namely: lack of physical resources, infrastructure problems, cultural concerns, capacity, inaccessibility of health services, lack of guidelines, ineffective communication, as well as weak monitoring and evaluation. These were to be addressed for the easy implementation of the contextualised framework (refer to Table 3.33) and were thus included in the action plan to facilitate implementation.

6.2.3 Identify opportunities for the implementation of the framework in the Ethiopian context

Phase 1 of the study assessed and described opportunities for implementing the contextualised framework in the Ethiopian context. The findings indicated that the Ethiopian Health Policy, the Ethiopian health sector transformation plan, and the commitment and drive by the Ethiopian government to achieve good governance in the health system were opportunities and will be advantages in implementing the contextualised framework (refer to Table 3.34).

6.2.4 Developed the contextualised framework

In Phase 2 of the study, the researcher developed the draft contextualised framework to improve postnatal care in the Ethiopian context. In developing the contextualised framework, the components of Chelagat's framework, the identified challenges, and opportunities in Phase 1 of the study, as well as the literature organised in Chapter 2 of this thesis, were used as inputs (refer to Figure 4.1) according to the System Model. The principles of contextualising a framework were

applied in the development of the draft contextualised framework (refer to Section 4.2.2 and Figure 4.1).

6.2.5 Develop an action plan to facilitate the implementation of the contextualised framework

An action plan to facilitate the implementation of the contextualised framework was developed. The results of the literature review, data collected from the postnatal care providers and coordinators during Phase 1 of the study, as well as the contextualised framework itself, formed the basis for the development of an action plan to facilitate implementation. The process for action plan development followed recommended procedures. Based on the recommendation for action plan development, the action plan included the action statements, the actions/methods to achieve the action statements, the possible persons responsible, as well as the possible time frames needed for the implementation of the actions to achieve the action statements or the required result (refer to Table 4.2).

6.2.6 Validate the contextualised framework and action plan for implementation

The contextualised framework and action plan for facilitation within the Ethiopian context were validated by postnatal care coordinators at a different health system in Ethiopia using the E-Delphi technique; 18 purposively invited panellists were involved.

The validation instruments were prepared based on the draft contextualised framework, the action plan to facilitate the implementation of the contextualised framework, data gathered during Phase 1, as well as the available literature. The inputs and recommendations from the panellists were used to develop the final contextualised framework and action plan to facilitate the implementation. The final contextualised framework and action plan were presented in Figure 5.1 and Table 5.94, respectively.

6.3 RECOMMENDATIONS

To improve postnatal care in Ethiopia, it is recommended that the contextualised framework must be implemented in all regions of Ethiopia by using the action plan to facilitate the implementation. Various ways to achieve this outcome are described below.

6.3.1 Implement the contextualised framework in practice

Any developed contextualised framework will only be effective provided that the methods and strategies used in the framework are shared among the relevant stakeholders responsible for the implementation. The Ethiopian FMOH should take the lead and responsibility in ensuring the implementation of the contextualised framework with the involvement of stakeholders and partners. To ensure that the FMOH has access to information regarding the scientific process followed (including evidence of the various stakeholders involved in its development), the researcher will electronically share the completed research report. The contextualised framework and action plan for implementation will be shared both electronically and in colour paper format for easy understanding and completeness.

An open invitation to ‘question and answer’ sessions on any platform as required will be shared with the Ethiopian FMOH.

The researcher will also take responsibility for sharing the contextualised framework at the Ethiopian Public Health Annual National Conference and the International conference on public health in Africa. Conferences specifically focusing on how the contextualised framework can be put into practice will be identified, and abstracts for possible inclusion in the conference proceedings will be submitted.

The findings will be disseminated in reputable peer-reviewed scientific journals such as BMC Women’s Health, BMC Public Health and PLoS ONE. Quality research conducted in the African context and solutions to health issues must be shared

globally and should add value to existing evidences in solving relevant health problems such as postnatal care.

The WHO, as the esteemed organisation concerned with the improvement of postnatal care, is an important body with whom to share the contextualised framework and the action plan to facilitate implementation. Any opportunity to share the contextualised framework and action plan for implementation will be sought from the WHO office in Ethiopia, both in person and electronically.

6.3.2 Further research

The findings from this study identified several opportunities for future research. Further studies can be conducted on the following topics:

- A follow-up study to explore challenges with the implementation of the framework as well as the action plan, and possible improvements to the contextualised framework for improving postnatal care utilisation in Ethiopia.
- Access the changes in postnatal care rendered for mothers and newborns in Ethiopia as a result of the implementation of the contextualised framework.

Based on the Systems Model (refer to Figure 1.1), the impact, which in this study would be a reduction in maternal and neonatal morbidity and mortality, is out of the scope this study as it will be a long-term effect of the implementation of the contextualised framework. Therefore, the researcher recommends a follow-up study on the impact, such as the possible reduction in maternal and neonatal morbidity and mortality after the implementation of the contextualised framework as a long-term effect in the Ethiopian context.

6.4 LIMITATIONS

It was a limitation that, in Phase 1, due to budget and other resource constraints, only selected health facilities (health centres and hospitals) were included. There may be differences in views and opinions among postnatal care providers in

unselected health facilities due to possible differences in access to resources for postnatal care. However, to minimise the mentioned limitations, the researcher purposively selected health facilities with similar infrastructure, access to resources such as equipment and supplies, as well as the human resources, which was believed to be representative. To further minimise the limitation, the validation of the contextualised framework and action plan for implementation included coordinators from all levels of the health system in Ethiopia, their views and opinions, as well as their recommendations on how to improve the postnatal care services. Their involvement in the final validated contextualised framework and action plan to facilitate the implementation was invaluable.

6.5 SUMMARY

This study aimed to develop a contextualised framework and action plan to facilitate the implementation thereof for postnatal care improvement. The study's objectives were achieved and the validated contextualised framework and action plan were presented in Figure 5.1 and Table 5.94, respectively. It was evident from the findings that Chelagat's framework (developed in Kenya) could be contextualised for the Ethiopian context and can now be implemented. This finding opens the door for many other African countries to use these two frameworks and test them for applicability in their own context as the neglect of postnatal care is a global concern; and even more so in the African context (Berhe, Bayray, Berhe, Teklu, Desta, Araya, et al. 2019:8).

"The effectiveness of any framework to improve postnatal care heavily relies on the inputs and inclusiveness of those who render the care, those who receive the care, but also those who are responsible for the policies and governance of health care. The commitment of health care providers and the community at large must also not be underestimated in the successful implementation of this framework". (Researcher)

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ANNEXURE 1: ETHICAL CLEARANCE CERTIFICATE FROM UNIVERSITY OF SOUTH AFRICA (UNISA)

UNISA university of south africa

UNIVERSITY OF SOUTH AFRICA
Health Studies Higher Degrees Committee
College of Human Sciences
ETHICAL CLEARANCE CERTIFICATE

REC-012714-039

HSHDC/452/2015

Date: 25 November 2015 Student No: 4400-377-3

Project Title: Contextualising a framework for postnatal care in Ethiopia.

Researcher: Elias Teferi Bala

Degree: D Litt et Phil Code: DPCHS04

Supervisor: Prof L Roets
Qualification: PhD
Joint Supervisor: -

DECISION OF COMMITTEE

Approved [√] **Conditionally Approved** [ ]

Prof L Roets
CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE

Prof MM Moleki
ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES

ANNEXURE 2: ETHICAL CLEARANCE CERTIFICATE FROM OROMIA REGIONAL HEALTH BUREAU

BIIROO EEGUMSA FAYYAA OROMIYAA

OROMIA HEALTH BUREAU
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Lakk/Ref. No. BEFO/አመኅ/1-8/2366

Guyyaa /Date 2-2-2009

Waajjira Eegumsa Fayyaa Go/Ilu Abbaa Booraa tiif
Waajjira Eegumsa Fayyaa Go/Wallaggaa Lixaa tiif
Waajjira Eegumsa Fayyaa Go/ Wallaggaaa Bahaa tiif
Waajjira Eegumsa Fayyaa Go/Shawaa Lixaa tiif
Waajjira Eegumsa Fayyaa Go/Shawaa Kibba Lixaa tiif

Bakka Jiranitti

Dhimmi: **Xalayaa deeggarsaa ilaala**

Akkuma beekamu biiroon keenya ogeeyyii, dhaabbilee akkasumas namoota qorannoo gaggeessuuf piroppoozaala dhiyeeffatan piroppoozaala isaanii madaaluun akkanumas iddoo biraatti ilaalchisanii fudhatama argatee (approved) dhiyaateef, piroppoozaala isaanii ilaaludhaan waraqaa deeggarsaa ni-kenna. Haaluma kanaan mata-duree **"Contextualising a frame work for postnatal care in Ethiopia"** jedhurratti **Obbo Eliyaas Tafarii** qorannoo godina keessan keessatti hojjachuuf piroppoozaalii isaanii koree "Health Research Ethical Review Committee" biiroo keenyaatti dhiyeesaniiru.

Haaluma kanaan koreen "Health Research Ethical Review Committee" biiroo keenyaas piroppoozaala kana ilaaluun fudhatee qorannoon kun akka hojiirra oolu murteessee jira.

Waan kana ta'eef hojii qorannoo kanarratti deeggarsa barbaachisaa akka gootaniif; akkasumas nama tokko kan adeemsa qorannoo kanaa hordofuu akka ramaddanii hordoftan jechaa, **Obbo Eliyaas Tafarii,** qaamni qorannoo hojjatu, wayitii qorannoon kun qaacceffamee xummurame fiiriisaa Biiroo Eegumsa Fayyaa Oromiyaa fi iddoowwan qorannoon irratti adeemsifameef kooppii tokko tokko akka galii godhan garagalchaa xalayaa kanaatiin isaan beeksifna.

Ani **Obbo Eliyaas Tafarii,** qorataa kan ta'e, wayitii qorannoon kun qaacceffamee xumurame fiiriisaa kooppii tokko tokko Biiroo Eegumsa Fayyaa Oromiyaa fi iddoowwan qorannoon irratti adeemsifameef akkan galii godhu mallattoo kiyyaan nan mirkaneessa.

Nagaa wajjin

Mallattoo_____
Maqaa _____

Guyyaa ----------
Lakk. Bilbilaa ----------
G/G
Obbo Eliyaas Tafarii tiif
Amboo

Gammachuu Shuumii
Gaggeessaa Adeemsa Hojii Ijoo Balaa
Tasaa Fayyaa Hawaasaa Qu' annoo
fi Qorannoo Fayyaa (BSC,MPH)

Teessoo: Tel:+251-011-369-01-49, Fax: +251-011-361-01-27 P.O.Box:2434 E-mail: ohbhead@telecom.net.et Address: ADDIS ABABA/FINFINNE-ETHIOPIA

Emblem
Oromia Health Bureau

Ref. No: ***BEFO/AHBTFH/1-8/2366***
Date: ***12/10/2016***

To Ilu Abaa Boora Zone Health Office
To West Wolega Zone Health Office
To East Wolega Zone Health Office
To West Shoa Zone Health Office
To South West Wolega Zone Health Office
Whereabouts
Subject: Regards Supportive Letter

As to be recalled our bureau after reviewing as the submitted proposal and other which are approved other place relevancy has been issuing supporting letter. Accordingly, Mr. Elias Teferi has submitted research study proposal for our Bureau Health Research Ethical Review Committee on title of Contextualizing a framework for postnatal care in Ethiopia to be implemented in your zone.

Accordingly, our bureau Health Research Ethical Review Committee has accepted the proposal and decided the research to be implemented.

Hence, we herby inform necessary collaboration to be extended and to assign one employee who can monitor the research; Mr. Eliyas Teferi is notified with copy of this letter to send copy of the research result to Oromia Health Bureau and to organs where the research is made while the research is completed.

I, Mr. Eliyas Teferi herby conform to send copy of the research result to Oromia Health Bureau and to organs where the research is made while the research is completed.

With regard
Signed
Gemechu Shumi
Social Health Emergency Disease Research and Health study Main Core Process (BSC, MPH)
Name: _____
Signature _____
Date_____
CC
To Mr. Eliyas Teferi

Seal
Oromia Health Bureau Social Health Emergency Disease Research and health study Main Core Process

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Editor & Translator

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ANNEXURE 3: QUESTIONNAIRE USED TO GATHER DATA IN PHASE 1 OF THE STUDY

Questionnaire for assessing postnatal care at health facilities, district health departments and regional health department (Adopted from D Chelagat)

Dear Participant

Thank you for voluntary participating in this study as your answers to these questions will allow for a comparison between the Kenyan and the Ethiopian context on postnatal care so that Chelagats' framework for improving postnatal care might be contexualised for implementation in Ethiopia. Please tick with an X in the appropriate box and provide your comments or motivations in the spaces provided as honest as possible.

Section 1

Q/No	Questions	Choice	Block	For Office use
1	Please indicate your age in years.	……years.	☐	☐
2	What is your gender?	1. Male 2. Female	☐ ☐	☐
3	How many years have you worked in maternal health services including maternity units/wards or in postnatal care?	……years	☐	☐
4	What is your highest level of education?	1. Masters 2. Bachelors 3. Diploma 4. Certificate	☐ ☐ ☐ ☐	☐

5	At what level of postnatal care service provision/coordination are you currently offering postnatal services?	1. Heath center District hospital 2. Referral hospital 3. District office		
6.	In the health facility or district where you work, is the postnatal care room /unit separate from the rest of the maternity units or rooms?	1.Yes 2. No		
6.1.	If your answer is no, please motivate your answer. _____ _____ _____ _____ _____ _____ _____			
7	Were you given adequate orientation when you were allocated to the postnatal ward/coordination unit?	1. Yes 2. No		
7.1.	If your answer is yes, please motivate your answer. _____ _____ _____ _____ _____ _____ _____			
8	If you received orientation, did your orientation include orientation on the guidelines available for postnatal care?	1. Yes 2. No		
8.1.	If your answer is no, please motivate your answer.			

	_____ _____ _____ _____ _____ _____ _____			☐☐
9	Are counseling services considered an important aspect of postnatal care in your health facility?	1. Yes 2. No	☐ ☐	☐
10	Do you have competent postnatal care providers in the Postnatal care unit?	1. Yes 2. No	☐ ☐	☐
10.1	If your answer is no, please motivate your answer. _____ _____ _____ _____ _____ _____ _____			☐☐
11	Do the postnatal care providers and coordinators participate in continuing professional education to enhance competence to offer postnatal care services?	1. Yes 2. No	☐ ☐	☐
11.1.	If your answer is no, please motivate your answer. _____ _____ _____ _____ _____ _____			☐☐
12	Have you ever received in service training on postnatal care?	1. Yes 2. No	☐ ☐	☐
13	Do you provide postnatal care in a team approach in your Workplace?	1. Yes 2. No	☐ ☐	☐

14	Do you have supportive supervision in providing postnatal care in your workplace?	1. Yes 2. No	☐ ☐	☐
14.1.	If your answer is no, please motivate your answer. _____ _____ _____ _____ _____			☐☐
15	Are postnatal care service reports submitted to the next health system hierarchy (to district or Zonal health department) on a monthly basis?	1. Yes 2. No	☐ ☐	☐
15.1.	If your answer is no, please motivate your answer. _____ _____ _____ _____ _____ _____ _____			☐☐
16	Are postnatal mothers in your hospital/health facility treated with respect and dignity?	1. Yes 2. No	☐ ☐	☐

16.1.	If your answer is no, please motivate your answer. _____ _____ _____ _____ _____ _____ _____			☐☐
17	Is the postnatal care rendered in your place of work according to the guidelines?	1. Yes 2. No	☐ ☐	☐
17.1.	If your answer is no, please motivate your answer. _____ _____ _____ _____ _____ _____ _____			☐☐
18	If your answer is yes to question 17 above, which guidelines are you using currently?	1. WHO guideline itself 2. The National ministry of health guideline 3. Other, please name…… ……	☐ ☐ ☐	☐
19	Are the above mentioned guidelines accessible to you?	1. Yes 2. No	☐ ☐	☐

19.1.	If your answer is no, please motivate your answer. _____ _____ _____ _____ _____ _____ _____			
20	Is there an adequate budget for the drugs needed to render postnatal care services in your work place?	1. Yes 2. No	☐ ☐	☐
20.1.	If your answer is no, please motivate your answer. _____ _____ _____ _____ _____ _____			
21	Do you always record postnatal care services rendered to mothers according to the mentioned guidelines? If the answer is no or never, please provide the reasons.	1. Always 2. Sometimes 3. Never	☐ ☐ ☐	☐
22	Do you think that cultural practices in the community are barriers to postnatal care in your health facility or district?	1. Yes 2. No	☐ ☐	☐
23	Do you involve the community when you provided education on postnatal care?	1. Yes 2. No	☐ ☐	☐
23.1.	If the answer is no or never, please provide the reason. _____ _____ _____ _____ _____			

24	Please record any possible suggestions on how you think postnatal care in Ethiopia can be improved. _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	

Section II

Please read the background to the development of a Framework that was developed by Chelagat in 2015 to improve postnatal care in Kenya. It might be possible to adapt this framework for the Ethiopian context if experts, like yourselves, find it appropriate to the Ethiopian context.

The below background to the development of the framework for Kenya provides information on:

1. **The purpose of the framework**
2. **The theoretical grounding that guided the development of the framework**
3. **The process of how the framework was developed**
4. **The stakeholders who were involved in the development of the frame work**

The information will allow you to be able to assess whether the Kenyan framework might be appropriate to use, and or whether changes should be incorporated.

CHELAGATS' FRAMEWORK TO IMPROVE POSTNATAL CARE IN KENYA:

1. THE PURPOSE OF THE FRAMEWORK

The purpose of the framework (see Figure 1) that was developed by Chelagat was to improve postnatal care in Kenya.

2. THE THEORETICAL GROUNDING

The Theory of Change Logic Model was used to guide the development of the Chelagats' framework. This model is a systematic and visual way of understanding the relationships among the resources required to operate a health programme (input), the activities to be undertaken (process) and the results that the programme hopes to achieve (output).

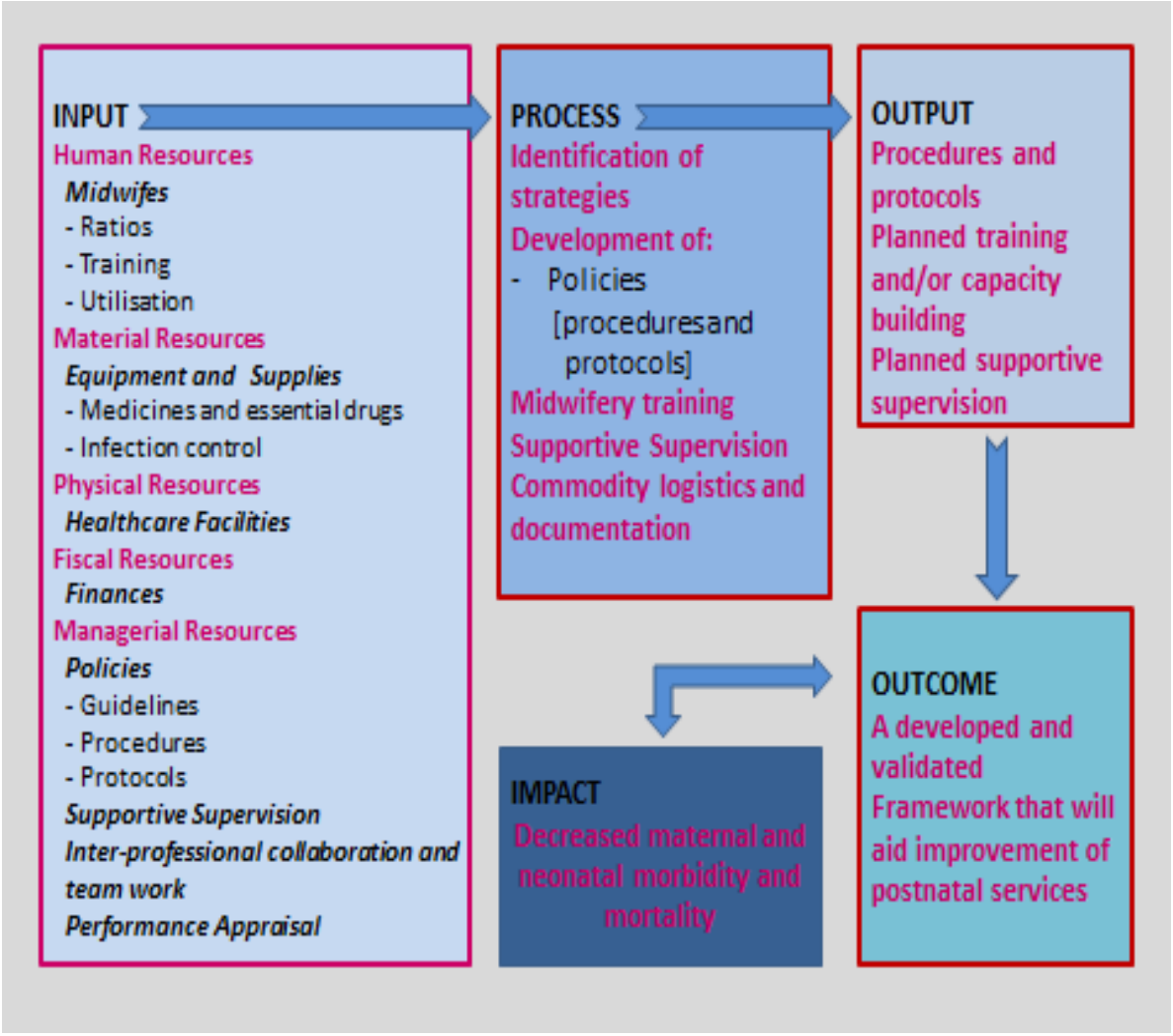

Figure 1: The application of the Systems Model (Onawa, Being, Mesas and Burnham, 1994:34) in the provision of postnatal care

The following components of the Theory of Change logic were taken into consideration in developing the framework namely: (1) the problem or issue that was the poor or neglected postnatal care, (2) the community needs, (3) the results desired,(4) the influential factors, (5) the strategies that could be implemented as well as the (6) assumptions made.

The problem: The starting point in applying this model was to identify the problem which in Kenya was the neglected postnatal care. Chelagat identified this problem through an extensive review of literature on postnatal care in Kenya and globally.

Community needs: To identify the needs of the community Chelagat developed a questionnaire derived from the literature review. The questionnaires were completed voluntarily by 258 midwives working in 37 hospitals in Kenya. Chelagat used a checklist and collected data from 37 hospitals to identify the status pertaining to the availability of physical resources required in the provision of postnatal care.

All the gathered data were then used to provide the information to the Reproductive Health Coordinators in Kenya who participated in a group discussion to identify the strategies that can be implemented to improve postnatal care.

The information was provided by a presentation of the needs of the community regarding the postnatal care in Kenya. In Kenya, the community represents the Division of Reproductive Health charged with the provision of postnatal care.

Desired results: outcomes, outputs and impact: The short and long term outcomes, planned outputs and possible impact such as improved postnatal care services and reduction in maternal mortality are the desired results in the Framework. The desired results can be referred to as the outcomes or the suspected outputs of the framework that might address postnatal care improvements.

Influential factors:

In Chelagat's framework, the influential factors were the potential challenges or opportunities that might impede or facilitate the expected change needed to improve the postnatal care. The factors were derived from literature, questionnaires complete

by midwives as well as the inputs of the National and Provincial Reproductive Health Coordinators during the validation of the framework.

Strategies: Strategies are best practices that are deemed helpful in achieving the expected results which, for Chelagats' study, is improved postnatal care. During a nominal group technique (phase 2 of Chelagats' study), the Reproductive Health Coordinators, identified the strategies that could be implemented to address post natal care in Kenya.

Assumptions: are the beliefs behind how and why the suggested strategies will work in a certain community. In Chelagats' framework the assumption indicates the beliefs, attitudes and justifications that the reproductive coordinators had on how the identified strategies will improve postnatal care in Kenya.

3. The process that were followed to develop the framework

The study was conducted in three phases.

Phase 1: Data was collected by means of a questionnaire from the 258 midwives that actively involved in the provision of postnatal care in Kenya to describe the status of postnatal care.

A checklist was completed in each of the 37 hospitals to determine the availability of the other required human and physical resources for the provision of postnatal care.

Phase 2: The findings of phase 1 were shared with 13 reproductive health coordinators in Kenya. The purpose was to identify strategies that can be employed in Kenyan hospitals to improve the quality of postnatal care. The Nominal Group Technique (NGT) as a type of group discussion was used as the instrument for data collection and in this phase of the study 6 strategies were identified.

Phase 3: The six strategies identified by the reproductive health coordinators in Kenya in phase 2 were then used to develop the framework.

The Reproductive Health coordinators provided their expert inputs to agree and finalise the framework that was developed to improve postnatal care in Kenya. Finally, the researcher recommended that the government to implement the framework that deemed to improve postnatal care in Kenya. It is clearly indicated by the researcher that the Ministry of Health at national level and the country`s government should critically address the shortage of personnel, especially midwives, who are the key providers of postnatal care in Kenya. It was also recommended by the researcher that the Kenyan government should develop an efficient supply of essential drugs, material supplies and equipment necessary to manage clients/patients in all healthcare facilities.

4. THE STAKEHOLDERS WHOWERE INVOLVED IN THE DEVELOPMENT OF THE FRAMEWORK

The participants and stakeholders who were involved in the development of the Chelagats' framework were the (1) midwives working in 37 hospitals in Kenya, as well as the (2) 13 National and Provincial Reproductive Health Coordinators in Kenya.

LIMITATIONS DESCIBED IN THE FRAMEWORK:

As a limitation it was described that in Phase 1 of the study, data was collected only from midwives working in hospitals and did not include health centers even though postnatal care is rendered at health centers in Kenya. The other limitation mentioned by the researcher was that postnatal care is provided not only by midwives, but also by other cadres of healthcare providers whose voices were not heard in the study.

Your contribution as a key stakeholder of postnatal care services in Ethiopia, are voluntarily requested to assess the adaptation possibility of the framework as discussed above and illustrated in figure 1 below, for improving postnatal care in Ethiopian context through the following self administered structured questionnaire.
Please complete the following questions by indicating on a scale of 1-7 whether you strongly disagree (1) with statement or strongly agree (7) with statements provided.

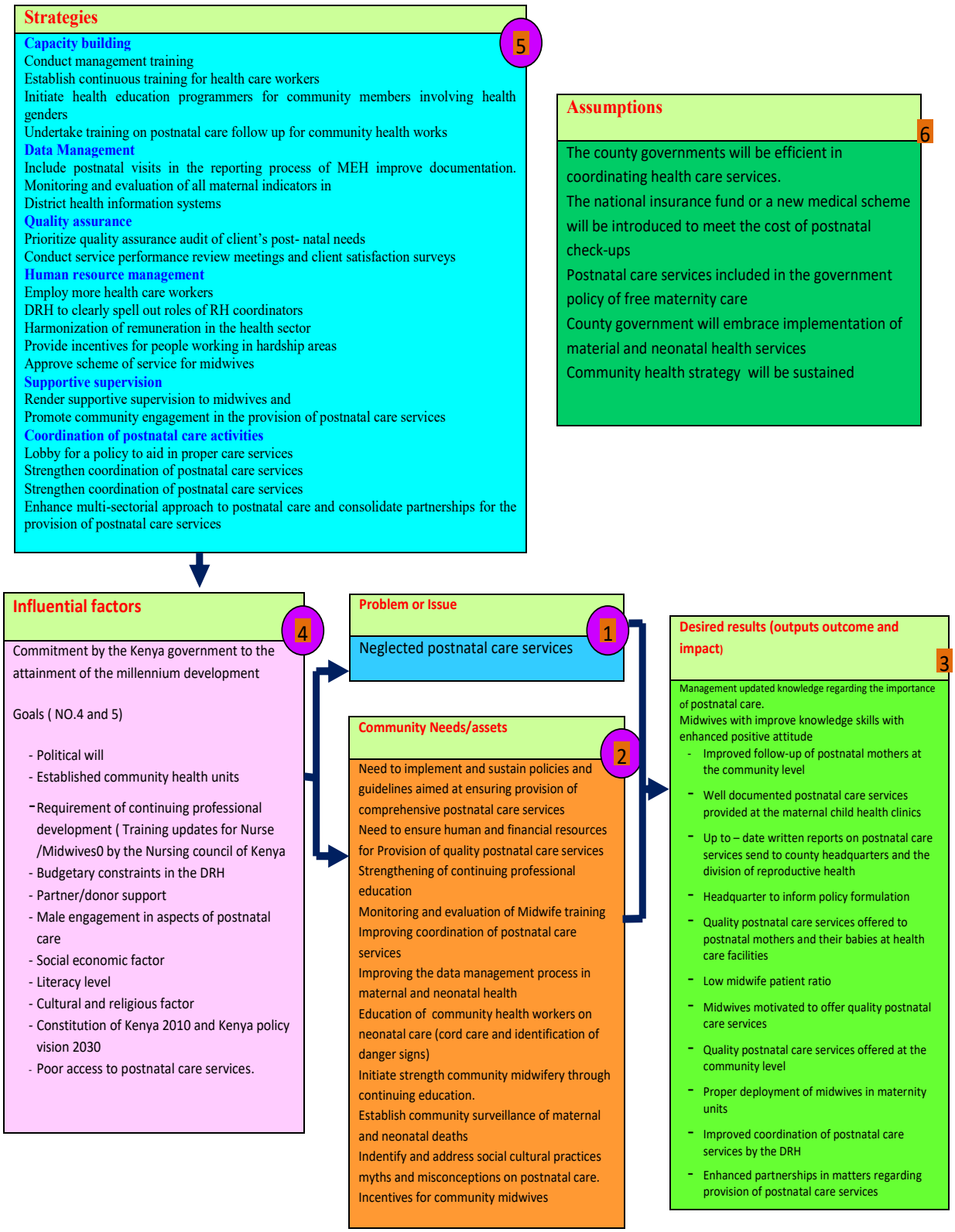

Figure 2: A framework for improving postnatal care utilization in Kenya (Chelagat2015)

1. The overall objective(s) of the framework is (are) specifically described.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement **for the Ethiopian context**: _____ _____ _____ _____							

2. The health question(s) covered by the framework is (are) specifically described and relevant **for Ethiopia.**

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5= Agree to some extent	6=Agree	7=Strongly Agree	For office use

Please provide any suggestions for improvement: _____ _____ _____ _____	

3. The population (patients, public, etc.) to whom the framework is meant to apply is specifically described and **fits the Ethiopian context**

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

4. The framework development group includes individuals from all relevant professional groups involved in post natal care.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5= Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

5. The views and preferences of the target population (patients, public, clients etc.) have been sought.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

6. The framework has extensively assessed factors that affect postnatal care utilization

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5= Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

7. The framework addressed strategies for improving postnatal care

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

8. The framework included the role of community in improving postnatal care

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

9. The framework has clearly indicted the outcome on postnatal care if implemented

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

10. The target users of the framework are clearly defined.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5= Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

11. Systematic methods were used to search for applicability of the frame work for implementation.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

12. The criteria for selecting the evidence regarding the framework for improving postnatal care are clearly described.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

13. The strengths and limitations of the body of evidence are clearly described.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5= Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

14. The methods for formulating the recommendations are clearly described.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

15. The health benefits have been considered in formulating the framework.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

16. The health side effects have been considered in formulating the recommendations.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5= Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

17. The health risks have been considered in formulating the framework.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5= Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

18. There is an explicit link between the components of the framework and the supporting scientific evidences.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

19. The framework has explicitly involved postnatal care experts for improvements of postnatal care.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

20. A procedure for updating the framework is provided.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5= Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

21. The framework is specific and unambiguous.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

22. The different options for management of post natal care are clearly presented.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

23. Key recommendations are easily identifiable.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

24. The framework describes facilitators and barriers to its application.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5= Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

25. The framework provides advice and/or tools on how the recommendations can be put into practice.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5= Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

26. The potential resource implications of applying the framework have been considered

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

27. The guideline presents monitoring and/or auditing criteria.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

28. The views of the funding body have not influenced the content of the framework.

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5 =Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

29. There are opportunities in implementing the frame work in Ethiopian context

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5= Agree to some extent	6=Agree	7=Strongly Agree	For office use
Please provide any suggestions for improvement. _____ _____ _____ _____							

30. The implementation of the frame work will improve the provision of postnatal care in Ethiopian context

1=Strongly Disagree	2=Disagree	3=Disagree to some extent	4 =Neutral	5= Agree to some extent	6=Agree	7=Strongly Agree	For office use

Please provide any suggestions for improvement.

_____

_____

_____

_____

31. Please describe the positive aspects identified adopted from Chelagats` framework for implementation in Ethiopia.

For office use

_____

_____

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_____

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_____

32. If in your opinion, the framework cannot be adapted or adopted, please mention your reasons.	For office use
_____ _____ _____ _____ _____ _____ _____ _____ _____	

Thank you for your valuable contributions.
Kind regards
Elias Teferi Bala

ANNEXURE 4: INFORMATION LEAFLET AND INFORMED CONSENT IN PHASE 1 OF THE STUDY

Title: Contextualising a framework for postnatal care in Ethiopia

Researcher: Elias Teferi Bala

Supervisor: Prof.Lizeth Roets

1.17 DEAR POSTNATAL CARE PROVIDER, DISTRICT AND REGIONAL POSTNATAL CARE COORDINATOR:

I am Elias Teferi Bala, a registered doctoral student at UNISA. The title of my study is: **Contextualising a framework for postnatal care in Ethiopia.** The purpose of this study is to assess, adapt and contextualise a framework, developed by Chelagat for improving postnatal care within the Kenyan context for possible adaptaion, adoption and implementation in Ethiopia.You are kindly invited to volunteer to participate in this research study because you are a key stakeholder in improving the utilization and quality of postnatal care in Ethiopia.

The study has been approved by the Research Ethics Committee of the Department of Health Studies, Universityof South Africa (UNISA) (REC-012714-039) as well as by Oromia regional heath bureau. I foresee no risks if you decide to participate in this study.

You are invited to participate by completing a questionnaire (section 1 and section 2) that will take about 40 to 60 minutes of your time. It will be required of you to answer section one first and then after reading through the background for the development of Chelagats` framework for Kenya to answer section 2. It is required that you answer all questions as honest as possible in order to assess the provided framework for applicability within the Ethiopian context.

Your identity will not be revealed, no names or identifying information is needed on the questionnaire and the data you provide will be kept confidential. The completed questionnaire will be stored in a locked cabinet and destroyed after the thesis is

examined. The framework as well as the data provided will be published, but your identity will not be revealed in any publication.

You will not be remunerated or benefit directly by participating in the study, but the community as a whole can benefit by possibly improved postnatal care in Ethiopia.

It is important for you to know that your participation is entirely voluntary. You may decide not to take part in or quit the study at any time, without any penalty.
Please feel free to ask any questions that you may have about the study, yourrights as a participantor complaints youmay have.For any enquiries regarding the study, the researcher Elias Teferi, can be contacted at +251-781-65-14., or at Email address: eliasteferi2015@gmail.com.,Prof Lizeth Roets, supervisor for the researcher at roetsl@unisa.ac.za or the chairperson of the research ethics committee at HSREC@unisa.ac.za.

I have read this information letter and voluntarily consent to participate in this study.

Subject's signature_____ Date_____

ANNEXURE 5: DELPHI CONSENSUS SEEKING ROUND 1 VALIDATION INSTRUMENT

Dear Panelist

Thank you for your willingness to participate in the validation of the framework to improve postnatal care in Ethiopia.

To enable me to contextualise the framework as well as the action plan for implementation, your opinions are valued. Please, provide your honest opinion regarding: (1) each of the action statements in the draft contexualised framework; (2) who the persons responsible for these actions must be as well as (3) a realistic timeframe for implementation. Evaluate each component by following the keys provided to express your agreement or disagreement and or make a click in the box next to your choice. For all questions, you are kindly requested to choose one best option from the provided choices and indicate your choice to the answer by clicking in the box next to your choice. You are also requested to provide comments/suggestions on each of the action statements at end of the questions.

An example for likert scale questions:

There is no need to improve postnatal care in Ethiopia.

Strongly agree	(SA)	4
Agree	(A)	3
Disagree	(D)	2 ⊖
Strongly disagree	(SD)	1

An example for other questions

Time frame: Please indicate the time frame in which in-service training must be implemented		
1	Within one year	⊖
2	Within 1-3 years	
3	Within 5 years	

	Items	SA	A	D	SD
1	**The problem**				
1.1	Postnatal care is a neglected aspect in health care in Ethiopia				
Comments: …….. ……					
2	**Community needs**				
2.1	**Action statement -1** Policies and guidelines aimed at ensuring the provision of comprehensive postnatal care services must be implemented.	SA	A	D	SD
2.1.1	**Responsible person:** Please indicate who must take responsibility for the implementation of policies and guidelines. Make a click in the box next to your choice.				
	Postnatal care program coordinators (Midwives, Nurses , Health officers an Doctors) at district, regional and national levels	1			
	Community leaders	2			
	Religious leaders	3			
2.1.2	**Time frame:** Please indicate the time frame within which policies and guidelines aimed at ensuring the provision of comprehensive postnatal care services must be implemented. Make a click in the circle/box next to your choice.				
	Within one month	1			
	Within 6 months	2			
	Within 12 months	3			
	Comments:…….....				
2.2	**Action statement -2** Human resources for the provision of quality postnatal care services must be ensured.	SA	A	D	SD
2.2.1	**Responsible person:** Please indicate who must take responsibility for ensuring human resource availability. Make a click in the box next to your choice.				
	Postnatal care providers	1			
	Human resource management coordinators in at district , regional and national levels	2			
	The community	3			
2.2.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which adequate human resources must be ensured. Make a click in the circle/box next to your choice.				
	Within 6 months	1			
	Within 12 months	2			
	Within 24 months	3			
Comments…… ……...					
2.3.	**Action statement -3**	SA	A	D	SD

	Financial resources for the provision of quality postnatal care services must be ensured.				
2.3.1	**Responsible person:** Please indicate who must take responsibility for ensuring financial resources. Make a click in the box next to your choice.				
	Family planning service unit leaders at health facilities	1			
	Head of Budget and finance at district, regional and national postnatal care coordination levels	2			
	Community leaders	3			
2.3.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which financial resources must be ensured. Make a click in the box next to your choice.				
	Within 6months	**1**			
	Within 12 months	2			
	Within 18months	3			
	Within 24 months	4			
Comments:…… ……..					
2.4	**Action statement- 4** Continuing professional education must be strengthened to improve postnatal care.	SA	A	D	SD
2.4.1	**Responsible person:** Please indicate who must take responsibility for continuing professional education. Make a click in the box next to your choice.				
	The community leaders	1			
	In -service training service coordinators in Oromia regional health bureau and ministry of health	2			
	Postnatal care team leaders at regional health department	3			
2.4.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which continuing professional education will be strengthened. Make a click in the box next to your choice				
	Within 3 months	1			
	Within 6 months	2			
	Within 9 months	3			
Comments:…… ……					
2.5.	**Action statement -5** There should be strong monitoring of postnatal care services	SA	A	D	SD
2.5.1	**Responsible person:** Please indicate who must take responsibility for the monitoring of postnatal care services. Make a click in the box next to your choice.				
	The community leaders	1			
	Midwives, Nurses, Health officers and Doctors who coordinate postnatal care at district, regional and national levels	2			
	Women development army leaders	3			
	Head of budget and finance at health facilities	4			

2.5.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which effective monitoring must be implemented. Make a click in the box next to your choice.	
	Within one month	1
	Within 6 months	2
	Within 12 months	3
Comments….. ……		

2.6.	**Action statement -6** There should be a consistent evaluation of postnatal care services	SA	A	D	SD
2.6.1	**Responsible person:** Please indicate who must take responsibility for the evaluation of postnatal care services. Make a click in the box next to your choice.				
	Midwives, Nurses, Health officers and Doctors who coordinate postnatal care at district, regional and national levels				1
	Head of budget and finance at health facilities				2
	Postnatal care team leaders at district level				3
2.6.2.	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which effective evaluation must be implemented. Make a click in the box next to your choice.				
	Within one month				1
	Within 6 months				2
	Within 12 months				3
Comments….. ……					

2.7	**Action statement -7** The Coordination of postnatal care services must be improved.	SA	A	D	SD
2.7.1	**Responsible person:** Please indicate who must take responsibility for the improvement of the coordination of postnatal care services. Make a click in the box next to your choice.				
	Head of health faculties				1
	Midwives, Nurses, Health officers and Doctors who coordinate postnatal care at district, regional and national levels				2
	Religious leaders				3
2.7.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which coordination of postnatal care services should be improved. Make a click in the box next to your choice.				
	Immediately				1
	Within 6 months				2
	Within 12months				3
Comments:…… ……					

2.8	**Action statement -8**	SA	A	D	SD

	Improve data management processes such as recording and reporting of postnatal care services				
2.8.1	**Responsible person:** Please indicate who must take responsibility for data management in postnatal care. Make a click in the box next to your choice.				
	Health management information system (HMIS) officers (Information technologists, Midwives, nurses, health officers and doctors at health facilities , district, regional and national levels				1
	Head of budget and finance at health facilities				2
	Postnatal care programme officers at district level				3
2.8.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which data management must be improved. Make a click in the box next to your choice.				
	Within one month				1
	Within 6 months				2
	Within 12 months				3
Comments:…… ……..					
2.9	**Action statement -9** Community involvement in postnatal care services must be improved.	SA	A	D	SD
2.9.1	**Responsible person:** Please indicate who must take responsibility for the improvement of community involvement in postnatal care. Make a click in the box next to your choice.				
2.9.2.	Midwives, Nurses , Health officers and Doctors who coordinate postnatal care at district, regional and national levels				1
	Head of budget and finance				2
	Family planning service unit leaders at health facilities				3
2.9.3	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which community involvement must be improved. Make a click in the box next to your choice.				
	Within 6 months				1
	Within 12 months				2
	Within 24 months				3
Comments….....					
2.10	**Action statement -10** Establish community surveillance of maternal and neonatal deaths.	SA	A	D	SD
2.10.1	**Responsible person:** Please indicate who must take responsibility to establishing community surveillance for maternal and neonatal deaths. Make a click in the box next to your choice.				
	Religious leaders				1
	Midwives, Nurses , Health officers and Doctors who coordinate postnatal care at district, regional and national levels				2
	Community leaders				3

2.10.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which community surveillance must be established. Make a click in the box next to your choice.	
	Within one month	1
	Within 6 months	2
	Within 12 months	3
Comments:…… ……		

2.11	**Action statement -11** Identify and address social and cultural practices, myths and misconceptions on postnatal care	SA	A	D	SD
2.11.1	**Responsible person:** Please indicate who must take responsibility for identifying and addressing the social and cultural practices, myths and misconceptions on postnatal care. Make a click in the box next to your choice.				
	Head of budget and finance at health facilities				1
	Midwives, Nurses , Health officers and Doctors who coordinate postnatal care at district, regional and national levels				2
	Institutional delivery service unit leaders at the health facilities				3
2.11.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which cultural practices, myths, and misconceptions must be addressed. Make a click in the box next to your choice.				
	Within 6 months				1
	Within 12 months				3
	Within 24 months				3
Comments:…… ……					

2.12	**Action statement -12** Provide incentives for postnatal care providers.	SA	A	D	SD
2.12.1	**Responsible person:** Please indicate who must take responsibility for the provision of incentives for postnatal care providers. Make a click in the box next to your choice.				
	Community leaders				1
	The head of district, regional, and national health departments				2
	Health facility leaders				3
Comments:…… ……					
2.12.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which incentives for postnatal care providers must be initiated. Make a click in the box next to your choice.				
	Immediately				1
	Within 6 months				2
	Within 12 months				3

Comments:……					
……					
2.13	**Action statement -13** Maternal waiting rooms must be available at all health facilities for improving postnatal care	SA	A	D	SD
2.13.1	**Responsible person:** Please indicate who must take responsibility for the availability of maternal waiting rooms at all health facilities. Make a click in the box next to your choice.				
	Postnatal mothers				1
	Midwives, Nurses , Health officers and Doctors who coordinate postnatal care at district, regional and national levels				2
	Head of budget and finance at health facilities				3
2.13.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which maternal waiting rooms must be available in health facilities. Make a click in the box next to your choice.				
	Within 6 months				1
	Within 12 months				2
	Within 24 months				3
Comments:……					
……					
2.14.	**Action statement -14** Ensure effective communication for ambulance service and other postnatal care issues for improving postnatal care.	SA	A	D	SD
2.14.1	**Responsible person:** Please indicate who must take responsibility for the ensuring effective communication for ambulance services. Make a click in the box next to your choice.				
	Head of the health facilities				1
	Ambulance drivers at health facilities; community leaders ; and Midwives, Nurses , Health officers and Doctors who coordinate postnatal care at district, regional and national levels				2
	In service training services directors at Oromia regional health bureau				3
2.14.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which effective communication with ambulance service must be ensured. Make a click in the box next to your choice.				
	Within one month				1
	Within 6 months				2
	Within 12 months				3
Comments:……					
……					
2.15.	**Action statement -15** Cultural ceremonies should be practiced at health facilities to motivate mothers to use institutional delivery and postnatal care.	SA	A	D	SD
2.15.1	**Responsible person:** Please indicate who must take responsibility for the practice of cultural ceremonies at health				

	facilities. Make a click in the box next to your choice.	
	Postnatal care programme coordinators at Federal ministry of health	1
	The community leaders; religious leaders; and Midwives, Nurses , Health officers and Doctors who coordinate postnatal care at district, regional and national levels	2
	Training service coordinators at Oromia regional health bureau	3
2.15.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which cultural ceremonies should be practiced in health facilities. Make a click in the box next to your choice.	
	Within 3 months	1
	Within 6 months	2
	Within 12 months	3

Comments:……
……

3	**Output**				
3.1	**Action statement -16** The implementation of a framework for postnatal care will contribute to increase postnatal care follow up visits for postnatal mothers at community level.	SA	A	D	SD

Comments:……
……

3.2	**Action statement -17** Implementation of a framework to improve postnatal care will contribute to have accurate written reports on the postnatal care services at different levels of the health system.	SA	A	D	SD

Comments:……
……

3.3	**Action statement -18** Quality of postnatal care services offered to postnatal mothers and their babies at health care facilities will be improved if the framework for improvement of postnatal care is implemented in Ethiopia.	SA	A	D	SD

Comments:……
……..

3.4	**Action statement -19** The implementation of the framework will enhance partnership forming in matters regarding the provision of postnatal care services.	SA	A	D	SD

Comments:……
……

4	**Influential factors:**				
4.1	**Action statement- 20** Ethiopian government is committed to the attainment of the health sector transformation plan which can contribute to improvement in postnatal care.	SA	A	D	SD

Comments:……					
4.2	**Action statement -21** Good governance in Ethiopia is contributing factor for the implementation of the contextualised framework and thus improvement in postnatal care.	SA	A	D	SD
Comments:……					
4.3.	**Action statement -22** The Ethiopian government political will can facilitate the implementation of the contextualized framework.	SA	A	D	SD
Comments:……					
4.4	**Action statement -23** There should be established community health units for postnatal care improvement.	SA	A	D	SD
4.4.1	**Responsible person:** Please indicate who must take responsibility for the establishing community health units. Make a click in the box next to your choice.				
	Midwives, Nurses , Health officers and Doctors who coordinate postnatal care at district, regional and national levels				1
	Head of health facilities				2
	Family planning service unit leaders at heath facilities				3
4.4.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which community health units must be established. Make a click in the box next to your choice.				
	Within 1 year				1
	Within 2 years				2
	Within 3 years				3
Comments:……					
4.5.	**Action statement -24** The Federal ministry of health should improve budget allocated for postnatal care to minimise the budget constraint for postnatal care services	SA	A	D	SD
Comments:……					
4.6	**Action statement- 25** Ensure Partner/donor support for postnatal care.	SA	A	D	SD
4.6.1	**Responsible person:** Please indicate who must take responsibility for the implementation of Partner/donor support for postnatal care. Make a click in the box next to your choice.				
	Community leaders				1
	Head of health facilities and postnatal care programme coordinators at district , regional health bureau and national ministry of health				2

	Religious leaders				3
4.6.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which partner/donor support for postnatal care must be initiated. Make a click in the box next to your choice.				
	Immediately				1
	Within 6 months				2
	Within 12 months				3
Comments:……					
4.7	**Action statement -26** Male engagement in aspects of postnatal care must be improved.	SA	A	D	SD
Comments:……					
4.8	**Action statement- 27** Address the socio-economic factors that influence postnatal care.	SA	A	D	SD
Comments:……					
4.9	**Action statement -28** Improve literacy level of postnatal mothers	SA	A	D	SD
4.9.1	**Responsible person:** Please indicate who must take responsibility for improving literacy level of postnatal mothers. Make a click in the box next to your choice.				
	Head of district , regional education offices ; and adult education coordinators at district levels				1
	Postnatal care providers				2
	Postnatal care coordinators				3
4.9.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which the literacy level of postnatal mothers must be improved. Make a click in the box next to your choice.				
	Within one year				1
	Within 2 years				2
	Within 3 years				3
Comments:……					
4.10	**Action statement -29** Religious factors that influence postnatal care services utilisation must be addressed.	SA	A	D	SD
4.10.1	**Responsible person:** Please indicate who must take responsibility for addressing cultural and religious factors. Make a click in the box next to your choice.				
	Head of budget and finance at health facilities				1
	The property management unit leaders at health facilities				2
	Community leaders, religious leaders and Midwives, Nurses , Health officers and Doctors who coordinate postnatal care at district, regional and national levels				3

4.10.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which partner/donor support for postnatal care must be initiated. Make a click in the box next to your choice.				
	Immediately				1
	Within 6 months				2
	Within 12 months				3
Comments:……					
4.11	**Action statement -30** Poor access to postnatal care services must be improved.	SA	A	D	SD
4.11.1	**Responsible person:** Please indicate who must take responsibility for addressing poor access to postnatal care services. Make a click in the box next to your choice.				
	Postnatal care programme coordinators (Midwives, Nurses, health officers and Doctors) at district, regional and national health department levels				1
	Head of budget and finance at health facilities				2
	Heads of health facilities				3
4.11.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which access to postnatal care services must be improved. Make a click in the box next to your choice..				
	Within 1 year				1
	Within 2 years				2
	Within 3 years				3
Comments:……					
5	**Strategies**				
5.1	**Action statement- 31** Capacity building for postnatal care providers and coordinators is an important strategy for postnatal care improvement.	SA	A	D	SD
5.1.1	**Responsible person:** Please indicate who must take responsibility for the capacity building. Make a click in the box next to your choice.				
	Head of health facilities				1
	In -service training service coordinators at Oromia regional health bureau and ministry of health				2
	Head of regional health bureau				3
5.1.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which capacity building must be implemented. Make a click in the box next to your choice.				
	Within one month				1
	Within 6 months				2
	Within 12 months				3
Comments:……					

5.2	**Action statement -32** There should be quality assurance mechanism for postnatal care services.	SA	A	D	SD
5.2.1	**Responsible person:** Please indicate who must take responsibility for the quality assurance mechanism. Make a click in the box next to your choice.				
	Midwives, Nurses , Health officers and Doctors who coordinate postnatal care at district, regional and national levels	1			
	Community leaders	2			
	Religious leaders	3			
5.2.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which a quality assurance mechanism must be addressed. Make a click in the box next to your choice..				
	Within one month	1			
	Within 6 months	2			
	Within 12 months	3			
Comments:……					
……					
5.3	**Action statement- 33** Supportive supervision should be implemented at all health facilities	SA	A	D	SD
5.3.1	**Responsible person:** Please indicate who must take responsibility for the supportive supervision. Make a click in the box next to your choice.				
	Head of budget and finance at health facilities	1			
	Postnatal care programme coordinators (Midwives, Nurses, health officers and Doctors) at health facility, at district, regional and national levels	2			
	Head of health facilities	3			
5.3.2	**Time frame:** Please indicate the time frame, after the implementation of the action plan is launched, in which the supportive supervision must be implemented. Make a click in the box next to your choice.				
	Within one month	1			
	Within 6 months	2			
	Within 12months	3			
Comments:……					
……..					
6	**Assumptions**				
6.1	**Action statement -34** The Ethiopian government will be efficient in coordinating postnatal care services.	SA	A	D	SD
Comments:……					
……					
6.2	**Action statement -35** Postnatal care services included in the government policy should be free maternity care	SA	A	D	SD

Comments:……					
6.3	**Action statement -36** Ethiopian government will embrace implementation of maternal and neonatal health services.	SA	A	D	SD
Comments:……					
6.4	**Action statement -37** The health extension program must be sustained for the implementation of the contextualised framework in Ethiopia.	SA	A	D	SD
Comments:……					

ANNEXURE 6: DELPHI CONSENSUS SEEKING ROUND 2 VALIDATION INSTRUMENT

Dear Panelist

INVITATION TO PARTICIPATE IN THE SECOND ROUND OF THE VALIDATION OF CONTEXTUALISED FRAMEWORK AND ACTION PLANFOR IMPLEMENTATION

I am Elias Teferi Bala, a doctoral student at the Department of Health studies, University of South Africa and I hereby invite you to participate in the second round of the validation of the contextualised framework and action plan for implementation with the aim to improve postnatal care in the Ethiopian context. As a postnatal care coordinator with experience in coordinating postnatal care services and therefore an expert and important stakeholder you were selected to volunteer to participate in this second round. If you agree to participate you will be required to validate the contextualised framework and implementation action plan.

All the data from the panelists received in round 1 were analysed and the recommendations were incorporated in this second round. Where consensus was already reached, the items are included in the framework and action plan, For items where consensus was not reached, or where you suggested changes in the first round, please, again provide your honest opinion regarding: (1) each of the action statements in draft 2 of the contexualised framework; (2) who the persons responsible for these actions must be as well as (3) a realistic timeframe for implementation.

Evaluate each component by following the keys provided to express your agreement or disagreement and or make a click in the box next to your choice. For all questions where options are available, you are kindly requested to choose one best option from the provided choices and indicate your choice to the answer by clicking in the box next to your choice. You are also requested to provide comments/suggestions on each of the action statements at end of the questions.

An example for likert scale questions:

There is no need to improve postnatal care in Ethiopia.

Strongly agree	(SA)	4
Agree	(A)	3
Disagree	(D)	2
Strongly disagree	(SD)	1

An example for other questions

Time frame: Please indicate the time frame in which in-service training must be implemented	

1	Within one year	
2	Within 1-3 years	
3	Within 5 years	

	Items				
1	**The problem**				
1.1	Postnatal care is a neglected aspect in health care in Ethiopia				
2	**Community needs**				
2.1	**Action statement 1** Policies and guidelines aimed at ensuring the provision of comprehensive postnatal care services must be implemented. • **Consensus**				
2.1.1	**Responsible person/s:** Postnatal care program coordinators (Midwives, Nurses, Health officers and Doctors) at district, regional and national levels must take responsibility for the implementation of policies and guidelines. • **Consensus**				
2.1.2	**Time frame:** Please indicate the time frame in which polices and guidelines must be implemented. Make a click in the box next to your choice.				
	Within one month	1			
	Within 6 months	2			
	Within 12 months	3			
	Comments:…….....				
2.2	**Action statement 2** Human resources for the provision of quality postnatal care services must be ensured.				
2.2.1	**Responsible person/s:** Human resource management coordinators at district, regional and national levels must take responsibility for ensuring human resource availability. • Consensus				
2.2.2	**Time frame:** Please indicate the time frame in which human resources must be ensured. Make a click in the circle/box next to your choice.				
	Within 6 months	1			
	Within 12 months	2			
	Within 24 months	3			
Comments……. ……...					
2.3.	**Action statement 3** Financial resources for the provision of quality postnatal care services must be ensured. • **Consensus**				
2.3.1	**Responsible person/s:** The Heads of Budget and finance at district, regional and national postnatal care				

	coordination levels must take responsibility for ensuring financial resources • **Consensus**	
2.3.2	**Time frame:** Please indicate the time frame in which financial resources must be ensured. Make a click in the box next to your choice.	
	Within 6months	**1**
	Within 12 months	2
	Within 18months	3
	Within 24 months	4
Comments:…… ……..		
2.4	**Action statement 4** Continuing professional education must be strengthened to improve postnatal care. • **Consensus**	
2.4.1	**Responsible person/s:** In -service training service coordinators in Oromia regional health bureau and ministry of health must take responsibility for continuing professional education. • **Consensus**	
2.4.2	**Time frame:** Please indicate the time frame in which continuing professional education will be improved. Make a click in the box next to your choice.	
	Within 3 months	1
	Within 6 months	2
	Within 9 months	3
Comments:…… ……		
2.5.	**Action statement 5** There should be strong monitoring of postnatal care services • **Consensus**	
2.5.1	**Responsible person/s:** Midwives, Nurses, Health officers and Doctors who coordinate postnatal care at district, regional and national levels must take responsibility for the monitoring of postnatal care services. • **Consensus**	
2.5.2	**Time frame:** Please indicate the time frame in which monitoring is implemented. Make a click in the box next to your choice.	
	Within one month	1
	Within 6 months	2
	Within 12 months	3
Comments….....		
2.6.	**Action statement 6** There should be a consistent evaluation of postnatal care services	

	• **Consensus**	
2.6.1	**Responsible person/s:** Midwives, Nurses, Health officers and Doctors who coordinate postnatal care at district, regional and national levels must take responsibility for the evaluation • **Consensus**	
2.6.2.	**Time frame:** Please indicate the time frame in which evaluation is implemented. Make a click in the box next to your choice.	
	Within one month	1
	Within 6 months	2
	Within 12 months	3
Comments….. ……		
2.7	**Action statement 7** The Coordination of postnatal care services must be improved. • **Consensus**	
2.7.1	**Responsible person/s:** Midwives, Nurses, Health officers and Doctors who coordinate postnatal care at district, regional and national levels must take responsibility for the improvement of the coordination of postnatal care services. • **Consensus**	
2.7.2	**Time frame:** Please indicate the time frame in which coordination of postnatal care services should be improved. Make a click in the box next to your choice.	
	Immediately	1
	Within 6 months	2
	Within 12months	3
Comments:…… ……		
2.8	**Action statement 8** Improve data management processes such as recording and reporting of postnatal care services • **Consensus**	
2.8.1	**Responsible person/s:** Health management information system (HMIS) officers (Information technologists, Midwives, nurses, health officers and doctors at health facilities, district; regional and national levels must take responsibility for data management in postnatal care. • **Consensus**	
2.8.2	**Time frame:** Please indicate the time frame in which data management must be improved. Make a click in the box next to your choice.	
	Within one month	1
	Within 6 months	2
	Within 12 months	3

Comments:…… ……..		
2.9	**Action statement 9** Community involvement in postnatal care services must be improved. • **Consensus**	
2.9.1	**Responsible person/s:** Midwives, Nurses, Health officers and Doctors who coordinate postnatal care at district, regional and national levels must take responsibility for the improvement of community involvement in postnatal care. • **Consensus**	
2.9.2	Community involvement in the postnatal care must be improved within **six months** of the implementation of the framework for improving postnatal care. • **Consensus**	
2.10	**Action statement 10** Establish community surveillance of maternal and neonatal deaths. • Consensus	
2.10.1	**Responsible person/s:** Midwives, Nurses, Health officers and Doctors who coordinate postnatal care at district, regional and national levels must take responsibility to establishing community surveillance for maternal and neonatal deaths. • **Consensus**	
2.10.2	**Time frame:** Please indicate the time frame in which community surveillance must be established. Make a click in the box next to your choice.	
	Within one month	1
	Within 6 months	2
	Within 12 months	3
Comments:…… ……		
2.11	**Action statement 11** Identify and address social and cultural practices, myths and misconceptions on postnatal care • **Consensus**	
2.11.1	**Responsible person:** Please indicate who must take responsibility for identifying and addressing the social and cultural practices, myths and misconceptions on postnatal care. Make a click in the box next to your choice.	
	Head of budget and finance at health facilities	1
	Midwives, Nurses , Health officers and Doctors who coordinate postnatal care at district, regional and national levels	2
	Institutional delivery service unit leaders at the health facilities	3
2.11.2	**Time frame:** Please indicate the time frame in which cultural practices, myths and misconceptions must be addressed. Make a click in the box next to your choice.	
	Within 6 months	1

	Within 12months	3
	Within 24months	3

Comments:……
……

		SA	A	D	SD
2.12	**Action statement 12** There should be a need to provide incentives for postnatal care providers.				
2.12.1	**Responsible person/s:** The head of district, regional, and national health departments must take responsibility for the provision of incentives for postnatal care providers. • **Consensus**				
2.12.2	**Time frame:** Please indicate the time frame in which incentives for postnatal care providers must be initiated. Make a click in the box next to your choice.				
	Immediately				1
	Within 6 months				2
	Within 12 months				3

Comments:……
……

2.13	**Action statement 13** Maternal waiting rooms must be available at all health facilities for improving postnatal care • **Consensus**	
2.13.1	**Responsible person:** Please indicate who must take responsibility for the availability of maternal waiting rooms at all health facilities. Make a click in the box next to your choice.	
	Postnatal mothers	1
	Midwives, Nurses , Health officers and Doctors who coordinate postnatal care at district, regional and national levels	2
	Head of budget and finance at health facilities	3
2.13.2	**Time frame:** Please indicate the time frame in which maternal waiting rooms must be available in health facilities. Make a click in the box next to your choice.	
	Within 6 months	1
	Within 12 months	2
	Within 24 months	3

Comments:……
……

2.14.	**Action statement 14** Ensure effective communication for ambulance service and other postnatal care issues for improving postnatal care. • **Consensus**
2.14.1	**Responsible person/s:** Ambulance drivers at health facilities; community leaders; and Midwives, Nurses, Health officers and Doctors who coordinate postnatal care at district, regional and national levels must take responsibility for the ensuring effective communication for ambulance services.

	• **Consensus**	
2.14.2	**Time frame:** Please indicate the time frame in which effective communication for ambulance service must be ensured. Make a click in the box next to your choice.	
	Within one month	1
	Within 6 months	2
	Within 12 months	3
Comments:…… ……		
2.15.	**Action statement 15** Cultural ceremonies should be practiced at health facilities to motivate mothers to use institutional delivery and postnatal care. • **Consensus**	
2.15.1	**Responsible person/s:** The community leaders; religious leaders; and Midwives, Nurses , Health officers and Doctors who coordinate postnatal care at district, regional and national levels must take responsibility for the practice of cultural ceremonies at health facilities. • **Consensus**	
2.15.2	**Time frame:** Please indicate the time frame in which cultural ceremonies should be practiced in health facilities. Make a click in the box next to your choice.	
	Within 3 months	1
	Within 6 months	2
	Within 12 months	3
Comments:…… ……		
3	**Output**	
3.1	**Action statement 16** The implementation of a framework for postnatal care will contribute to increase postnatal care follow up visits for postnatal mothers at community level. • **Consensus**	
3.2	**Action statement 17** Implementation of a framework to improve postnatal care will contribute to have accurate written reports on the postnatal care services at different levels of the health system. • **Consensus**	
3.3	**Action statement 18** Quality of postnatal care services offered to postnatal mothers and their babies at health care facilities will be improved if the framework for improvement of postnatal care is implemented in Ethiopia. • **Consensus**	

3.4	**Action statement 19** The implementation of the framework will enhance partnership forming in matters regarding the provision of postnatal care services. • **Consensus**
4	**Influential factors:**
4.1	**Action statement 20** Ethiopian government need to have commitment to the attainment of the health sector transformation plan which can contribute to improvement in postnatal care. • **Consensus**
4.2	**Action statement 21** Good governance in Ethiopia is contributing factor for the implementation of the contextualised framework and thus improvement in postnatal care. • **Consensus**
4.3.	**Action statement 22** The Ethiopian government political will can facilitate the implementation of the contextualized framework. • **Consensus**
4.4	**Action statement 23** There should be established community health units for postnatal care improvement. • **Consensus**
4.4.1	**Responsible person/s:** Midwives, Nurses, Health officers and Doctors who coordinate postnatal care at district, regional and national levels must take responsibility for the establishing community health units. • Consensus
4.4.2	**Time frame:** Please indicate the time frame in which community health units must be established. Make a click in the box next to your choice.

Within 1 year	1
Within 2 years	2
Within 3 years	3

Comments:……
……

4.5.	**Action statement 24** The Federal ministry of health should improve budget allocated for postnatal care to minimise the budget constraint for postnatal care services • **Consensus**
4.6	**Action statement 25** There is a need to have Partner/donor support for postnatal care. • **Consensus**
4.6.1	Head of health facilities and postnatal care programme coordinators at district, regional health bureau and national ministry of health must take responsibility for the implementation of Partner/donor support for postnatal care. • **Consensus**

4.6.2	**Time frame:** Please indicate the time frame in which Partner/donor support for postnatal care must be initiated. Make a click in the box next to your choice.	
	Immediately	1
	Within 6 months	2
	Within 12 months	3
Comments:…… ……		
4.7	**Action statement 26** Male engagement in aspects of postnatal care must be improved. • **Consensus**	
4.8	**Action statement 27** The socio-economic factors influence postnatal care services delivery. • **Consensus**	
4.9	**Action statement 28** Literacy level of postnatal mothers is influential factors for postnatal care and must be improved • Consensus	
4.9.1	**Responsible person/s:** Head of district, regional education offices; and adult education coordinators at district levels must take responsibility for improving literacy level of postnatal mothers. • **Consensus**	
4.9.2	**Time frame:** Please indicate the time frame in which literacy level of postnatal mothers must be improved. Make a click in the box next to your choice.	
	Within one year	1
	Within 2 years	2
	Within 3 years	3
Comments:…… ……		
4.10	**Action statement 29** Religious factors that influence postnatal care services utilisation must be addressed.	
4.10.1	**Responsible person/s:** Community leaders, religious leaders and Midwives, Nurses , Health officers and Doctors who coordinate postnatal care at district, regional and national levels must take responsibility for addressing cultural and religious factors. • **Consensus**	
4.10.2	**Time frame:** Please indicate the time frame in which religious and cultural factors that impact postnatal care must be dressed. Make a click in the box next to your choice.	
	Immediately	1
	Within 6 months	2
	Within 12 months	3
Comments:…… ……		

4.11	**Action statement 30** Poor access to postnatal care services must be improved. • **Consensus**	
4.11.1	**Responsible person/s:** Postnatal care programme coordinators (Midwives, Nurses, health officers and Doctors) at district, regional and national health department levels must take responsibility for addressing poor access to postnatal care services. • **Consensus**	
4.11.2	**Time frame:** Please indicate the time frame in which access to postnatal care services must be improved. Make a click in the box next to your choice.	
	Within 1 year	1
	Within 2 years	2
	Within 3 years	3
Comments:……		
5	**Strategies**	
5.1	**Action statement 31** Capacity building for postnatal care providers and coordinators is an important strategy for postnatal care improvement. • **Consensus**	
5.1.1	**Responsible person/s:** In -service training service coordinators at Oromia regional health bureau and ministry of health must take responsibility for the capacity building. • **Consensus**	
5.1.2	**Time frame:** Please indicate the time frame in which capacity building must be implemented. Make a click in the box next to your choice.	
	Within one month	1
	Within 6 months	2
	Within 12 months	3
Comments:……		
5.2	**Action statement 32** There should be quality assurance mechanism in postnatal care services. • **Consensus**	
5.2.1	**Responsible person/s:** Midwives, Nurses, Health officers and Doctors who coordinate postnatal care at district, regional and national levels must take responsibility for the quality assurance mechanism. • **Consensus**	
5.2.2	**Time frame:** Please indicate the time frame in which quality assurance mechanism must be addressed. Make a click in the box next to your choice. .	
	Within one month	1

	Within 6 months	2
	Within 12 months	3
Comments:…… ……		
5.3	**Action statement 33** Supportive supervision should be implemented at all health facilities • **Consensus**	
5.3.1	**Responsible person/s:** Postnatal care programme coordinators (Midwives, Nurses, health officers and Doctors) at health facility, at district, regional and national levels must take responsibility for the supportive supervision. • **Consensus**	
5.3.2	**Time frame:** Please indicate the time frame in which the supportive supervision must be implemented. Make a click in the box next to your choice.	
	Within one month	1
	Within 6 months	2
	Within 12months	3
Comments:…… ……..		
6	**Assumptions**	
6.1	**Action statement 34** The Ethiopian government will be efficient in coordinating postnatal care services. • **Consensus**	
6.2	**Action statement 35** Postnatal care services included in the government policy should be free maternity care • **Consensus**	
6.3	**Action statement 36** Ethiopian government will embrace implementation of maternal and neonatal health services. • **Consensus**	
6.4	**Action statement 37** The health extension program must be sustained for the implementation of the contextualised framework in Ethiopia. • **Consensus**	

ANNEXURE 7: DELPHI CONSENSUS SEEKING ROUND 3 VALIDATION INSTRUMENT

Dear Panelist

INVITATION TO PARTICIPATE IN THE VALIDATION OF A CONTEXTUALISED FRAMEWORK AND ACTION PLAN FOR IMPLEMENTATION

I am Elias Teferi Bala, a doctoral student at the Department of Health studies, University of South Africa and I hereby invite you to participate in the third round of the validation of the contextualised framework and action plan for implementation with the aim to improve postnatal care in the Ethiopian context. As a postnatal care coordinator with experience in coordinating postnatal care services and therefore an expert and important stakeholder you were selected to volunteer to participate in this third round. If you agree to participate you will be required to validate the contextualised framework and implementation action plan.

All the data from the panelists received in round 1 and 2 were analysed and the recommendations were incorporated in this third round. Where consensus was reached, the items are included in the framework and action plan. In the previous rounds (round 1 and 2), consensus was reached for many of the validation assessment items. You are kindly requested d to provide your responses for only validation assessments where consensus was not reached that are presented with response options.

Evaluate the item by following the keys provided to express your agreement or disagreement and or make a click in the box next to your choice. You are kindly requested to choose one best option from the provided choices and indicate your choice to the answer by clicking in the box next to your choice. You are also requested to provide comments/suggestions on each of the action statements at end of the questions.

An example for likert scale questions:

There is no need to improve postnatal care in Ethiopia.

Strongly agree	(SA)	4
Agree	(A)	3
Disagree	(D)	2 ⊙
Strongly disagree	(SD)	1

An example for other questions

Time frame: Please indicate the time frame in which in-service training must be implemented		
1	Within one year	⊙
2	Within 1-3 years	
3	Within 5 years	

	Items				
1	**The problem**				
1.1	Postnatal care is a neglected aspect in health care in Ethiopia • Consensus				
2	**Community needs**				
2.1	**Action statement -1** Policies and guidelines aimed at ensuring the provision of comprehensive postnatal care services must be implemented. • Consensus				
2.1.1	**Actions/Methods:**Please tick next to ALL the options of your choice how you think policies and guidelines aimed at ensuring the provision of comprehensive postnatal care can be implemented				
2.1.1.1.	Ensure that all health facilities have access to postnatal care guidelines and polices				1
2.1.1.2.	Distribute adequate number of guidelines and polices for all health facilities				2
2.1.1.3.	Make sure that postnatal care is offered based on guidelines and polices at all health facilities				3
2.1.2	**Responsible person/s:**Please tick next to the option of your choice who you think needs to take the responsibility for ensuring that policies and guidelines are provided for implementation				
2.1.2.1.	A selected postnatal care provider at every health facility*(selected by their peers)*				1
2.1.2.2.	Postnatal care programme officers at regional level				2
2.1.2.3.	A team of postnatal care service providers at district, regional and national level appointed by their postnatal care co-workers				3
2.1.3	**Time frame:** Polices and guidelines for postnatal care must be implemented within 12 months after the contextualised framework is launched for implementation. • Consensus				
2.2	**Action statement 2** Human resources for the provision of quality postnatal care services must be ensured. • Consensus				
2.2.1	**Actions/Methods :**Please tick next to ALL the options of your choice how you think adequate human resources for postnatal care can be ensured				
2.2.1.1.	Conduct a staff workload indicator assessments at least twice a year to identify shortages				1
2.2.1.2.	Recruit skilled and competent postnatal care providers to adhere to the WHO recommendation of population to midwifery ratio of 23 midwives for every10,100 women				2
2.2.1.3.	Instil career growth opportunities for postnatal care providers working in rural health facilities				3
2.2.1.4.	Negotiate with the finance department at national level on incentives for postnatal care services providers working in rural areas of Ethiopia				4
2.2.1.5.	Promote professional development training opportunities for postnatal care providers.				5
2.2.1.6.	Train postnatal care providers who meet the health care needs of postnatal care mothers				6
2.2.2	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility for ensuring thatadequate human resources are provided				

2.2.2.1.	Human resource managementofficers at the health facilities	1
2.2.2.2.	Human resource managementofficers at district level	2
2.2.2.3.	An appointed team ofhuman resource managers at district, regional and national levels *(appointed by the heads of the health departments at the various levels)*	3
2.2.3	**Time frame:** Strategies to ensure that human resources for postnatal care are available must be developed within 12 months after the implementation date of the contextualised framework • Consensus	
2.3.	**Action statement -3** Financial resources for the provision of quality postnatal care services must be ensured. • Consensus	
2.3.1	**Actions/Methods:**Please tick next to ALL the options of your choice how you think the financial resources for postnatal care can be ensured	
2.3.1.1.	Develop and implement an action plan to secure financial resources for delivering of ordered supplies	1
2.3.1.2.	Arrange annual meetings with postnatal care coordinators at different levels of the health system to secure financial resources	2
2.3.1.3.	Develop and implement procedures to ensure accurate procurement to optimally utilize the available financial resources	3
2.3.2.	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility for the availability of financial resources	
2.3.2.1.	A selected team of Postnatal care programme officers at district level (*selected by peers*)	1
2.3.2.2.	The heads of budget and finance at district, regional and national levels associated with postnatal care coordination	2
2.3.2.3.	An Ad-hoc committee selected from the officials responsible for the budget of postnatal service delivery at district, regional and national levels *(appointed by the health departments at the various levels).*	3
2.3.3	**Time frame:** Allocation of adequate financial resources for postnatal care services must be ensured within 12 months after the date of the implementation of the contextualised framework. • Consensus	
2.4	**Action statement- 4** Continuing professional education must be strengthened to improve postnatal care. • Consensus	
2.4.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think the continuing professional education can be strengthened	
2.4.1.1.	Develop an action plan for professional development training to include participation of all postnatal care providers	1
2.4.1.2.	One professional development training schedule opportunity per year must be compulsory for every postnatal care provider	2
2.4.1.3.	Attain a record of postnatal care providers who attended continuing professional education to ensure compliance	3

2.4.2	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility for strengthening continuing professional education	
2.4.2.1.	In -service training programme officers at district level	**1**
2.4.2.2.	Postnatal care programme officers at the ministry of health	2
2.4.2.3.	An appointed committee *(appointed by head of Oromia regional health bureau and postnatal care coordinator at the national ministry of health)* selected from the in -service training coordinators at Oromia regional health bureau and the ministry of health	3
2.4.3.	**Time frame:** Continuing professional education on postnatal care services must be improved within the time frame of 9 months after implementation of contextualised framework is launched • Consensus	
2.5.	**Action statement -5** Effective monitoring of postnatal care services • Consensus	
2.5.1.	**Actions/Methods:** Please tick next to ALL the options of your choice how you think thatstrong monitoring of postnatal care can be implemented	
2.5.1.1.	Conduct a quarterly inspection of the health facilities rendering postnatal care	1
2.5.1.2.	Compile quarterly quality assurance reports for submission to the ministry of Health	2
2.5.1.3.	Identify gaps in the quality of postnatal care rendered	3
2.5.1.4.	Communicate all challenges detected to the appropriate managers	4
2.5.2.	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility forthe strengthening of monitoring of postnatal care services	
2.5.2.1.	Directors of the health facilities	1
2.5.2.2.	All Postnatal care programme officers at district level	2
2.5.2.3.	An appointed team of program officers working at district, regional and national levels (*selected by their peers within the various levels*)	3
2.5.3.	**Time frame: The strategy for strengthening the monitoring of postnatal services must be implemented** within one month after the date of the implementation of the contextualised framework. • Consensus	
2.6.	**Action statement -6** There should be a consistent evaluation of postnatal care services • Consensus	
2.6.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think consistent evaluation of postnatal care must beimplemented	
2.6.1.1.	Conduct an evaluation of the quality of postnatal care services at least every 3 months	1
2.6.1.2.	Improve postnatal care coordinators` assessment skills through training programs	2
2.6.1.3.	Share the quality assessment results and experiences with postnatal care coordinators at least once a year at a formal postnatal care summit	3
2.6.2.	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility for the implementation of a consistent postnatal care evaluation.	

2.6.2.1.	Director of every individual health facility offering postnatal care services	**1**
2.6.2.2.	Postnatal care programme officers at district and national level	2
2.6.2.3.	An appointed team of programme officers of postnatal care services working at district, regional and national levels *appointed by their peers at the various levels*	3
2.6.3.	**Time frame:** The selected persons must take the responsibility of ensuring consistent evaluation of postnatal care within 12 months after the implementation of the contextualised framework is approved. • Consensus	
2.7	**Action statement -7** Improve Coordination of postnatal care services. • Consensus	
2.7.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think the coordination of postnatal care can be improved	
2.7.1.1.	Enhance community involvement in postnatal care by increasing community participation	1
2.7.1.2.	Provide health education to the community to increase awareness regarding the importance of Postnatal care	2
2.7.1.3.	Facilitate communication networks among postnatal care coordinators and the different stakeholders	3
2.7.1.4.	Implement the use of mobile phones and social media to provide information on the importance of postnatal care utilisation	4
2.7.2	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility forthe improvement of the coordination of postnatal care services	
2.7.2.1.	All postnatal care programme officers at district and regional levels	**1**
2.7.2.2.	Directors of health facilities	2
2.7.2.3.	An appointed team of postnatal care program officers working at district, regional and national levels (*appointed by their direct managers at the various levels)*.	3
2.7.3	**Time frame:** The responsible person/s must take responsibility to improve the coordination of postnatal care immediately after the implementation of the contextualised framework is approved. • Consensus	
2.8	**Action statement -8** Improve data management processes such as recording and reporting of postnatal care services • Consensus	
2.8.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think data management processes can be improved	
2.8.1.1.	Provide technical support to postnatal care providers and coordinators to record postnatal care data	1
2.8.1.2.	Arrange ICT training to improve the technical skills of postnatal care providers and coordinators	2
2.8.1.3.	Implement the use of ICT to manage records, medical drugs and information sharing	3
2.8.1.4.	Implement a timely reporting system for postnatal care services delivery at all health facilitates offering postnatal care	4

2.8.2	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility fordeveloping strategies to address the above mentioned actions to improve the data management of postnatal care	
2.8.2.1.	All Postnatal care programme officers at district level	**1**
2.8.2.2.	Directors of health facilities	2
2.8.2.3.	An appointed team of the health management information heads working at health facilities; district; regional and national levels (*appointed by the heads of the postnatal care coordinating offices at the different levels*)	3
2.8.3	**Time frame:** A method for the effective data management of postnatal care must be implemented within a time frame of 1month after the implementation of the framework is approved. • Consensus	
2.9	**Action statement -9** Improve community involvement in postnatal care services. • Consensus	
2.9.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think community involvement in postnatal care can be improved	
2.9.1.1.	Improve the postnatal care knowledge of the community through social media	1
2.9.1.2.	Involve community leaders with the development of educational material	2
2.9.1.3.	Select community members to participate in communicating educational material and messages to the community	3
2.9.1.4.	Involve the community in planning postnatal care activities	4
2.9.2	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility for implementing the actions for the improvement of community involvement in postnatal care	
2.9.2.1.	Postnatal care providers working at health facilities	**1**
2.9.2.2.	Postnatal care programme officers at district and regional levels	2
2.9.2.3.	An ad hoc committee of postnatal care programme officers (at district level) appointed by their peers as well as appointed community members selected by the district postnatal coordinating offices	3
2.9.3.	**Time frame:** The actions for the improvement of community involvement in the postnatal care must be implemented within six months after the implementation of the contextualised framework is approved • Consensus	
2.10	**Action statement -10** Establish community surveillance of maternal and neonatal deaths. • Consensus	
2.10.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think community surveillance of maternal and neonatal deaths can be established.	
2.10.1.1	Conduct annual surveillance on maternal and neonatal deaths	1
2.10.1.2.	Develop an effective reporting system of maternal and neonatal deaths	2

2.10.2.	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility for developing and implementing strategies for establishing community surveillance	
2.10.2.1.	Directors of health facilities	1
2.10.2.2.	Postnatal care programme officers at district and regional levels	2
2.10.2.3.	An appointed team of postnatal care programme officers working at district, regional and national levels *(appointed by heads of the postnatal coordinating offices at the various levels*)	3
2.10.3.	**Time frame:** Please indicate the time frame in which community surveillance must be established after the contextualised framework is approved for implementation. Make a click in the box next to your choice.	
2.10.3.1.	Within one month	1
2.10.3.2.	Within 6 months	2
2.10.3.3.	Within 12 months	3
2.11	**Action statement -11** Identify and address social and cultural practices, myths and misconceptions on postnatal care	
2.11.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think the cultural myths and misconceptions can be identified and addressed	
2.11.1.1.	Assess the cultural practices in the community that impact on postnatal care services	1
2.11.1.2.	Conduct information education and communication (IEC) for increasing awareness and knowledge on cultural misconceptions.	2
2.11.1.3.	Involve the community in identifying the cultural issues that impact on postnatal care by instilling meetings between the healthcare workers and the community	3
2.11.1.4	Involve the community in addressing the cultural issues that impact on postnatal care by instilling community meetings.	4
2.11.2.	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility for addressing the social and cultural practices, myths and misconceptions	
2.11.2.1.	Directors of health facilities	**1**
2.11.2.2.	Postnatal care programme officers at district and regional levels	2
2.11.2.3.	An ad hoc committee of postnatal care programme officers (at district level*) appointed by their peers* as well as appointed community members *selected by the district postnatal coordinating offices.*	3
2.11.3	**Time frame:** The responsible person/s must identify and address the cultural practices, myths and misconceptions regarding postnatal care within 6months after approval of the implementation of the contextualised framework. • Consensus	
2.12	**Action statement -12** Provide incentives for postnatal care providers. • Consensus	
2.12.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think the provision of incentives for postnatal care providers can be successfully implemented.	
2.12.1.1.	Provide a certificate at an award ceremony for those identified to be the best performers	1
2.12.1.2.	Instilcareeropportunities for those with high performance appraisal results	2
2.12.1.3.	Allocate additional professional development opportunities for those with high performance appraisal	3

	results	
2.12.2.	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility for the provision of incentives for postnatal care providers	
2.12.2.1.	All the postnatal care program officers at district level	**1**
2.12.2.2.	A team of Postnatal care programme officers at regional level, selected by their peers to liaise with the national department of Health	2
2.12.2.3.	An ad hoc committee of programme officers working at regional health department *appointed by head of the regional health department* to liaise with the national health department for the implementation of the incentives	3
2.12.3.	**Time frame:** The responsible person/s must implement the actions to provide incentives for postnatal care providers within 12 months after the approval of the contextualised framework. • Consensus	
2.13	**Action statement -13** Maternal waiting rooms must be available at all health facilities • Consensus	
2.13.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think the maternal waiting rooms can be accessible	
2.13.1.1.	Provide areas that can serve as maternal waiting homes at all health facilities	1
2.13.1.2.	Equip the maternal waiting homes with the necessary infrastructure such as electric power, water supply , kitchen and adequate rooms	2
2.13.1.3.	Ensure that maternal waiting homes comply with culture congruent requirements by involving the community in the development thereof.	3
2.13.2.	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility forthe availability of maternal waiting rooms	
2.13.2.1.	Postnatal care providers at health facilities	**1**
2.13.2.2.	Postnatal care program officers at district and regional levels	2
2.13.2.3.	Appointed postnatal care programme officers working at district, regional and national levels *appointed by the postnatal care coordinating offices* at the various levels as well as selected community members appointed by the directors of the health facilities	3
2.13.3.	**Time frame:** The responsible person/s must implement actions that ensure the availability of maternal waiting rooms in all health facilities within 12 months after the implementation of the contextualised framework is approved. • Consensus	
2.14.	**Action statement -14** Ensure effective communication for AMBULANCE SERVICES for postnatal care improvement • Consensus	
2.14.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think effective communication for AMBULANCE SERVICES can be ensured	
2.14.1.1.	Communicate the contact details of all available ambulance services to mothers via social media and	1

	printed communication	
2.14.1.2.	Develop an effective communication system to ensure ambulance service accessibility	2
2.14.1.3.	Ensure the availability of ambulance services at all health facilities	3
2.14.2.	**Responsible person/s:**Please tick next to the option of your choice who you think needs to take the responsibility for ensuring effective communication regarding AMBULANCE SERVICES	
2.14.2.1.	Directors of health facilities	**1**
2.14.2.2.	All postnatal care program officers at district and regional levels	2
2.14.2.3.	An ad hoc committee consisting ofambulance drivers; community leaders (*selected by the directors of the health facilities)* as well as postnatal care programme officers working at the health facilities *(appointed by their peers and the directors of the health facilities*)	3
2.14.3.	**Time frame:** The responsible person/s must ensure effective communication about AMBULANCE SERVICES accessibility for postnatal care within 1 month after the implementation of the contextualised framework is approved. • Consensus	
2.15.	**Action statement -15** Cultural ceremonies should be practiced at health facilities to motivate mothers to utilise postnatal care. • Consensus	
2.15.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think the practice of cultural ceremonies can be enhanced	
2.15.1.1.	Develop a policy that makes provision for cultural ceremonies in health facilities	1
2.15.1.2.	Allow mothers and their families to practice their cultural ceremonies	2
2.15.1.3.	Have maternal waiting homes at all health facilities rendering postnatal care	3
2.15.1.4.	Equip the health facilities with the necessary infrastructure such as electric power , water supply and adequate rooms to allow the practice of their culture	4
2.15.2.	**Responsible person/s:**Please tick next to the option of your choice who you think needs to take the responsibility for developing strategies that encourage the practice of cultural ceremonies	
2.15.2.1.	All postnatal care providers	1
2.15.2.2.	Postnatal care programme officers at district and regional levels	2
2.15.2.3.	An ad hoc committee consisting of selected community and religious leaders as well as the programme officers of postnatal care services working at district level (*appointed by the heads of district health departments)* to liaise with the regional and national health departments	3
2.15.3.	**Time frame:** The responsible persons must implement the actions/methods that encourage the practice of the cultural ceremonies after delivery in all health facilities within 3 months after the implementation of the contextualised framework is approved. • Consensus	
3	**Output**	

3.1	**Action statement -16** The implementation of the contextualised framework will contribute to improvement in postnatal care follow up visits for postnatal mothers at community level. • Consensus
3.2	**Action statement -17** Implementation of a framework to improve postnatal care will contribute to have accurate written reports on the postnatal care services at different levels of the health system. • Consensus
3.3	**Action statement -18** Quality of postnatal care services offered to postnatal mothers and their babies at health facilities in Ethiopia needs to be improved through the implementation of a contextualised framework. • Consensus
3.4	**Action statement -19** The implementation of the framework will enhance partnership forming in matters regarding the provision of postnatal care services. • Consensus
4	**Influential factors:**
4.1	**Action statement- 20** Ethiopian government is committed to the attainment of the health sector transformation plan which can contribute to improvement in postnatal care. • Consensus
4.2	**Action statement -21** Good governance in Ethiopia must contribute to the implementation of the contextualised framework and thus improvement in postnatal care. • Consensus
4.3.	**Action statement -22** The Ethiopian government political will must facilitate the implementation of the contextualised framework. • Consensus
4.4	**Action statement -23** Establish community health units for postnatal care improvement. • Consensus
4.5.	**Action statement -24** The Federal ministry of health should improve budget allocated for postnatal care to minimise the budget constraint for postnatal care services in Ethiopia • Consensus
4.6	**Action statement- 25** Ensure Partner/donor support for postnatal care. • Consensus

4.6.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think partner/donor support for postnatal care can be enhanced	
4.6.1.1.	Invite local and national partners to participate in technical and financial support for the postnatal care improvement	1
4.6.1.2.	Negotiate partnerships with donors	2
4.6.1.3.	Use the technical and financial support from the partners for postnatal care improvements	3
4.6.2.	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility for enhancing of partner/donor support for postnatal care services	
4.6.2.1.	Appointed team of postnatal care officers at national level *selected by their peers*	**1**
4.6.2.2.	Appointed team of postnatal care officers at regional level *selected by their peers*	2
4.6.2.3.	An ad hoc committee consisting of the directors of health facilities and postnatal care programme officers working at district level (*appointed by heads the district postnatal care coordinating offices)*	3
4.6.3.	**Time frame:** The responsible person/s must implement the strategies for enhancing partner/donor support immediately after the implementation of the contextualised framework is approved. • Consensus	
4.7	**Action statement -26** Male engagement in aspects of postnatal care must be improved. • Consensus	
4.7.1.	**Actions/Methods:** Please tick next to ALL the options of your choice how you think male engagement in aspects of postnatal care must be improved	
4.7.1.1.	Increase awareness of males on the benefits of postnatal care through mass media	1
4.7.1.2.	Improve male involvement through discussion with community leaders	2
4.7.1.3.	Improve male involvement through discussion with religious leaders	3
4.7.2.	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility for improving male engagement in postnatal care	
4.7.2.1.	Selected community leaders *(selected by directors of health facilities)*	1
4.7.2.2.	Selected religious leaders (selected by directors of health facilities)	2
4.7.2.3.	An ad hoc committee consisting of community and religious leaders (appointed by district postnatal care coordinating offices as well as postnatal care coordinators at district and regional levels (*appointed by the various health department)*	3
4.7.3.	**Time frame:** Please indicate the time frame in which male engagement in postnatal care must be improved	
4.7.3.1.	Within 6 months	1
4.7.3.2.	Within 12 months	2
4.7.3.3.	Within 18 months	3
4.8	**Action statement- 27** Address the socio-economic factors that influence postnatal care. • Consensus	
4.8.1.	**Actions/Methods:** Please tick next to ALL the options of your choice how you think socio-economic factors that	

	influence postnatal care can be addressed	
4.8.1.1.	Encourage women to postpone marriage until 18 years	1
4.8.1.2.	Implement strategies to prevent teenage pregnancies	2
4.8.1.3.	Advocate for the Improvement of employment opportunities for women (job opportunities)	3
4.8.2.	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility for addressing the socio-economic factors that influence postnatal care	
4.8.2.1.	Selected women development army *(selected by peers)*	1
4.8.2.2.	Appointed postnatal care coordinators at district level (selected by the heads of district health department)	2
4.8.2.3.	An ad hoc committee consisting of postnatal care coordinators , women development army as well as the community leaders *(selected by the district health department)*	3
4.8.3.	**Time frame:** Please indicate the time frame in which the socio-economic factors that influence postnatal care can be addressed	
4.8.3.1.	Within 2 year	1
4.8.3.2.	Within 3 years	2
4.8.3.3.	Within 4 years	3
4.9	**Action statement -28** Improve literacy level of postnatal mothers	
4.9.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think the literacy level of postnatal mothers can be improved.	
4.9.1.1.	Encourage pregnant and postnatal mothers to improve their level of education by through mass media	1
4.9.1.2.	Involve the community to motivate pregnant and postnatal mothers to attain education	2
4.9.1.3.	Involve the religious leaders to motivate pregnant and postnatal mothers to improve their level of education	3
4.9.2	**Responsible person/s:**Please tick next to the option of your choice who you think needs to take the responsibility for developing and implementing strategies for improving the literacy level of postnatal mothers	
4.9.2.1.	All Adult education Programme officers at district level	**1**
4.9.2.2.	All Adult education programme officers at regional level	2
4.9.2.3.	An appointed team of community and religious leaders (*appointed by head of the district postnatal care coordinating offices*) and of the district and regional education offices programme officers *(appointed by the heads of the various education offices)*	3
4.9.3.	**Time frame:** The responsible person/s must implement the actions for improving literacy level of postnatal mothers within 3 years after the implementation of the contextualised framework is approved. • Consensus	
4.10	**Action statement -29** Address the religious factors that influence postnatal care services utilisation. • Consensus	
4.10.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think the religious factors that	

	impact postnatal care can be identified and addressed.	
4.10.1.1.	Conduct IEC for increasing awareness and knowledge on religious factors that impact on postnatal care	1
4.10.1.2.	Improve women and community knowledge though health education to overcome religious influences	2
4.10.2.	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility for identifying and addressing religious factors that impact postnatal care	
4.10.2.1.	An ad hoc committee consisting of community leaders *appointed by directors of health facilities*	**1**
4.10.2.2.	An ad hoc committee consisting of religious leaders *appointed by directors of health facilities*	2
4.10.2.3.	An ad hoc committee consisting of community and religious leaders as well as district postnatal care programme officers *appointed by the head of the district postnatal care coordinating offices*	3
4.10.3.	**Time frame:** The responsible person/s must implement the methods for identifying and addressing religious factors that impact postnatal care services within 12 months after the implementation of the contextualised framework is approved. • Consensus	
4.11	**Action statement -30** Poor access to postnatal care services must be improved. • Consensus	
4.11.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think poor access to postnatal care can be improved.	
4.11.1.1.	Increase the number of health facilities	1
4.11.1.2.	Renovate the existing health facilities	2
4.11.1.3.	Improve the transportation services for easy access to health facilities	3
4.11.2.	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility forimproving poor access to postnatal care services	
4.11.2.1.	Directors of health facilities to liaze with the district health department	1
4.11.2.2.	All Postnatal care programme officers at district level to liaze with regional health department	2
4.11.2.3.	An appointed team of postnatal care programme officers working at district, regional and national levels (*appointed by the heads of postnatal coordinating offices at the various levels)* to liaze with federal (national) ministry of health	3
4.11.3.	**Time frame:** The responsible person/s must implement the actions to improve access to postnatal care within 1 year after the launching of the implementation of the contextualised framework. • Consensus	
5	**Strategies**	
5.1	**Action statement- 31** Capacity building for postnatal care providers and coordinators is an important strategy for postnatal care improvement. • Consensus	
5.1.1.	**Actions/Methods:** Please tick next to ALL the options of your choice how you think capacity building can be improved	

5.1.1.1.	Ensure the implementation of continuous professional education	1
5.1.1.2.	Instil a attendance register of postnatal care providers for professional development training at least once a year	2
5.1.2	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility forensuring capacity building.	
5.1.2.1.	Directors of health facilities	**1**
5.1.2.2.	All Postnatal care programme officers at district and regional levels	2
5.1.2.3.	An ad hoc committee from in -service training coordinators at regional health bureau and ministry of health *appointed by heads of the regional health bureau and national ministry of health*	3
5.1.3.	**Time frame:** The responsible person/s must implement the capacity building strategies for postnatal care providers and coordinators within 12 months after the implementation of contextualised framework is launched. • Consensus	
5.2	**Action statement -32** There must be quality assurance mechanisms for postnatal care services. • Consensus	
5.2.1.	**Actions/Methods:** Please tick next to ALL the options of your choice how you think quality assurance mechanisms can be implemented.	
5.2.1.1.	Implement standard operating procedures when rendering postnatal care	1
5.2.1.2.	Provide quality counselling services to postnatal mothers	2
5.2.1.3.	Provide compassionate and respectful care to enhance postnatal mothers satisfaction	3
5.2.1.4	Provide effective “wistle blow” opportunities to complain about the quality of care rendered	4
5.2.2.	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility for the improvement of the quality assurance mechanism.	
5.2.2.1.	All Postnatal care providers	1
5.2.2.2.	All Postnatal care programme officers at district and regional levels	2
5.2.2.3.	An appointed team of programme officers ofpostnatal care services working at district, regional and national levels *appointed by head of postnatal care coordinating offices at the various levels*	3
5.2.3.	**Time frame:** The responsible person/s must implement the actions for quality assurance mechanisms within 12 months after the implementation of the contextualised framework is launched. • Consensus	
5.3	**Action statement- 33** Supportive supervision should be implemented at all health facilities • Consensus	
5.3.1	**Actions/Methods:** Please tick next to ALL the options of your choice how you think supportive supervision can be improved	
5.3.1.1.	Provide training to improve supervision skills for postnatal care coordinators	1
5.3.1.2.	Conduct supportive supervision on postnatal care services at least quarterly.	2
5.3.1.3.	Provide technical and financial support to postnatal care coordinators to do supportive supervision	3

5.3.2	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility fordeveloping and implementing actions for consistent supportive supervision	
5.3.2.1.	Directors of health facilities	1
5.3.2.2.	All Postnatal care programme officers at district and regional levels	2
5.3.2.3.	An appointed team of postnatal care services programme officers working at district, regional and national levels *appointed by the head of postnatal care coordinating offices at the various levels*	3
5.3.3	**Time frame:** The responsible person/s must implement the actions to ensure consistent supportive supervision within 6 months after the implementation of contextualised framework is launched. • Consensus	
5.4.	**Action statement 34:** Health facility infrastructure must be secured for improvement of postnatal care	
5.4.1.	Strongly agree	1
5.4.2.	Agree	2
5.4.3.	Disagree	3
5.4.4.	Strongly disagree	4
5.4.1.	**Actions/Methods:** Please tick next to ALL the options of your choice how you think health facility infrastructures can be improved	
5.4.1.1.	Prepare an audit report on the quality and availability of infrastructure	1
5.4.1.2.	Renovate the existing infrastructure of facilities	2
5.4.1.3.	Submit the audit reports to the Ministry of Health through the district health department	3
5.4.1.4.	Prepare a separate and adequate room/space for postnatal care at all health facilities	4
5.4.1.5.	Provide all health facilities with safe water and functioning hydro electric power.	5
5.4.1.6.	Link all health facilities with a 24 hours functional referral system.	6
5.4.2.	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility forensuring health facility infrastructure	
5.4.2.1.	Selected postnatal care programme officers at district and regional level (*selected by their peers within each level*)	1
5.4.2.2.	All Postnatal care programme officer at national level	2
5.4.2.3.	An appointed team of postnatal care programme officers working at district , regional and national level *appointed by head of postnatal care coordinating offices at the various levels*	3
5.4.3.	**Time frame:** Please indicate the time frame within which health facility infrastructures must be secured. Make a click in the circle/box next to your choice.	
5.4.3.1.	Within 1 year	1
5.4.3.2.	Within 2 years	2
5.4.3.3.	Within 3 years	3
5.5.	Action statement 35: Provision of appropriate medical drugs and supplies for the postnatal services must be ensured	
5.5.1.	Strongly agree	1
5.5.2.	Agree	2

5.5.3.	Disagree	3
5.5.3.	Strongly disagree	4
5.5.1.	**Actions/Methods:** Please tick next to ALL the options of your choice how you think medical drugs and supplies for postnatal care can be improved	
5.5.1.1.	Ensure procurement and availability of all the necessary drugs for provision of postnatal care	1
5.5.1.2.	Enhance the postnatal care providers skills in maintaining the stock balance on essential drugs	2
5.5.1.4.	Establish and sustain strong partnerships with national and international medical drug producers	3
5.5.2.	**Responsible person/s:** Please tick next to the option of your choice who you think needs to take the responsibility for ensuring medical drugs and supplies	
5.5.2.1.	Directors of health facilities	1
5.5.2.2.	All postnatal care programme officers at district and regional levels	2
5.5.2.3.	An appointed team of postnatal care programme officers working at district , regional and national level *appointed by the heads of postnatal care coordinating offices at the various levels*	3
5.5.3.	**Time frame:** Please indicate the time frame within which the availability ofmedical drugs and supplies must be ensured. Make a click in the circle/box next to your choice.	
5.5.3.1.	Within one year	1
5.5.3.2.	Within 2 years	2
5.5.3.3.	Within 3 years	3
6	**Assumptions**	
6.1	**Action statement -36** The Ethiopian government will be efficient in coordinating postnatal care services. • Consensus	
6.2	**Action statement -37** Postnatal care services included in the government policy should be free for maternity care • Consensus	
6.3	**Action statement -38** Ethiopian government will embrace implementation of maternal and neonatal health services. • Consensus	
6.4	**Action statement -39** The health extension program must be sustained for the implementation of the contextualised framework in Ethiopia. • Consensus	

ANNEXURE 8: DELPHI ROUND 1 RECRUITMENT LETTER

Dear participants:

INVITATION TO PARTICIPATE IN THE VALIDATION OF A FRAMEWORK AND ACTION PLAN FOR IMPLEMENTATION

I am Elias Teferi Bala, a doctoral student at the Department of Health studies, University of South Africa. I hereby invite you to participate in the validation of a contextualised framework and action plan for implementation in Ethiopia with the aim to improve postnatal care. As a postnatal care coordinator with experience in coordinating postnatal care services and therefore an expert and important stakeholder you were selected to volunteer to participate. If you agree to participate you will be required to validate the contextualised framework and implementation action plan.

The back ground information, including the validation tool is accessible to you if you click on the link provided at the end of this recruitment letter. You will remain anonymous to the other participants and all inputs will be received via the Google forms software used for the validation. All the inputs of the panellists will be utilised to revise the framework that will again be circulated in a next round for your input. The process will continue until 75% consensus is reached by all the participants. There will be no negative consequences if you choose not to participate. However, once you have clicked on the link and start to validate you are kindly requested to participate in all rounds of the validation process.

You will be required to provide your email addresses as part of the biographical data when you have access to the validation tool, thus agree to participate, as this will allow me to incorporate all the comments into the new visual concept map and then circulate the revised version of the tool to all participants.

Your email address and any other personal information will not be known to other participants and your e-mail address will be separated from the data received via the tool. You will not receive any remuneration as your participation is voluntary, but your valuable inputs will contribute to improvements in postnatal care in Ethiopia. The study findings will be published in the report and incorporated in the final thesis of this study but your identity will not be revealed.

I will appreciate your voluntary participation in the validation process until a 75% between all panellists are reached. If you agree to participate please open the link by pressing the Ctrl button on your keyboard and simultaneously click on the link: https://docs.google.com/forms/d/1mSaixMWjsJTIlibOyyLt9GFKz5NrSONRSXGiJ_qvbjw/edit

If you have any enquiries or questions, please do not hesitate to contact me or my research supervisor using the E mail addresses.

Researcher: Elias Teferi Bala, Email Address: eliasteferi2015@gmail.com
Research supervisor: Professor Lizeth Roets, Email address:roetsl@unisa.ac.za

Thank you for your willingness to participate in the validation of the framework to improve postnatal care in Ethiopia.

Kind regards
Elias Teferi Bala

ANNEXURE 9: DELPHI ROUND 2 RECRUITMENT LETTER

Dear Panellist

INVITATION TO PARTICIPATE IN THE SECOND ROUND OF THE VALIDATION OF CONTEXTUALISED FRAMEWORK AND ACTION PLAN FOR IMPLEMENTATION

I am Elias Teferi Bala, a doctoral student at the Department of Health studies, University of South Africa and I hereby invite you to participate in the second round of the validation of the contextualised framework and action plan for implementation with the aim to improve postnatal care in the Ethiopian context. As a postnatal care coordinator with experience in coordinating postnatal care services and therefore an expert and important stakeholder you were selected to volunteer to participate in this second round again. If you agree to participate you will be required to validate the contextualised framework and action plan.

All the data from the panelists received in round 1 were analysed and the recommendations were incorporated in this second round. Where consensus was reached, the items are included in the framework and action plan, For those items where consensus was not reached, or where you suggested changes in the first round, your honest opinion is again needed regarding:(1) each of the action statements; (2) who the persons responsible for these actions must be as well as (3) a realistic timeframe for implementation.

You will remain anonymous to the other panelists as all inputs will be received via the Google forms software used for the validation. All the new inputs will be utilised to revise the framework that may again be circulated in a next round for your inputs. The process will continue until 75% consensus is. There will be no negative consequences if you choose not to participate. However, once you have clicked on the link and start to validate you are kindly requested to complete all questions for the validation process.

You will be required to provide your email addresses as part of the biographical data when you have access to the validation tool, thus agree to participate, as this will allow me to incorporate all the comments into the new visual concept map and then circulate the revised version of the tool to all participating panelists.

Your email address and any other personal information will not be known to other participants and your e-mail address will be separated from the data received via the tool. You will not receive any remuneration as your participation is voluntary, but your valuable inputs will contribute to improvements in postnatal care in Ethiopia. The study findings will be published in the report and incorporated in the final thesis of this study but your identity will not be revealed.
If you agree to participate please open the link by pressing the Ctrl button on your key board and simultaneously click on the link https://docs.google.com/forms/d/1e7AFCxAT3ed0OnQHeHVHLpdlAOahDw0Px3KDbSFF8PA/edit

If you have any enquiries or questions, please do not hesitate to contact me or my research supervisor using the E mail addresses.

Researcher: Elias Teferi Bala, Email Address: eliasteferi2015@gmail.com
Research supervisor: Professor Lizeth Roets, Email address:roetsl@unisa.ac.za

ANNEXURE 10: DELPHI ROUND 3 RECRUITMENT LETTER

Dear Panelist

INVITATION TO PARTICIPATE IN THE VALIDATION OF A CONTEXTUALISED FRAMEWORK AND ACTION PLAN FOR IMPLEMENTATION

I am Elias Teferi Bala, a doctoral student at the Department of Health studies, University of South Africa and I hereby invite you to participate in the third round of the validation of the contextualised framework and action plan for implementation with the aim to improve postnatal care in the Ethiopian context. As a postnatal care coordinator with experience in coordinating postnatal care services and therefore an expert and important stakeholder you were selected to volunteer to participate in this third round again. If you agree to participate you will be required to validate the contextualised framework and action plan.

All the data from the panelists received in round 1 and 2 were analysed and the recommendations were incorporated in this third round. Where consensus was reached, the items are included in the framework and action plan. In the previous rounds (round 1 and 2), consensus was reached for many of the validation assessment items. You are kindly requested d to provide your responses for only validation assessments where consensus was not reached that are presented with response options.
You will remain anonymous to the other panelists as all inputs will be received via the Google forms software used for the validation. All the new inputs will be utilised to revise the framework that may again be circulated in a next round for your inputs. The process will continue until 75% consensus is. There will be no negative consequences if you choose not to participate. However, once you have clicked on the link and start to validate you are kindly requested to complete all questions for the validation process.

You will be required to provide your email addresses as part of the biographical data when you have access to the validation tool, thus agree to participate, as this will allow me to incorporate all the comments into the new visual concept map and then circulate the revised version of the tool to all participating panelists..

Your email address and any other personal information will not be known to other participants and your e-mail address will be separated from the data received via the tool. You will not receive any remuneration as your participation is voluntary, but your valuable inputs will contribute to improvements in postnatal care in Ethiopia.
The study findings will be published in the report and incorporated in the final thesis of this study but your identity will not be revealed.

If you agree to participate please open the link by pressing the Ctrl button on your key board and simultaneously click on the link https: //docs.google.com/forms/d/1RDG0OWnuhmmL66uyz0VzowhN7N0yqJAwPihATBzyB8A/edit

If you have any enquiries or questions, please do not hesitate to contact me or my research supervisor using the E mail addresses.
Researcher: Elias Teferi Bala, Email Address: eliasteferi2015@gmail.com
Research supervisor: Professor Lizeth Roets, Email address:roetsl@unisa.ac.za

ANNEXURE 11: CV OF STATISTICIAN

1. Personal information

1.1. Name : Dr. Habte Tadesse Likassa

1.2. Birth date : 12/01/1987

1.3. Gender : Male

1.4. Marital status: Married

1.5. Nationality : Ethiopian

1.6. Passport number : EP4762913

1.7. Subject/Qualification : PhD

1.8. Telephone number : +251923866685

1.9. Email :habte.tade@yahoo.com

1.10. Address : Ambo University , Ethiopia

2. Educational Level

2.1. PhD in Statistical Signal Processing from National Taiwan University of Science and Technology, Taiwan since July 2019.

2.2. Sc in Statistics (2010-2011) from Addis Ababa University , Ethiopia

2.3. B.Sc in Statistics from university of Gondar, Ethiopia in 2008

3. List of Publications

1. New Robust Methods for Image Recovery and Alignment via the Frobenious and L21 Norm: *Springer (Accepted on Hindawi Journal)*
2. Robust Regression with Affine Transformations for Face Recovery and Head Pose Estimation, *Elsevier Journal of Visual Image Communication and Representation: Accepted (Impact Factor: 2.259)*, 2019
3. Robust Image Recovery via Affine Transformation and L2, 1 Norm: *IEEE Access, 2019 Impact Factor (4.098).*
4. Effects of Problem Based Learning on Students' Academic Achievement and Their Attitude towards Applied Mathematics in Some Selected Ethiopia Higher Institutions with Specific Reference of First Year Civil Engineering Technology Student: ***Global* Journal *of Current Research, 2015.***

ANNEXURE 12: LANGUAGE EDITING CERTIFICATE

Between the lines editing

Leatitia Romero
Professional Copy Editor, Translator and Proofreader
(BA HONS)

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25 May 2020

To whom it may concern:

I hereby confirm that I have edited the thesis entitled: "CONTEXTUALISING A FRAMEWORK FOR POSTNATAL CARE 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.

Leatitia Romero

Affiliations

PEG: Professional Editors Group (ROM001)
EASA: English Academy of South Africa
SATI: South African Translators' Institute (1003002)
SfEP: Society for Editors and Proofreaders (15687)
REASA: Research Ethics Committee Association of Southern Africa (104)